



Source versus message cues in persuasion : the interaction of modality with credibility and comprehensibility
by Danny Stephen Hifumi Choriki

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in Psychology
Montana State University
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Abstract:

This study examines the relationship of communication modality to the persuasion research paradigm with a view towards distinguishing between the Yale, the McGuire, and an interaction model of communication and persuasion. Students from a pool of introductory and developmental psychology classes participated in a 2X2X2X2 between subjects factorial experiment. Factors were comprehensibility, credibility, modality, and sex of subject. Dependent variables included attribution and memory measures along with a persuasion measure. The existence of modality main and interaction effects were used to support the interaction model over the Yale and McGuire models of persuasion. Additionally, the use of a new dependent variable, the social recall score, and the use of the absolute values of attribution ratings were found to be useful tools in the persuasion research paradigm.

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A thesis submitted in partial fulfillment
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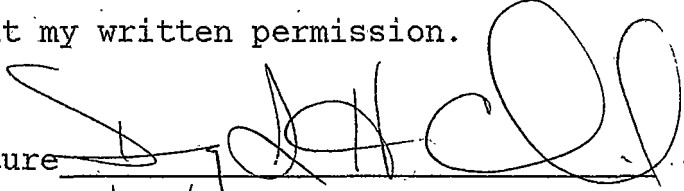
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ABSTRACT

This study examines the relationship of communication modality to the persuasion research paradigm with a view towards distinguishing between the Yale, the McGuire, and an interaction model of communication and persuasion. Students from a pool of introductory and developmental psychology classes participated in a 2 X 2 X 2 X 2 between subjects factorial experiment. Factors were comprehensibility, credibility, modality, and sex of subject. Dependent variables included attribution and memory measures along with a persuasion measure. The existence of modality main and interaction effects were used to support the interaction model over the Yale and McGuire models of persuasion. Additionally, the use of a new dependent variable, the social recall score, and the use of the absolute values of attribution ratings were found to be useful tools in the persuasion research paradigm.

INTRODUCTION

"No printer's type can record...the persuasion of his silvery tongue."

--Lord Lytton (1858) *mf*

In 1923, M. M. Willey and S. A. Rice used a lecture by William Jennings Bryan, the state's attorney in the Scopes trial, on the topic "Science vs Evolution" and the attending students in a simple persuasion field study. The data indicated that Bryan's presentation strengthened students' beliefs towards both creationism and evolutionism. The belief shift towards creationism was among students who had not had evolution theory in a biology class. On the other hand, students who had been taught evolution strengthened their reported beliefs in evolution theory (Willey & Rice, 1924). Thus, one cause, Bryan's presentation, had dual effects in opposite directions. The predictive factor for the direction of attitudinal change was previous exposure to evolution theory.

Willey and Rice also reported students "were able to discriminate between Mr. Bryan's oratorical ability and the logic that he employed" (p. 342). Still, "many of Mr. Bryan's listeners were changed in their beliefs after hearing him." These authors were intrigued by students

who reported both events. One student reported, "I do not think that he (Bryan) proved anything. He made me, however, undecided as to the true origin of man." Thus, something other than the actual message, was effective in persuading some of the students.

From Willey and Rice's conclusions, we can make the following two statements; (1) Persuasion is a process which involves a number of different factors: and (2) These factors do not have consistent effects on persuasion. It is my theoretical perspective that the inconsistencies noted by Willey and Rice can be explained through an interaction perception perspective such as that described by Newtonson (1980): "The organization of the behavior stream into perceived action units seems to result from an interaction of cognitive structures and available stimulus information" (p. 324).

Let's begin the search for this interaction by contrasting a few persuasion/communication models. One of the earliest models of persuasion is from the Yale Communication Research Program. The model (cited in Fishbein & Ajzen, 1975) is a three step process. It begins with independent environmental variables: source (or persuader), message, and audience factors. The environmental variables interact with the audience's internal mediating processes which include attention, comprehension and acceptance. The results are the

observable communication effects or attitude change, which can be changes of opinion, perception, affect, and action (see Figure 1). This results in a research task investigating "who says what to whom with what effect" (Fishbein & Ajzen, 1975, p. 451).

Figure 1. The Yale Communication Model.

Independent Variables	Internal Mediating Processes	Observable Communication Effects
Source Message Audience	Attention Comprehension Acceptance	Opinions Perceptions Affect Action

Note: The Yale approach to communication starts with external independent variables that go into the internal mediating processes and results in observable communication effects. This figure is adapted from Janis and Hovland (1959, cited in Fishbein & Ajzen, 1975, p. 453).

McGuire (1969) redefined the persuasion model by reverting to Lasswell's (1948) statement that persuasion is "who says what to whom, how, and with what effect." As shown in Figure 2, McGuire summarizes Lasswell's definition by reducing persuasion to five components; source, message, channel, receiver, and destination. Thus, a given source presents a specific message over a certain channel or

modality to a given audience with the intended effect of changing a target behavior or belief.

Figure 2. The McGuire Communication Model.

Source Factors	Message Factors	Channel Factors	Receiver Factors	Observable Effects
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Note: The McGuire matrix of persuasive communication starts with source and message factors that are mediated by the channel or modality factors and then go into the internal mediating processes of the receiver and results in observable communication effects. This figure is adapted from McGuire (1969, cited in Fishbein & Ajzen, 1975, p. 456).

If we combine the simpler organization of the Yale model with the factors of the McGuire model, we arrive at a three step process with four possible results. This interaction model (named interaction because the different factors of each step interact with each other) begins with the three environmental factors of source and message cues and information from other members of the audience which are transmitted (step two) via one of the modalities to the target. Cognitive and attributional processes make-up the third step of internal mediating processors. The end product is the observable communication effects of opinion, perception, effect, and behavioral changes.

Figure 3. The Interaction Model of Persuasion.

Environmental Factors	Modalities of Presentation	Cognitive Processes	Behavioral Outcomes
Source Message Audience	Live Video Audio Written	Comprehension Attributions Attitudes Information Acceptance	Opinions Perceptions Affect Action

Note: The interaction model of persuasion starts with environmental factors which are presented via different modalities to the audience where individual cognitive processes mediate the behavioral outcomes.

From a behavioral perspective, the persuader has some control over source, message, and channel factors which interact with the cognitive factors of the audience and create attitude change. Thus, the applied research question for persuasion focuses on understanding how the controllable environmental factors interact with the internal processing factors to create behavior change. This paper examines how source and message cues interact with various modalities to cause differential attitude change. It also makes inferences about how internal mediating processes affect the outcome.

Modality of Presentation

"The biggest mistake in my political life was not to learn how to use television."

--Hubert H. Humphrey

mf

In establishing that different presentation modalities cause the use of specific internal processes, we must first show that certain internal processes are used by some individuals in some situations and that other internal processes are used by these individuals in other situations. Fiske, Kinder, and Larter (1983, p. 393) found "that novices employ knowledge based strategies that differ from experts." In a mock jury trial, Ryan and Hurtig (1980, p. 231) supported the hypothesis that individuals use the same information differently by finding "that jurors arriving at different verdict conclusions differ in the way they compute verdicts from a common evidence base rather than in the structure (organization) of their evidence bases." These two studies support the hypothesis that diverse internal processes are used by different people. Edell and Staelin (1983, p. 59) concluded "that consumers' processing of print advertisements in a forced exposure situation is related to the structure and content of the advertisement." Thus, different situations invoke diverse internal processes. It appears that different internal processes are invoked by individual and situational

differences. It now remains to be seen how diverse internal processes can be invoked by varying the modality of presentation.

Four types of message channels or modalities which have been investigated are written, audiotaped, videotaped, and live presentations. Most researchers have hypothesized a main effect of modality on persuasion such that the more vivid the presentation, the greater the persuasion. The vividness effect is a stimulus that "is (1) emotionally interesting, (2) concrete and imagery-provoking, and (3) proximate in a sensory, temporal or spatial way" (Nisbett & Ross, 1980, p. 45).

The vividness effect was developed to explain the popular belief that television was an effective persuasion tool. A recent review by Taylor and Thompson (1982) reported little if any empirical support for the vividness effect, especially between written and televised presentations. Taylor and Thompson (1982) presented two explanations for the lack of a persuasion effect due to modality. First, was a lack of construct validity and the use of problematic operationalizations. Secondly, persuasion probably interacted with differential attention and possibly with other perceiver characteristics to negate the main effect of modality.

Improvements in the methods of persuasion research are called for by Taylor and Thompson's first explanation. There is mixed empirical support for the second explanation. Cohen (1976) examined the effects of radio versus television advertising for four candidates in an Israeli election. This field study revealed some candidates did better with radio and others with television advertisements. In a laboratory study, Keating and Latane (1976) found that the more vivid the presentation, the more positively the subjects rated the alleged politicians.

Taylor and Thompson's explanation suggests that in the laboratory study, only positive attributions were made because of the lack of prior information about the alleged politicians. The field study would have included prior information as all candidates were previously known by the subjects. Conceivably, subjects in the field study made both positive and negative attributions and these balanced out the main effect for attributions and persuasion.

If this effect is balancing out the main effect of modality on persuasion, then according to Taylor and Thompson (1982, p. 170) the variance in judgments should increase as a function of modality. Basically, they expected increased vividness to polarize opinions. A cell-by-cell analysis of nine studies failed to show an overall trend of increased variance in dependent measures

for persuasion. Taylor and Thompson concluded that there is little support for a polarization hypothesis.

If we look at this problem from the interaction perspective, an alternative possibility arises. Recall the Israeli field study and the American laboratory study. If in fact, differential attributions occur when previous information about the communicator is available, then the polarization effect should only happen when previous information causes differing attributions. Taylor and Thompson do not discuss controlling for this factor in their analysis. Since most laboratory studies attempt to control for "extraneous variables" such as prior knowledge by using previously unknown persuaders, Taylor and Thompson's conclusion cannot be considered conclusive without further study. Persuasion research using the interaction model must carefully consider this problem when making predictions.

Two additional and related conclusions of Taylor and Thompson's need to be considered. Still dealing with differential attention and other perceiver characteristics, Taylor and Thompson (1982, p. 178) point out that "five (additional) studies found interactions between vividly presented information and other perceiver characteristics, and these represent most of the studies testing interaction hypotheses." This led these authors to conclude that "an interactionist perspective involving a delineation of

theoretically relevant perceiver characteristics is propitious." Perceiver (or audience) characteristics found to interact with modality are personal need or relevance to the persuasion situation (Borgida & Nisbett, 1977), and prior attitudes about the topic (Reyes, Thompson, & Bower, 1980). Message comprehensibility, or the perceivers' ability to comprehend, has been shown to interact with modality. Chaiken and Eagly (1976) found that video presentations were most effective when the message content was easy to comprehend. One important source characteristic that interacts with modality is credibility, with highly credible sources being most influential in video presentations (Andreoli & Worchel, 1978; Worchel, Andreoli, & Eason, 1975).

Chaiken and Eagly (1983) tested Taylor and Thompson's (1982, p. 178) conclusion, that "vividness effects occur only under conditions of differential attention." In searching for a salience effect, to determine what subjects were paying attention to, Chaiken and Eagly (1983, p. 251) found fairly strong support for the hypothesis that "communicator characteristics should be more salient and thus exert a greater (positive or negative) persuasive impact when messages are transmitted in videotaped or audiotaped, rather than written, form." Conversely, message cues should be more important in written versus the videotaped presentations. Given a salience effect,

there should be an interaction between modality and attributional and recall measurements with videotaped presentations yielding higher attribution scores and written messages yielding higher recall scores.

Thus, the interaction between source and message cues and the various communication modalities is such that the message is important during a written presentation with source characteristics increasing as more source information becomes available for processing. This supports Chaiken's (1980) hypothesis that "the greater salience of communicator cues in the videotaped and audiotaped modalities favors heuristic processing, whereas the relatively greater salience of message content in the written modality favors systematic processing" (cited in Chaiken & Eagly, 1983, p. 241).

While supporting this hypothesis, Chaiken and Eagly (1983) experimentally manipulated only one of the two environmental variables, the source characteristic of likeability. It remains to be seen whether or not the salience effect remains constant when both source and message information are experimentally manipulated. To further this end, I will briefly review some of the literature on message and source cues in persuasion, focusing on credibility and comprehensibility.

Message Cues

"Well--I made you take time to look at what I saw and when you took time to really notice my flower you hung all your own associations with flowers as if I think and see what you think and see of the flower--and I don't."

--Georgia O'Keefe (1939) *mf*

The ability of a reader to comprehend a message is a vital cognitive factor in persuasion. If the audience can not understand the message, then it is unlikely that the message will persuade the audience. Schumacker came to this conclusion when he preassigned subjects on the basis of their performance on a reading comprehension test. He concluded that, "persuasive tendencies increased as a function of ability to comprehend" (Schumacker, 1981, p. 583).

Miller, Maruyama, Beaver and Valone (1976) varied the complexity and the speed of the presentation along with the credibility of the source. They found that as speed increased, so did the perceived credibility of the source. This led to an interaction, with the high speed, high credibility speaker being the most persuasive and the high speed, low credibility speaker being the least. Another method for altering comprehension as a means of influencing persuasion is distraction. Petty, Cacioppo and Heesacker (1981) reported that rhetorical questions distracted listeners more than did summary statements.

Given that organization of a narrative effects the recall of that narrative (Thorndyke, 1977), and since memory seems to affect persuasion, the organization of a persuasive argument should influence persuasion. For example, Calder, Insko, and Yandell (1974) varied the number of arguments in a persuasive presentation. They found the more arguments there were, the greater was the persuasion. Wilson and Miller (1968) examined effects of repetition of arguments and order of presentation. Both recency and repetition were shown to influence both opinion change and retention. Choriki and Crook (1980) examined the effect of organization and presentation of a theme on the attributions subjects made toward a defendant in a jury trial paradigm. They found that if the presentation lacked a clearly presented theme or was poorly organized, subjects were more likely to make negative attributions of the defendant.

In an attempt to distinguish between the social and the cognitive explanations of varying comprehensibility of a message, Eagly (1974, p. 758) supported both social and memory hypotheses. Persuasion was seen to be influenced by both the "amount of supportive information that was received" and the amount of negative affective reaction that was produced.

This is exactly the effect that Chaiken and Eagly (1976) reported when they showed that persuasion is highest with an easy to understand message when the modality of presentation is visual. Audiotaped and written messages followed in descending order. The exact opposite effect was found if the message was complex.

As Taylor and Thompson (1982) suggest when talking about the Chaiken and Eagly results, there seems to be an interaction between source and message cues and the perceiver's internal processing mechanisms that prevents a consistent main effect for vividness in persuasion studies.

To further research these possibilities, we must continue to use a dependent variable of comprehension along with an experimental manipulation of comprehensibility. In this experiment the presentation of a theme statement was used to manipulate comprehensibility and the level of comprehension was measured using both recall and recognition techniques.

Source Cues

"Persuasion is achieved by the speaker's personal character when the speech is so spoken as to make us think him credible. We believe good men more fully and more readily than others..."

--Aristotle

As Fishbein and Ajzen (1975, p. 462-463) pointed out,

"Source variables are characteristics associated with the communicator, such as his credibility, expertise, trustworthiness, attractiveness, sincerity, status, etc. It has usually been assumed that factors of this kind influence the receiver's confidence in the source belief and thus affect probability of acceptance."

Other social factors that have an effect across modality are likability (Chaiken & Eagly, 1983), intensity and sex of a speaker's voice (Robinson & McArthur, (1982), social role manipulated through appearance and dress (McPeck & Gross, 1975; Cooper, Darley & Henderson, 1974), prestige (Walster, Aronson, & Abrahams, 1966), attractiveness (Norman, 1976; Eagly & Chaiken, 1975), and nonverbal synchronization (Woodall & Burgoon, 1981). Given that different persuaders exhibit different values and sets of social cues, it is not surprising to see that different modalities emphasize the various qualities of certain persuaders differently by causing individuals to focus on one or another of the various available social cues.

Recall that the second interaction reported by Taylor and Thompson (1982) between the environment and the

modality is with the source cue of credibility (Worchel, Andreoli, & Eason, 1975; Andreoli & Worchel, 1978).

Worchel, Andreoli, and Eason (1975) found an interaction between credibility and modality. These authors had noticed an inconsistency in previous modality and persuasion research: that is, a large number of the studies that showed no effects had used politicians as the communicator (Tannenbaum & Kerrick, 1954; Sawyer, 1955; Frandsen, 1963; Kennedy, 1971; Keating, 1972; all cited in Andreoli & Worchel, 1978). They noted that politicians as a group were considered to be biased and untrustworthy (Hovland & Mandell, 1952; Walster & Festinger, 1962; all cited in Andreoli & Worchel, 1978). This led them to the interaction hypothesis that credible sources would be more persuasive on television and untrustworthy persuaders would be most effective in a written presentation. Their research concurred.

This interaction suggests support for the salience hypothesis in the following manner. In a live or videotaped presentation, the audience is overwhelmed with information and finds it simpler to focus on the credibility of the communicator. When the credibility information is more salient than the message information, high credibility communicators are more persuasive than low credibility communicators. When the amount of social information is low, as in an auditory or a written presentation, the

audience has more of its attention directed towards the message. Thus, despite the credibility of the source, the audience has paid more attention to the message. This makes the written form the more effective modality for the low credibility source. ✓

One of the methods for manipulating credibility is vested interest. If an audience perceives that the communicator has something to gain by persuading the audience, then the audience is less likely to trust the communicator. Eagly, Wood and Chaiken (1978) refer to vested interest in an attributional perspective as knowledge bias. Their evidence supported the hypothesis that communicators are most effective when they argued against what is perceived as their own best interests. Walster, Aronson and Abrahams (1966) showed that Joe "The Shoulder" Napolitano, who was supposedly "serving the third year of his twenty-year sentence for smuggling and peddling dope," (p. 329) was much more successful in arguing for more powerful courts and stiffer criminal sentences than he was for weaker courts and shorter sentences. Walster et al. (1966, p. 325) hypothesized that "in some cases, a low prestige source could be extremely effective--in fact, even more effective than a high prestige communicator". These authors concluded that arguing against one's own best interest increased the credibility of a communicator.

Vested interest has yielded interesting results in legal research. The defendant giving testimony is perceived as having the vested interest of being found innocent by the jury. A witness is presumed to be neutral in terms of self-interest. Choriki and Crook (1980) presented some attributional data which indicated that an audience used different information-processing biases when processing the testimonies of witnesses as opposed to defendants. Choriki and Crook found a main effect of vested interest with defendants seen as less reliable and less believable than witnesses. Vested interest interacted with the organizational patterns of the narrative testimony. The witness was seen as most reliable and believable when a clear theme was presented and the narrative followed a standard temporal organization. In the same conditions, however, the defendant was attributed as being unreliable and unbelievable.

Given these results, it should be safe to hypothesize that vested interest as manipulated in a mock jury trial should yield similar results to Andreoli and Worchel's (1978) and Worchel et al.'s (1975) manipulation of credibility in a modality study. Support for this hypothesis would increase our ability to generalize about the modality by credibility interaction in persuasion.

With this in mind, I can present the following set of assumptions and a research hypothesis. Given that modality interacts with source cues and also with message cues; that source and message cues interact with each other; that different memory systems are used in different situations because of different modalities, source and/or message cues; and that different cognitions and attributions cause differential persuasion; then different source cues and message cues and modalities should interact with each other to create different cognitions and attributions thereby affecting persuasion. Thus, in a Comprehensibility X Credibility X Modality experiment, it would be reasonable to expect the three-way and all of the two-way interactions to be significant. This would support two specific theories: (1) Taylor and Thompson's (1982) differential hypothesis explaining the lack of main effects for vividness, and (2) Chaiken's (1980) salience hypothesis explaining how the differential attention hypothesis works.

Given the existence of these interactions as support for these hypotheses, then it can be inferred that the interaction model of persuasion more accurately fits the persuasion process than does McGuire's persuasive communication model. Should modality be a main effect in the experiment, then the Yale model would be disconfirmed.

While noting that a number of different channels of communication do exist in persuasion situations, the McGuire model differentiates between source and message cues in the persuasion process. From the environmental interactionist perspective, however, both source and message cues are considered from the audience or receiver's perspective and as such can be lumped together as environmental cues. If so, then it would be simpler to explain an interaction with modality and only one of the environmental cues using the interaction hypothesis instead of the McGuire model. Therefore, interactions of only one environmental cue with modality would support the interaction hypothesis over the McGuire model. Interactions with two environmental cues and modality would be additional evidence ruling out the Yale model, however, it would not distinguish between the McGuire and the interaction models.

METHOD

Subjects

A total of 160 subjects, from a pool of introductory and developmental psychology students, participated in exchange for extra credit points. Each subject was randomly assigned to one of eight experimental conditions which were counter-balanced for sex of subject (with 10 males and 10 females per cell). Subjects participated in groups of 20 to 25.

Design

A 2 X 2 X 2 between-subjects factorial design was used. The modality of presentation was either videotaped or written. The second independent variable, vested interest, was manipulated by telling the subjects that the speaker giving the testimony was either the defendant in the case or a witness to the accident. The same testimony from the same perspective was used for both the witness and the defendant. In both cases, the witness was the person driving the car (see Appendix A). It was assumed that subjects would perceive the defendant as having a vested interest in persuading the audience that he was innocent and that they would perceive the witness as an

unbiased observer. The third variable was whether or not the narrative included a clear theme statement at the beginning of the presentation.

Materials

A brief testimony about an automobile accident was created. Parallel forms of the testimony were made for presentation both with and without a theme statement (see Appendix A). Two video-taped presentations were produced, one for each form. This was the same for the written presentation.

Social/cognitive Measurements

As shown in Appendix B, subjects assessed the speaker on a series of semantic differential and attribution measures. The semantic differential scale for evaluative, active, and potency consisted of the composite of four separate 7-point scales. The possible composite score ranged from 4 to 28. The evaluative score was a composite of honest(1)-dishonest(7), kind(1)-cruel(7), wise(1)-foolish(7), and good(1)-bad(7) items. The active score was a composite of active(1)-passive(7), excitable(1)-calm(7), changeable(1)-stable(7), and progressive(1)-regressive(7) items. The potency score was

a composite of strong(1)-weak(7), rash(1)-cautious(7), hard(1)-soft(7), and severe(1)-lenient(7) items. An additional 18 semantic differential items were combined into three attribution ratings assessing the speaker's personality, social and physical attractiveness. The possible composite score ranged from 6 to 42. The personality attribution score consisted of the six single measures of sane(1)-insane(7), serious(1)-humorous(7), positive(1)-negative(7), smart(1)-ignorant(7), easy(1)-harsh(7), and happy(1)-sad(7). The social attribution scores consisted of rich(1)-poor(7), interesting(1)-boring(7), friendly(1)-unfriendly(7), success(1)-failure(7), professional(1)-unprofessional(7), and nice(1)-nasty(7). The physical attribution score consisted of young(1)-old(7), graceful(1)-awkward(7), quiet(1)-loud(7), attractive(1)-unattractive(7), experienced(1)-unexperienced(7), and healthy(1)-sick(7). Using a Likert scale, subjects assessed the reliability of the speaker and of the speaker's testimony, reliable(1)-unreliable(7). Subjects rated the defendant's guilt on a 7-point scale from innocent(1) to guilty(7). This was the primary persuasion measure in the experiment. Subjects' comprehension of the message was measured by having them recall the important features of the testimony.

They were told to;

"Please list as many different things about the testimony that you have just seen [read] that you can recall. [Do not refer back to the testimony if you are unsure of an answer.] Simply do the best that you can and continue."

These recollections were scored by eight independent raters who were blind to conditions. Raters were asked to count the number of complete concepts or idea units that subjects accurately recorded from the original testimony. Two raters examined the recollections of each subject. Subjects also completed seven true/false questions about the testimony and three true/false questions that were the manipulation checks on the appearance of organization, vested interest and vividness for the speaker. As shown in Appendix C, subjects responded to the statements: "In the testimony that you just heard [read], the person speaking was the defendant"; "The person speaking appeared to you to be very well organized"; "The person speaking appeared to you to have a very vivid personality". Subjects responses were then correlated with the actual independent variable codes for each experimental condition ($r > .90$, $p < .001$).

Procedure

Subjects were told they were participating in a social cognition experiment that examined the effects of different cognitive styles on the attitudes of jurors. Half the subjects were told they would be presented with the testimony of a witness in an automobile accident trial. The remainder were informed the speaker was the defendant in the case. The testimony was presented. Then subjects were given either the social or the comprehension measurements first (which were counter-balanced between-subjects for order effects). Subjects were then debriefed.

RESULTS

"This learned I from the shadow of a tree,
That to and fro did sway against a wall,
Our shadow selves, our influence, may fall
Where we ourselves can never be."

--Anna Hamilton (1843-1875)

The 37 separate measures were compiled into nine composite dependent variables. The items within these variables were shown to be sufficiently correlated with each other (Pearson r 's were not significantly negative at the $< .05$ level). The nine composite dependent variables were the three semantic differentials (activity, potency, and evaluative) comprised of four items each, the three attribution scores (social, personality, and physical) with six items each, the memory recall score with two items, the reliability of the testimony with three items, and the reliability of the speaker with two items. The two separate sets of ratings of the memory recall scores were highly correlated with each other, $r = .80$, $p < .001$. Two single item dependent variables were analyzed: the guilt of the defendant and the recognition memory score, which consisted of the number of correct answers to seven true/false questions. Following completion of the initial analysis, a tenth composite dependent variable was compiled

by measuring the amount of social information recorded about the speaker during the recall measure. The social recall score of the two raters were sufficiently correlated, $r = .87$, $p < .001$. Data were analyzed using Minitab (Ryan, 1981), SPSS (Hull & Nie, 1981; Norusis, 1982), and BMDP (Dixon, 1983) statistical packages.

Initial analysis indicated that the data set fit the assumptions of the Analysis of Variance (ANOVA) and the Multivariate Analysis of Variance (MANOVA) models after elimination of univariate and multivariate outliers. Once identified, outliers with a large Cook's distance were moved towards the center of the data until they reached the next data point. Seven univariate and four multivariate outliers were eliminated in this fashion. Initial 2 X 2 (Sex of Subject X Order) Anovas performed on the 11 dependent variables yielded no significant order of presentation main effects nor a Sex X Order interaction effect. A significant multivariate main effect of sex of subject was found on the attribution scores, $F(3,142) = 3.30$, $p < .03$. Therefore, the sex of subject variable was included in the main analysis.

Three 2 X 2 X 2 X 2 (Modality X Presentation of Theme (Comprehensibility) X Vested Interest (Credibility) X Sex of Subject) Anovas and three Anovas comprised the main analysis. Separate SPSS Manovas were performed on the three attribution scores (social, personality, and

physical), the three semantic differentials (active, evaluative, and potent), and the two memory scores (recall and recognition). Standardized discriminant function coefficients identified the major dependent variables contributing to the multivariate effect. Separate SPSS Anovas were performed on dependent variables measuring the reliability of the speaker, the testimony, and the guilt of the defendant. Least Significant Difference (LSD) tests were performed to determine significant cell mean differences where univariate interactions occurred. A residual analysis (Rosenthal & Rosnow, 1984) was done to help explain the interactions.

A second analysis was performed to test the polarization hypothesis. The attribution and the semantic differential scores were transformed into absolute value scores using the middle of the scale, four(4), as the zero point. Data were then compiled into the same composite scores as the original data and found to fit the assumptions of the analysis models. The range for the absolute data values were from 0 to 12 for the semantic differential measures and from 0 to 16 for the attribution measures. The absolute value score analysis replicated the raw data analysis and revealed additional significant effects. The

results reported here are the absolute value scores. The raw data cell means are reported when useful.¹

Manipulation Checks

Subjects were significantly affected by the experimental manipulations. Manipulation checks were true-false questions on which subjects indicated whether or not the speaker was the defendant or the witness (vested interest), was organized or unorganized (comprehensibility), and was vivid or not vivid (modality). Scores were satisfactorily correlated with the related codes for the independent variables ($r(158) > .90, p < .001$).

Attribution Scores

The attribution scores revealed a multivariate main effect for sex, $F(3,142) = 3.30, p < .03$. As shown in Table 1, Standardized Discriminant Function Coefficient (SDFC) analysis on the main effect of sex revealed that males were somewhat more extreme in reporting attributions for the speaker on the social and personality scores, whereas females were more extreme in their ratings on the

¹ On the raw data analysis main effects occurred on modality on the attribution scores and the semantic differentials. These effects were replicated using the absolute value data. Three additional effects occurred on the absolute value analysis, a main effect for sex on the attribution scores and two interactions using the semantic differentials (Credibility X Comprehensibility and Credibility X Comprehensibility X Sex of Subject).

physical attributions. Females rated the speaker more positively on the raw data scores.

Table 1. Strength of Sex of Subject Main Effect.

Dependent Variable	MS effect	F*	p-value	SDFC**
Attributions		3.30	<.03	
Social	2.03	.21	>.50 ns	-.45
Personality	7.23	.81	>.25 ns	-.91
Physical	22.50	2.45	>.10 ns	1.37

* Multivariate degrees of freedom were 3,142.
Univariate degrees of freedom were 1,144.

** Standardized discriminant function coefficients (SDFC) were not computed at the multivariate level.

The modality main effect, $F(3,142) = 4.25$, $p < .01$, revealed subjects rated the speaker in the videotaped presentation more positively than in the written. As shown in Table 2, SDFCs revealed that physical and social attributions contributed about the same amount to the significance of this variable.

Table 2. Strength of Modality Main Effects.

Dependent Variable	MS effect	F*	p-value	SDFC**
Attributions		4.25	<.01	
Social	96.10	10.18	<.005	-.64
Personality	36.10	4.07	<.05	.27
Physical	93.03	10.14	<.005	-.66
Semantic Differential		3.08	<.03	
Activity	22.50	3.70	<.05	-.02
Potency	65.03	9.35	<.005	-.96
Evaluative	11.56	2.42	<.15 ns	-.06

* Multivariate degrees of freedom were 3 and 142. Univariate degrees of freedom were 1 and 144.

** Standardized discriminant function coefficients (SDFC) were not computed at the multivariate level.

Semantic Differential Scores

The semantic differential measures revealed a significant multivariate main effect for modality, $F(3,142) = 3.08$, $p < .03$, and two multivariate interaction effects. The main effect for modality followed the same pattern as the modality effect on the attribution scores with more positive ratings made on the videotaped presentation than on the written presentation. An SDFC analysis of the semantic differential measures, shown in Table 2, revealed potency as the strength of the effect. The raw data indicated that subjects viewed the videotaped presenter as being more potent than the written presenter.

A significant multivariate Credibility X Comprehensibility interaction, $F(3,142) = 2.88$, $p < .04$, occurred on

the semantic differential items. As shown in Table 3, the SDFCs revealed the major variable contributing to this effect was the evaluative measure, closely followed by activity. Multiple comparisons indicated subjects recorded more extreme responses for the low credibility defendant who did not provide a theme statement than the defendant who included a theme statement.

Table 3. Strength of Credibility X Comprehensibility Interaction Effects.

Dependent Variable	MS effect	F*	p-value	SDFC**
Semantic Differential		2.88	<.04	
Activity	4.90	.81	>.25 ns	-1.16
Potency	1.23	.18	>.50 ns	.33
Evaluative	12.66	2.65	>.10 ns	1.09

* Multivariate degrees of freedom were 3,142.
Univariate degrees of freedom were 1,144.

** Standardized discriminant function coefficients (SDFC) were not computed at the multivariate level.

Cell mean analysis indicated the defendant who included a theme statement was rated most negatively. Subjects were less consistent in rating the defendant in the other three cells. Using the LSD test, only the potency scores, shown in Table 4, revealed any significant cell mean differences.

Table 4. Least Significant Differences on Credibility X Comprehensibility Interaction Cell Means. Dependent Variable is Semantic Differential Potency Score.

Comprehensibility	Credibility	
	Defendant	Witness
No Theme	3.95 b	3.53 ab
Theme	2.95 a	3.67 ab

Note: The raw data ratings were on a 7-point scale. These are the absolute value scores using 4 as the midpoint. The higher the number, the more extreme the ratings. Values with different subscripts differ at the .05 level using the Least Significant Difference test.

The Sex X Credibility X Comprehensibility interaction revealed a multivariate sex difference on the semantic differential scores, $F(3,142) = 3.82, p < .015$. As shown in Table 5, the most important contributor to the semantic differential effect, according to the SDFCs, was the evaluative score.

Table 5. Strength of Credibility X Comprehensibility
X Sex of Subject Interaction Effect.

Dependent Variable	MS effect	F*	p-value	SDFC**
Semantic Differential		3.82	<.02	
Activity	19.60	3.22	<.10 ns	-.25
Potency	30.63	4.40	<.04	.32
Evaluative	51.76	10.83	<.001	.97

* Multivariate degrees of freedom were 3,142.
Univariate degrees of freedom were 1,144.

** Standardized discriminant function coefficients
(SDFC) were not computed at the multivariate level.

Cell mean analysis shown in Table 6 and Figure 4, revealed females as more consistent in their evaluative ratings of the low comprehensible defendant whereas males were not. Males were significantly more inconsistent in their ratings of the low comprehensible defendant and also the high comprehensible witness.

Table 6. Least Significant Differences on Credibility
 X Comprehensibility X Sex of Subject Cell Means.
 Dependent Variable is Semantic Differential
 Evaluative Score.

Sex of Subject

Comprehensibility	Credibility	
	Defendant	Witness
No Theme	5.35 ab	5.20 ab
Theme	5.70 ab	4.15 a

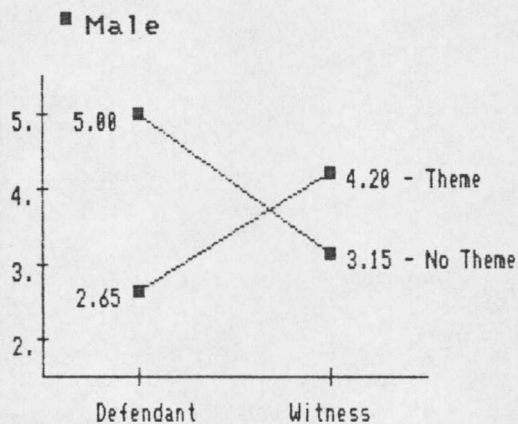
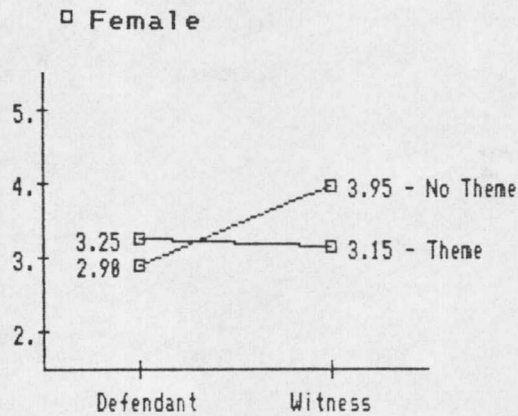
Sex of Subject

Comprehensibility	Credibility	
	Defendant	Witness
No Theme	5.85 b	5.00 ab
Theme	4.85 ab	6.10 b

Note: The raw data ratings were on a 7-point scale. These are the absolute value scores using 4 as the midpoint. The four evaluative items were then compiled into one score. The higher the number, the more extreme the ratings. Values with different subscripts differ at the .05 level using the Least Significant Difference test.

Figure 4.

Credibility (defendant vrs. witness) X
 Comprehensibility (theme vrs. no theme) X
 Sex of Subject (female vrs male) inter-
 actions using cell means.



Note: Dependent variable was the
 Semantic Differential Evaluative score
 using the absolute values.

Memory Scores

Three effects on the memory scores (recall and recognition) and reliability of the testimony variables occurred. A univariate main effect of comprehensibility occurred on the reliability of the testimony, $F(1,144) = 4.08, p < .05$. The main effect for comprehensibility on the reliability of the testimony replicated an earlier counter-intuitive finding by Choriki and Crook (1980). In both studies, subjects reported the low comprehensible presentation as more reliable than the presentation with a theme.

Analysis revealed a multivariate main effect of credibility on the memory scores $F(2,143) = 4.12, p < .02$. As shown in Table 7, SDFCs revealed that the recall memory score was the most significant factor in the credibility main effect. Subjects accurately recalled more of the defendant's testimony than that of the witness's.

Table 7. Strength of Credibility Main Effect.

Dependent Variable	MS effect	F*	p-value	SDFC**
Memory Measures		4.12	<.02	
Recall	220.90	4.58	<.04	1.05
Recognition	.40	.77	>.25 ns	-.74

* Multivariate degrees of freedom were 2,143.

Univariate degrees of freedom were 1,144.

** Standardized discriminant function coefficients (SDFC) were not computed at the multivariate level.

A significant multivariate Modality X Comprehensibility X Sex interaction occurred on the memory scores, $F(2,143) = 3.55$, $p < .04$. As shown in Table 8, however, neither of the univariate interactions were significant. Inspection of the SDFCs indicates both SDFCs are high and in opposing directions.

Table 8. Strength of Modality X Comprehensibility X Sex Interaction Effect.

Dependent Variable	MS effect	F*	p-value	SDFC**
Memory Measures		3.55	<.04	
Recall	90.00	1.87	>.10 ns	.90
Recognition	1.23	2.83	>.10 ns	-.94

* Multivariate degrees of freedom were 2,143.

Univariate degrees of freedom were 1,144.

** Standardized discriminant function coefficients (SDFC) were not computed at the multivariate level.

Cell mean analysis of the two memory variables revealed different interaction effects. Multiple comparisons of the recall memory variable failed to reveal any significant differences between groups at the $p < .05$ level. On the recognition variable, a LSD test revealed a comprehensibility effect interacting with sex and modality. As shown in Table 9 and Figure 5, males who read a written statement without a theme statement recalled significantly less material than both males and females who read a written statement which contained a theme statement and females who watched the videotaped presentation with a theme statement.

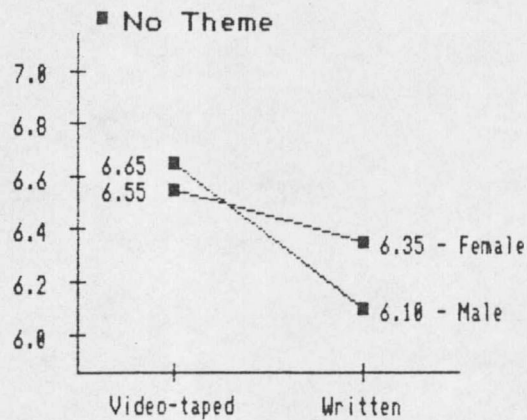
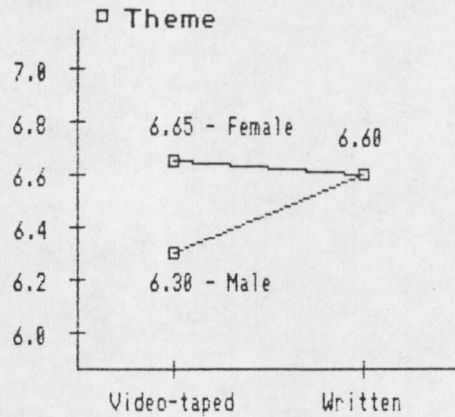
Table 9. Least Significant Differences on Modality X Comprehensibility X Sex of Subject Cell Means. Dependent Variable is the Recognition Memory Score.

Sex of Subject		
Female		
Comprehensibility	Modality	
	Videotape	Written
No Theme	6.55 ab	6.35 ab
Theme	6.65 b	6.60 b
Sex of Subject		
Male		
Comprehensibility	Modality	
	Videotape	Written
No Theme	6.60 ab	6.10 a
Theme	6.30 ab	6.65 b

Note: The higher the number then the more correct answers the subjects made on a series of seven true/false questions about the testimony. Values with different subscripts differ at the .05 level using the Least Significant Difference test.

Figure 5.

Modality (videotape vrs. written) X
 Comprehensibility (theme vrs. no theme) X
 Sex of Subject (female vrs. male)
 interactions using the cell means.



Note: Dependent variable is the recognition memory score.

Persuasion Score

The only measure of persuasion in this experiment was the guilt/innocence measure. Univariate analysis revealed what appeared to be a main effect of credibility, $F(1,144) = 72.86$, $p < .001$. Subjects tended to rate the defendant as guiltier when he was the driver of the vehicle which was responsible for the accident. However, due to the method of the manipulation and the measure, high and low credibility were confounded with the apparent guilt of the two drivers. Thus, it comes as no surprise that the driver responsible for the accident was rated as guilty when he was the defendant, and that the driver who was hit was rated as innocent when he was the defendant. This means that the credibility main effect on this measure cannot be viewed as a credibility effect on persuasion, but instead as a check on the attributions on guilt on the two participants in this specific testimony.

A Comprehensibility X Sex of Subject interaction also occurred, $F(1,144) = 9.31$, $p < .005$. Multiple comparisons, shown in Table 10, revealed that males evaluated the speaker using a theme statement as being innocent more often than they did the speaker who did not use a theme statement. Female subjects' evaluations of guilt or innocence due to the presentation of a theme, were not

significant; however, the direction of the effect was in the opposite direction than the males.

Table 10. Least Significant Differences on Comprehensibility X Sex of Subject Interaction Cell Means. Dependent Variable is the Guilt/Innocent Rating.

Sex of Subject	Comprehensibility	
	No Theme	Theme
Female	3.32 ab	3.97 bc
Male	4.20 c	3.13 a

Note: Data was a set of 7-point semantic differential using innocent (1) and guilty (7). Values with different subscripts differ at the .05 level using the Least Significant Difference test.

Social Recall Score

Given that little support was found for Taylor and Thompson's (1982) differential attention hypothesis, post hoc analysis was performed. The recall measures were scored for units of information about the speaker. Two second year psychology students (blind to condition) scored the recall measures for information on the speaker that was visual in nature, information that subjects would have obtained from the videotape. It was hypothesized

that if the differential attention effect was working with the comprehensibility and/or the credibility manipulations, then a social recall score might be a sensitive measure of this effect. Specifically for Credibility X Modality, subjects would attend to and record more information about a defendant who is testifying than a witness. In the Comprehensibility X Modality interaction, subjects might record more social information about a well organized speaker since they would not have to expend as much attention on the testimony.

The inter-rater reliability on the social recall scores was highly correlated ($r(158) = .87, p < .001$), moreover, the data fit the Anova assumptions within acceptable ranges. Thus, a 2 X 2 X 2 (Comprehensibility X Credibility X Sex) Anova was performed. Two two-way univariate interactions were significant, Credibility X Sex $F(1,72) = 3.94, p < .05$, and Credibility X Comprehensibility, $F(1,72) = 4.45, p < .04$.

The Credibility X Sex multiple comparisons shown in Table 11 suggest the existence of a sex difference in attribution. In the low credibility condition, males recorded significantly more social information than did females. This was reversed, but not significantly in the high credibility condition where females recorded more information about the witness than did males.

Table 11. Least Significant Differences on
Credibility X Sex of Subject Interaction
Cell Means. Dependent Variable is Social
Recall Score.

Sex of Subject	Credibility	
	Defendant	Witness
Female	1.60 a	3.00 b
Male	3.35 b	1.55 a

Note: Data were social recall scores in which the higher the number the more social information about the speaker was recorded by subjects. The higher the number, the more extreme the ratings. Values with different subscripts differ at the .05 level using the Least Significant Difference test.

Multiple comparisons on the Credibility X Comprehensibility interaction revealed when a theme statement was used subjects recorded significantly more social information about the low credibility defendant than the high credibility witness. As shown in Table 12, the no theme condition was reversed, although not significantly.

Table 12. Least Significant Differences on Credibility X Comprehensibility Interaction Cell Means. Dependent Variable is Social Recall Score.

Comprehensibility	Credibility	
	Defendant	Witness
No Theme	1.65 ab	3.00 ab
Theme	3.30 b	1.40 a

Note: Data were social recall scores in which the higher the number the more social information about the speaker was recorded by subjects. The higher the number, the more extreme the ratings. Values with different subscripts differ at the .05 level using the Least Significant Difference test.

Power Analysis

Examination of the strength of the effects revealed in most cases less than 20 percent of the total variance was explained. This led to the consideration of a power analysis (Cohen, 1977). This might be an important consideration as the individual cell size was reduced from 20 to 10 by the inclusion of the sex of subject variable in the analysis.

Examining the hypothesized Credibility X Comprehensibility interaction across the 12 dependent variables

revealed three had sufficient sample sizes, (the social and memory recall scores and the attribution of guilt), two measures (the reliability of the testimony and the social attribution scores) required moderate increases (40 to 60 subjects per interaction cell), and the remaining seven required 100 or more subjects per cell. Had the analysis been performed without sex of subject as a variable, the Credibility X Comprehensibility interaction cell size would have been 80. The power analysis thereby confirmed that a large portion of the variance in the experimental situation was not being explained by the independent variables, and increasing the sample size might have increased the overall significance level of the experiment.

DISCUSSION

"When you think about it, Adolf Hitler was the first pop star. It certainly wasn't his politics. He was a media pop star."

--David Bowie

Recent research (Andreoli & Worchel, 1978; Chaiken & Eagly, 1976, 1983; Worchel, Andreoli, & Eason, 1975) indicates that modality of presentation interacts with various other factors in persuasion. This study replicated these earlier findings. Additionally, we attempted to fit the persuasion process into an overall research paradigm. Three sets of predictions were made that corresponded with three models of the persuasion/communication process. In general, results failed to support the Yale Communication model. The evidence distinguishing the McGuire and the interaction models, however, was not as clear. General support for the interaction hypothesis emerged, as well as suggestions about how research in this area might be furthered. Finally, support was found for the polarization hypothesis by using the absolute values of the raw data instead of the raw data in the analysis of variance. This analysis revealed a polarization effect on the semantic differential and the attribution scores. Overall, this research revealed support for a new view of persuasion,

the interaction model. It also found two new methods for examining persuasion, the use of absolute values for measuring the relative strengths of attributions being made and a new method for measuring attributions, the social recall score.

The Yale Communication Model

Recall that the Yale Communication model is the study of who says what to whom with what effect. The model examines persuasion through source and message cues, audience factors and behavioral effects. The major feature of the Yale model examined in this experiment was the lack of modality as an influencing factor in persuasion. Two separate inferences from our results indicate communication modality is an important factor in the persuasion process.

The first inference was from the main effects for modality on the attribution and the semantic differential scores. Both the raw data and absolute value data analysis indicated that subjects reported different types and amounts of information about the speaker because of presentation modality. One would expect subjects to make more attributions about someone seen on a television screen than one read about. This was the case. This finding supports a basic assumption of the vividness model--that the more vivid the presentation, the more information will be reported. More positive ratings were made of the

videotaped speaker. The absolute value analysis showed subjects made more extreme attributions of the videotaped speaker. Since the presentation modality varies the type and amount of information that subjects report about the speaker; it seems, therefore, modality should be included in the model.

The second relevant effect was the three-way Modality X Comprehensibility X Sex of Subject interaction. Here, modality interacted with a message cue (comprehensibility) and an audience factor (sex of subject) to alter what the subjects recalled about the testimony. As before, modality was a necessary consideration in the information processing of the persuasion situation.

In summary, due to the absence of a modality factor, the Yale Communication model does not accurately define audience's information processing.

McGuire versus the Interaction Model

Recall that the McGuire model is the study of who says what to whom, how, with what effect. The major difference between the McGuire and the Yale models was the inclusion of modality as a factor. In the interaction model, the same basic persuasion process is used; however, source and message cues are combined into an environmental cues category. The model is designed from the audience's perspective. Despite the failure to find the predicted

Credibility X Comprehensibility interaction on the social attribution and memory recall scores, a number of significant results support the cognitive/environmental interaction hypothesis. Though unexpected, one result was the Modality X Credibility X Sex of Subject interaction on the memory scores. Here, males recalled less of the written testimony without a theme statement than either sex in the other conditions. This implies a sex difference in attention paid to the less vivid written testimony. It is tempting to attribute this effect to differences in reading styles or abilities across sexes, but a more parsimonious explanation would be a Sex of the Experimentor X Sex of Subject, or a Sex of the Speaker X Sex of Subject interaction. In either case, it is apparent that there is a Modality X Source Cue X Audience Cognition interaction occurring. Though the McGuire model does not rule out this effect, the interaction model expects such results.

Recall the differential attention hypothesis which argues that the lack of main effect for modality in persuasion research is due to inconsistencies in what people direct their attention towards. This is consistent with the lack of main effects on the persuasion measure (innocent/guilty). As this hypothesis was developed to explain this specific lack of modality effect, little more need be said.

The post hoc analysis supported the differential attention hypothesis and the interaction model. The social recall score provided two higher level interactions including the sole occurrence of a Comprehensibility X Credibility interaction. Both interactions imply the existence of a differential attention effect. The amounts of social information classified as relevant in credibility situations varies on the basis of an interaction with either comprehensibility or sex of subject or both.

The absolute value analysis revealed similar effects. Two higher order interactions, Credibility X Comprehensibility and Credibility X Comprehensibility X Sex of Subject occurred on the semantic differential scores. It appears the attributional responses are effected by both credibility and comprehensibility manipulations. Given the polarization hypothesis, it appears individual attitudes about the testimony and the speaker are creating extreme bipolar social attribution effects in the higher order interactions. Thus, the persuasion effect may be averaged into nonsignificance. This suggests future research must either control for these differences or test for the possibilities of this effect as one assumption of the model.

Future Considerations

The failure to obtain several significant higher order interactions may be due to one of two (or a combination of the two) methodological considerations. During debriefing, several subjects commented on the implausibility of the automobile accident happening as described. These subjects were retained in the analysis. This problem was not noted during two previous uses of this testimony. The comments indicate the reliability of the testimony and speaker were damaged by the apparent inconsistencies in the testimony and may have washed out other effects. Another possible consideration with the testimony was the use of a driver who may have been perceived as drinking alcohol before the accident. The current campaign against driving under the influence of alcohol and the attempts to raise the drinking age to 21 may have increased the attention some subjects paid to the testimony. These different and presumably strong attitudes about drinking and driving may have created some of the variance in the experiment. As no attitudinal information was collected, this hypothesis could not be tested here. Future work using this topic should include measures which could examine this possible explanation.

A second methodological consideration centers around the use of an attractive male speaker in the videotapes.

This could have affected the results in two ways. First, the attractive male speaker could have caused the sex of subject effect which led to the inclusion of this variable in the analysis. It also may have increased the unexplained variance and led to a decrease in cell size. The power analysis did show that the higher order Comprehensibility X Credibility interaction would have been significant on the following four dependent variables; reliability of the testimony, the social attribution score, memory recall score, and the social recall score had the cell size been doubled. It would seem that a 2 X 2 interaction cell size of at least 60 subjects, and possibly 80, is required to reveal this effect.

Additionally, the credibility manipulation should be re-examined. The defendant/witness manipulation is both a good and a strong manipulation of credibility. On the other hand, it creates methodological and interpretational problems. Using a defendant/witness manipulation requires parallel forms of the testimony (which wasn't done in this experiment). Methodologically, one can not be certain the two testimonies are, in fact, identical. In the judicial world, levels of a defendant's or a witness's credibility are two separate questions, even when the witness is the defendant. More importantly, in this experiment, the credibility manipulation became confounded with defendant/witness situation. With guilt/innocence as the persuasion

measure, the defendant responsible for the accident should always be more guilty than a defendant who wasn't responsible for the accident. Obviously with such a measure, the effect of persuasion on credibility is meaningless. Future credibility manipulations should involve more subtle approaches focusing on either the defendant or the witness.

Finally, on the dependent variables, the success of the absolute value and the social recall scores indicates a new approach to the analysis of persuasion attribution research and a new dependent variable for future analysis.

Conclusions

This experiment does not clearly support the interaction hypothesis over the McGuire model. Support was found for the corollaries of the interaction model, i.e., the salience effect, the polarization effect, and the differential attention hypothesis. It does not, however, appear to clearly reject either model. In general, this experiment provides enough support for these hypotheses to warrant further examination. Despite methodological problems, post hoc analysis yielded a number of encouraging significant results. On the other hand, the low level of explained variance poses the question of just how large a theoretical model is required to explain persuasion. Currently, existing models are too simplistic. A working

model should include as many of the environmental, cognitive, modality, and audience factors as possible.

Future research on the polarization effect should include the use of absolute values in the analysis. The success of the absolute value variable in this experiment indicates the existence of a polarization effect in the attributions being made during a persuasive presentation. Using the absolute value along with the raw data in future analysis should lend additional support for the interaction model of persuasion and correspondingly increase our knowledge of the attribution process in persuasion. Research on the salience effect should be done comparing memory (testimony) and social (speaker) recall measures. Certainly, additional research is called for that focuses on the differences between the McGuire and the interaction models of the persuasion and the communication processes.

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APPENDICES

APPENDIX A
EXPERIMENTAL STIMULUS

THE TESTIMONY

It was late on a cool clear spring night. I think the bars had just closed. I was coming into Bozeman on 7th Avenue South. I was coming back into Bozeman after spending spring break in Great Falls. There wasn't much traffic out. [I think the guy in the pick-up truck had been drinking. He certainly didn't seem to know what he was doing.]

I was coming up past the Cat's Paw. I saw the pick-up truck coming out of the parking lot at the Cat's Paw. I thought he was going to stop, but he didn't. He comes rolling out onto 7th and turned the wrong way up the street towards me. His pick-up smashed right into the rear fender of my car. I spun out of control and headed up over the curb and into the parking lot. I managed to miss the first row of cars and some people standing in the parking lot. But there was no where else to go and so I ran into the van that was parked on the edge of a row of cars.

As I got out of my car, I looked back. The pick-up had bounced over the median and had landed on its side. I went over to check and see if the driver was alright.

He was pretty shaken but looked like he would survive. I went into the Cat's Paw and called the police.

APPENDIX B

DEPENDENT VARIABLES

ATTRIBUTION MEASURES

While thinking about the person who gave the testimony, complete the following opposite word pairs. Remember, trust your first feelings. Do not spend a lot of time thinking about any one of these word pairs.

- RICH _____ : _____ : _____ : _____ : _____ : _____ : _____ POOR
- SANE _____ : _____ : _____ : _____ : _____ : _____ : _____ INSANE
- YOUNG _____ : _____ : _____ : _____ : _____ : _____ : _____ OLD
- GRACEFUL _____ : _____ : _____ : _____ : _____ : _____ : _____ AWKWARD
- SERIOUS _____ : _____ : _____ : _____ : _____ : _____ : _____ HUMOROUS
- BORING _____ : _____ : _____ : _____ : _____ : _____ : _____ INTERESTING
- NEGATIVE _____ : _____ : _____ : _____ : _____ : _____ : _____ POSITIVE
- FRIENDLY _____ : _____ : _____ : _____ : _____ : _____ : _____ UNFRIENDLY
- SMART _____ : _____ : _____ : _____ : _____ : _____ : _____ IGNORANT
- LOUD _____ : _____ : _____ : _____ : _____ : _____ : _____ QUIET
- ATTRACTIVE _____ : _____ : _____ : _____ : _____ : _____ : _____ UNATTRACTIVE
- SUCCESS _____ : _____ : _____ : _____ : _____ : _____ : _____ FAILURE
- HARSH _____ : _____ : _____ : _____ : _____ : _____ : _____ EASY
- EXPERIENCED _____ : _____ : _____ : _____ : _____ : _____ : _____ UNEXPERIENCED
- HEALTHY _____ : _____ : _____ : _____ : _____ : _____ : _____ SICK
- HAPPY _____ : _____ : _____ : _____ : _____ : _____ : _____ SAD
- PROFESSIONAL _____ : _____ : _____ : _____ : _____ : _____ : _____ UNPROFESSIONAL
- NICE _____ : _____ : _____ : _____ : _____ : _____ : _____ NASTY

SEMANTIC DIFFERENTIAL MEASURES

While thinking about the person who gave the testimony, complete the following opposite word pairs. Remember, trust your first feelings. Do not spend a lot of time thinking about any one of these word pairs.

ACTIVE _____ : _____ : _____ : _____ : _____ : _____ : _____ PASSIVE
 HONEST _____ : _____ : _____ : _____ : _____ : _____ : _____ DISHONEST
 RASH _____ : _____ : _____ : _____ : _____ : _____ : _____ CAUTIOUS
 EXCITABLE _____ : _____ : _____ : _____ : _____ : _____ : _____ CALM
 KIND _____ : _____ : _____ : _____ : _____ : _____ : _____ CRUEL
 STRONG _____ : _____ : _____ : _____ : _____ : _____ : _____ WEAK
 WISE _____ : _____ : _____ : _____ : _____ : _____ : _____ FOOLISH
 HARD _____ : _____ : _____ : _____ : _____ : _____ : _____ SOFT
 CHANGABLE _____ : _____ : _____ : _____ : _____ : _____ : _____ STABLE
 LENIENT _____ : _____ : _____ : _____ : _____ : _____ : _____ SEVERE
 GOOD _____ : _____ : _____ : _____ : _____ : _____ : _____ BAD
 PROGRESSIVE _____ : _____ : _____ : _____ : _____ : _____ : _____ REGRESSIVE

RELIABILITY AND PERSUASION MEASURES

Answer the following questions by putting your mark in the position that you feel is most appropriate on the scale below the question.

How believable is the person who was giving the testimony?

NOT VERY _____ : _____ : _____ : _____ : _____ : _____ : _____ VERY

How reliable is the person who was giving the testimony?

NOT VERY _____ : _____ : _____ : _____ : _____ : _____ : _____ VERY

How important do you feel that the testimony is?

NOT VERY _____ : _____ : _____ : _____ : _____ : _____ : _____ VERY

How valid do you feel that the testimony is?

NOT VERY _____ : _____ : _____ : _____ : _____ : _____ : _____ VERY

How meaningful do you feel that the testimony is?

NOT VERY _____ : _____ : _____ : _____ : _____ : _____ : _____ VERY

If you were on the jury in this trial, would you find the defendant to be:

GUILTY _____ : _____ : _____ : _____ : _____ : _____ : _____ INNOCENT

APPENDIX C

DEPENDENT VARIABLES
RECOGNITION MEMORY VARIABLES

RECOGNITION MEMORY MEASURES

Answer the following true/false questions by circling "T" if you think that the answer is true and "F" if you think that the statement is false. If you are unsure of an answer, simply do your best and continue.

- T F In the testimony that you just heard [read], the person speaking was the defendant.
- T F The person speaking appeared to you to be very well organized.
- T F The person speaking appeared to you to have a very vivid personality.
- T F The accident occurred in Great Falls.
- T F The person driving down 7th Avenue South was in a pick-up truck.
- T F The pick-up truck crashed into the rear fender of the car.
- T F After being hit, the car ran into a parked van.
- T F After hitting the car, the pick-up truck bounced over the meridian and landed on its side.
- T F There were people standing in the parking lot.
- T F The pick-up truck was coming out of the parking lot before the accident.

