AN EXPERIMENTAL STUDY OF THE EFFECT
OF A JUDGE'S NONVERBAL BEHAVIORS
ON MOCK JURORS' DETERMINATION OF
A VIDEOTAPED WITNESS'S CREDIBILITY

A thesis submitted in partial satisfaction of the
requirements for the degree of Master of Arts in
Speech Communication

By

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January, 1979
The thesis of Thomas E. Miller is approved:

California State University, Northridge
January, 1979
ACKNOWLEDGMENT

The formulation stage is always a difficult one. My task was made significantly easier with the help of the six following people:

William J. Bryan, M.D., Ph.D., J.D., for taking time from his work as nonverbal consultant for F. Lee Bailey, to generously answer my questions.

Albert Mehrabian, Ph.D., Department of Psychology, U.C.L.A., for his perceptive criticism, encouragement and support.

Paul Krivonos, Ph.D., for his unceasing demand for excellence and sound theoretical articulation.

Raymond Zeuschner, Ph.D., for sensitizing me to the forensic dimensions of courtroom communication, and for helping me to understand and apply small group theory and process to jury deliberations.

Judith Barnes, Ph.D., whose class inspired me to seek practical applications for nonverbal communication theory, and whose example has inspired me to think with my heart and feel with my mind.

Joan Kessler, Ph.D., whose arrival at CSUN helped bring this study to fruition and whose expert advice precluded many problems. Her friendship and understanding I will always cherish.
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ABSTRACT

AN EXPERIMENTAL STUDY OF THE EFFECT
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Master of Arts in Speech Communication

January, 1979

There has been little research into the role that nonverbal communication plays in the courtroom. The legal system does not acknowledge the importance of nonverbal behavior to the overall communication process. It was suggested that the subtle nonverbal influence process that has been identified in experimental research might also occur in the courtroom as well.

It was predicted that positive and negative nonverbal behaviors by the judge toward a witness would result in an increased positive or negative evaluation of the witness's source credibility.

It was also predicted that more immediate head and body orientation would communicate a greater positive attitude than less immediate head and body orientations.

To test these hypotheses eight different versions of a trial were recreated on videotape by actors. Subjects acting as mock jurors then watched one of the eight versions and were asked to evaluate the source
credibility of the witness on semantic differential type scales consisting of 25 bipolar adjectives that explored the dimensions trustworthiness, expertness and dynamism.

The findings support both theoretical hypotheses. More immediate head and body orientation resulted in changes in the predicted direction. However, while the nonverbal effects did occur in the predicted direction, the differences were significant only when the independent variable's polarities (positive or negative) were consistent. In other words, (positive) high head/(positive) high body and (negative) low head/(negative) low body produced a significant effect. In contrast, when the polarity was mixed (positive head/ negative body or negative head/positive body) there was no significant effect. It appears that when the nonverbal behaviors' polarities were mixed they tended to cancel out the influence of the other.

In addition to the above findings a significant difference was found on two dimensions of source credibility (trustworthiness and dynamism) when the two witnesses were compared for physical attractiveness. This result tends to confound the findings of this study.

The findings were discussed and the methodological shortcomings identified. Implications to the legal system, source credibility research and a number of possible future studies were proposed.
CHAPTER I
INTRODUCTION

The Problem

Only the strong survived when ravage, not reason, clubs not courts, resolved disputes among men. With the evolution of the law as a code of conduct, the jury developed as an institutionalized way of determining the appropriate application of the law. By requiring unanimity or at least a majority consensus, in jury deliberations, it was reasoned that process would likely ferret out unfair and biased judgments.

To insure equitable decisions, the legal system mandated extensive procedures to guarantee a jury's impartiality. For example, communication between the judge and jury, deemed by higher courts to be crucial, is highly controlled. Unfortunately, the legal literature views the process of communication largely as a transmission of word symbols. Generally speaking, only words have been of interest to appellate courts in determining the propriety of a judge's communication behavior.

The problem is that it is unrealistic to assume that the essence of communication is but the transmission of word symbols. Contemporary theories of human communication suggest that words are but a part of a larger and more complex process that includes many other codes, most notably nonverbal.

The review of literature will demonstrate that the nonverbal and paralinguistic codes are responsible for a high level of concurrence
between the experimenter and subject in experimental research. The agreement results because the experimenter subtly and probably unintentionally communicates to the subjects how he wants them to respond. The similarities between the experimenter/subject relationship and the judge/juror relationship lend credence to the assertion that the biasing nonverbal influence process that occurs in experimental research probably also occurs in the courtroom.

The Spring 1975 issue of the Virginia Law Review provides valuable speculation on the possible biasing effect of a judge's nonverbal behavior. Unfortunately, the discussion suffers 3 major shortcomings:

First, the explanation of experimental artifacts is superficial, mentioning but two of the major biasing agents. Second, the exposition on nonverbal communication is brief and unfortunately misconstrues some of the experimental studies. For example, arm openness was asserted to be a general principle demonstrating a positive attitude on the basis of one obscure doctoral dissertation. Third, since the essay is but intelligent speculation, there is no empirical justification for the conclusion.

Despite these shortcomings, the article does offer excellent directions for empirical research on this topic. The article concluded:

"...more study is needed to appreciate how susceptible jurors in particular situations are to any (nonverbal) influence by the trial judge (Greenbaum, 1975, p. 1298)."

Therefore, the purposes of the investigation are: 1) the investigation of nonverbal influence by the judge on the jury, and 2) to examine the levels of nonverbal intensity necessary to achieve an effect. Specifically, it is hypothesized that the more positive the nonverbal
behaviors by the judge toward a witness, the more positive the rating of source credibility by the experimental juror, than do negative nonverbal behaviors.

Judge/Jury Communication: A Legal Perspective

The courtroom operates under a multitude of rules and procedures that govern all facets of communication. For example, the subpoena power guarantees that necessary information will be present in court. Cross-examination is a method of testing the veracity of information and the rules of evidence insure that only certain types of information will be considered. Both federal and state courts have acknowledged the importance of the judge/jury influence process.

The communication between the judge and the jury is also regulated and may be scrutinized upon appeal. As the United States Supreme Court indicated in Star v. United States (153 U.S. 614 626 1894):

It is obvious that under any system of jury trials the influence of the trial judge on the jury is necessarily and properly of great weight, and that his lightest word or intimation if received with deference may prove controlling.

Lawyers, too, have recognized that the judge acts almost like a father to the jury. As one lawyer indicated:

The jury looks to the judge for guidance and if he tells them what they are to do, they are going to do just the thing he says (Polk, 1944, p. 338).

The jury is also aware of the judge's nonverbal behavior. McKelway (1944) discusses the effect of the judge's vocal stress and inflection, while Conner (1965) demonstrates how facial expression and general demeanor may communicate the judge's feelings about the case to the jury.
Jurors have also acknowledged the importance of the judge's non-verbal behavior. As Head (1967) indicated in "Confessions of a Juror":

During the testimony the attitude of the judge is very important. His movements and gestures, even his posture, affects the jury and they react accordingly (p. 330).

Despite the lawyer's concern, the legal literature is usually concerned with less subtle communication behavior. In fact, the non-verbal behavior of the judge must be exceedingly overt for relief on appeal. For example, in State v. Barron (465 S.W. 2d 523, 527 Mo. 1971) the following nonverbal behavior was cited as grounds for reversal:

When a brother of the appellant testified that appellant was at home watching television on the night of the burglary, the trial judge placed his hands flat to the sides of his head, shook his head negatively once, leaned back swiveled his chair 180 degrees around.

The judge's verbal communication, such as his instructions to the jury or other comments, are the subject of intense interest by the higher courts. Unfortunately, only blatantly biased nonverbal communication is grounds for reversal. Can more subtle forms of the judge's nonverbal behavior influence the jury? If so, through what medium, at what level, under what conditions, and when does it become a threat to judicial impartiality?

To understand this very subtle communication process, it is necessary to first understand a similar subtle communication process that has been identified in behavioral research, that of behavioral artifacts. The artifacts that emerge from the experimenter/subject interaction can bias the results of the experiment.
Behavioral Artifacts in Experimentation

One of the shortcomings of experimental research is that people behave differently in a scientific experiment than they do in actual life. This section will examine how experimental psychologists, troubled by their methodology, have found that experimenter/subject relations (communication) can have significant effects on their results.

The effect of such artifacts on internal and external validity has been demonstrated under the rubric of effects: 1) pretest sensitization, 2) demand characteristics, 3) evaluation apprehension, and 4) experimenter's expectancy.

Pretest Sensitization

When experimental observations occur prior to the experimental manipulation of the independent variables and the subject is aware of a possible impact to his observation, this will result in interaction or changes in the result (Lana, 1969). The subject gains information during the pretest which assists in the performance of the post-test requirements (Solomon, 1949). In addition, Lana and Rosnow (1963) found that the pretest acts as a "public commitment" inhibiting change in the subject which non-pretested subjects do not have to contend with.

Demand Characteristics

The subject may try to guess the hypothesis and then assist the experimenter in confirming the hypothesis (Orne, 1962). Though the subject's perceptions of the hypothesis may be incorrect, it is the effect of attempting to fulfill the perceived hypothesis that will cause the extraneous variance. When the subject allows his perception of the hypothesis to affect his behavior, it need not always be posi-
tive. As Rosenberg (1969) points out, a subject may want to throw a "monkey wrench" into the experiment. That is why Riecken's (1958) definition of demand characteristics is useful:

A set of inferential and interpretive activities on the part of the subject in an effort to penetrate the experimenter's inscrutability (p. 31).

**Evaluation Apprehension**

"How did I do?" "Was I normal?" and "Did I react the same as...?" are examples of a subject's evaluation apprehension. A subject's fear of evaluation in an experiment will produce an anxious desire to win a positive evaluation from the experimenter. In some cases, the anxiety of the subject will cause him to be "on guard" so as to provide no grounds for a negative evaluation. This artifact becomes operative when the subject perceives he is being evaluated whether it is the case or not (Rosenberg, 1969).

**Experimenter's Expectations**

Rosenthal (1966) offers a complete definition:

The expectancy the experimenter has on how his subjects will respond in the specific experiment being conducted. This expectancy is somehow communicated to his subjects through verbal and nonverbal cues which may create bias and inconsistency in his results. The experimenter's expectancy of how the subject will respond changes as a function of the subject's treatment conditions; i.e., the experimenter will communicate to his subjects the way he wants them to respond in accordance with his hypothesis on how they should respond in the different treatment conditions (p. 250).

We have defined the major artifacts that may occur in behavioral experimentation. These artifacts can emerge in combination or alone. Even with great precautions on the part of the ethical scientist and a minimal amount of interaction between the experimenter and subject,
a biasing effect can occur.

The next discussion will focus on the subtle ways in which these artifacts may be communicated—specifically, through nonverbal and para-linguistic communication. The understanding of pretest sensitization, demand characteristics, evaluation apprehension and experimenter's expectations will become crucial in the subsequent demonstration of the similarity of the experimenter/subject relationship to the relationship between judge and juror.

**Communicating Experimental Artifacts**

Duncan, Rosenberg and Finkelstein (1969), Rosenberg (1969), Masling (1966), and Riecken (1958) have added support to the contention that the communication of experimental artifacts usually occurs on the nonverbal or para-linguistic levels and is usually not purposive or consciously calculated by the experimenter or subject.

In this study nonverbal behavior will be defined as:

....kinesic behavior, (which) typically includes gestures, movements of the body, limbs, hands, head, feet and legs, facial expressions (smiles), eye behavior (blinking and direction and length of gaze, and pupil dilation) and posture (Knapp, 1972, p. 5).


According to Trager (1958) paralinguistic behaviors refer to how something is said and not what is said. The components of his definition include: 1) voice qualities and 2) vocalizations such as charac-
Nonverbal Communication

Any overview of the literature in nonverbal communication must acknowledge the work of Charles Darwin (1872). His observations of animal and human body motion laid the groundwork for later assertions of body motion as an ordered communication system. Specifically, Sapir (1931, 1933) indicated that learning the "body language" code was a prerequisite to effective communication. Advancing the notion of a specific learned structure to body motion communication was the seminal work in this field--Introduction to Kinesics (Birdwhistell, 1952).

Birdwhistell (1962) defines kinesics as:

A methodology concerned with the communicated aspects of learned and patterned body motion behavior (p. 194).

He identifies kinesics as a part of a dual "infracommunication system" that is interdependently mixed with verbal and other communication behavior. Birdwhistell suggests that words, tone of voices and gestures occur in conversation simultaneously and are part of a "cross-referencing system" (p. 201). He points out that body movement functions as type of language and suggests that the most useful way to understand that language is by using a linguistic analogy. In using such an analogy, Birdwhistell (1970) has developed a system of recording body movements very similar to the transcription method used in descriptive linguistics or phonetics.

Using slow motion film and other such devices, Birdwhistell has isolated microgestures. In attempting to answer the question of mean-
ing for a particular gesture, he has concluded that the gestures must be considered contextually, there are no universal meanings, movements are a product of a culture and that they are not biologically inherited (1970, p. 139).

The major objections to the linguistic-kinesic analogy have come from Dittman (1971). He found that the analogy breaks down under close scrutiny, body movements are continuous variables, not discrete categories and that the kinemes (etc.) often do not have a shared social meaning. Mehrabian (1972) enumerates an additional objection in terms of the categories:

More evidence is needed for the referential significance of each category, and there is a need for the empirical justification of the separation or grouping of categories (p. 158).

Despite the aforementioned shortcomings, Birdwhistell (1952) has made significant contributions to the field of nonverbal communication. Argyle (1975) concludes that Birdwhistell's contribution has been to draw attention to the subtle yet powerful influences of body motion in the communication process (p. 253).

Many related areas of inquiry have evolved from Birdwhistell's initial kinesic research. A review of the major nonverbal textbooks such as Bodily Communication by Argyle (1975), Nonverbal Communication in Human Interaction by Knapp (1972), Nonverbal Communication by McCardle (1974), Silent Messages and Nonverbal Communication by Mehrabian (1971, 1972) all contain discussions of kinesics (facial, gestural and postural communication), proxemics (the study of distance and space), physical appearance (body image, dress) and paralinguistics.
General Principles

The study proposed here asserts that nonverbal communication is a larger and more crucial part of the communication process between judge and jury than the current legal literature acknowledges. To demonstrate the validity of this assertion, it is necessary to discuss the general principles that have emerged from the study of nonverbal communication. Leathers (1976) and Barnes (1973) provide, perhaps, the most comprehensive list of propositional statements that emerge from the numerous experimental studies in nonverbal communication.

1. All individuals manifest nonverbal behavior in communication situations. This principle on its face seems almost tautological. While the legal literature acknowledges that nonverbal behavior on the part of the judge does occur, it relegates the majority of nonverbal behavior to a status of irrelevance. In fact, unless the gestural behavior is blatantly biased, the remedying of prejudicial behavior is post-facto using the curative instruction (tell the jury he has made a mistake), creating a record (the lawyer must complain about it at the time), or demonstrating a harmful error. Our review of the legal perspective demonstrated that our legal system considers the important or crucial communication primarily involves the transmission of word symbols. However, the research of Birdwhistell (1952), Leathers (1976), Knapp (1972), Mehrabian (1972) and others confirm the presence of nonverbal communication in almost every face-to-face communication. Therefore, there is ample evidence to assert that the influence process between the judge and the jury involves more than the transmission of

(emphasis on loudness and pitch).
of word symbols. In fact, it is a complex process that utilizes many codes that are transmitted through all influenceable sensory channels. All individuals manifest nonverbal behavior in communication situations and the judge is no exception to this proposition.

2. Nonverbal communication accounts for 60-65% of the total communication output of an individual and is the major determinant of meaning in the interpersonal context. Heger (1969) and Frahm (1970) confirmed that nonverbal behavior accounts for about 65% of an individual's total communicative output. Despite a high output of a code other than verbal, the question must be answered: How much meaning is carried by the nonverbal channels? Birdwhistell (1970, p. 158) asserted that 30-35% of social meaning is carried by words. The remaining 70% is communicated nonverbally. With a somewhat higher estimate is Mehrabian (1968, p. 51) who proposed that 93% of the total impact of a message is due to nonverbal factors. The fact that nonverbal communication is a major determinant of meaning gives significance to the lack of any meaningful controls of the nonverbal behavior of the judge while conducting a trial.

3. Attitudes, emotions and feelings, both intentional and unintentional, are more accurately conveyed and exchanged by nonverbal than by verbal means. According to Barnes (1973), studies by Sainsbury (1955), Ellis (1969), Schutz (1971), Kinzel (1969), Lowen (1958), Ekman (1970), and Fast (1971) confirm the proposition that body cues are accurate indices of emotional orientation. In addition to body gestures, Davitz (1964, 1969) has demonstrated that emotional expression is often communicated through paralinguistic channels. Mehrabian (1967, 1969,
1971), Rosenfeld (1966) and Scheflen (1964) have concluded that non-verbal behavior primarily involves the communication of emotions and attitudes and that for more complex information words are used.

The preceding studies have demonstrated that attitudes and emotions are conveyed nonverbally but what about the accuracy of the conveyance? Leathers reported that:

> Laboratory research reveals that emotional meanings can be communicated accurately in a variety of non-verbal media... In each instance, the accuracy with which emotional meanings were communicated far exceeded chance expectations. In fact, results demonstrated incontrovertibly that nonverbal emotional communication is a stable measurable phenomenon (1976, p. 4).

Applying the findings of this research to the judge/jury influence process, the assertion can be made that any attitudes and emotions of the judge concerning the guilt or innocence of a defendant, or his credibility, may be communicated nonverbally.

4. **Body cues are seen as indices of attitude and mood about the immediate social situation.** Most of the work confirming this proposition (Deutsch and Murphy, 1955; Reich, 1945; Braatoy, 1954; Lowen, 1958; Fromm-Reichmann, 1950; Machota, 1965; Condon and Ogston, 1966) was done in the context of the clinical interview involved with psychoanalysis. The findings confirm that the attitudes conveyed by body cues were in response to the immediate social situation.

Applying the findings of this research to the judge/jury influence process, the assertion can be made that the body cues of the judge should be viewed as indices of attitudes and moods about the immediate goings on in the courtroom.
5. The nonverbal portion of communication is largely beyond the sender's conscious control. Mehrabian (1971), Deutsch (1963, p. 40-41), Goffman (1959, p. 7) and Argyle (1970, p. 222-230) confirmed that an individual cannot totally hide his emotions. Dissertations by Victoria (1970) and Green (1973) attest to these findings.

Related to the fact that nonverbal portion of communication is beyond the sender's conscious control is the understanding that nonverbal behavior is taught and learned on the unconscious level. As Mehrabian (1971, p. 111) points out:

At an early age children are taught speech, reading and writing. There is no similar systematic effort to teach children to express their feelings nonverbally.

Mehrabian (1971) and Ekman and Friesen (1969) discovered that when emotions are denied they will escape from one channel and find another outlet.

Applying the findings of this research to the judge/jury influence process, two assertions emerge: 1) the judge may not be purposefully communicating his attitudes, however, any attitudes he might have are largely beyond his conscious control and will be communicated; and 2) the fact that attempts to suppress emotions will escape through other nonverbal channels confounds the proposed reforms discussed in the "Implications" section.

6. The nonverbal portion of communication conveys meanings and intentions that are relatively free of deception and distortion.

Part of the evidence that supports this proposition comes from the studies cited in #5. In addition, Leathers (1976, p. 5) reasons that because nonverbal cues are rarely under sustained conscious control,
they are less likely to be used significantly to conceal or obfuscate the communicator's true intentions, as is often the case with the verbal dimensions of communication. Wachtel's (1976, p. 100) research concludes that the polygraph is geared to the same assumptions that an individual's emotions will be revealed in tell-tale changes in bodily cues. Galloway (1968, p. 38), continuing with this line of reasoning, found that nonverbal cues typically convey a communicator's real meaning and intent and his opinion of others. The fact that nonverbal cues are not consciously controlled for extended periods, as are verbal cues, suggests that they are less frequently used for deception and distortion.

The implication of this proposition to the judge/jury influence process is that the nonverbal communication on the part of the judge conveys meaning and intention that is relatively free from deception and distortion. The next proposition will demonstrate that when a receiver is faced with a contradictory message between the verbal and nonverbal, he will usually rely on the nonverbal. Part of this proclivity is based on the high credibility that the nonverbal communication enjoys due to the fact that it is usually assumed to be relatively free of deception and distortion.

The first six propositions confirm that a source does manifest nonverbal behavior. But, does the other half of the communication process, the receiver, notice and understand those nonverbal cues? The last three propositions will demonstrate that receivers do notice and accurately interpret nonverbal cues whether directed toward themselves or toward others, and that when there is an inconsistency between
the verbal and the nonverbal, the receiver will rely upon the nonverbal.

7. A sender's nonverbal cues can be understood by most individuals. 

Ekman, Friesen and Ellsworth (1971, pp. 77-119 and 176-177) confirmed that untrained observers correctly understood nonverbal cues. Johnson (1970) found that decoding of nonverbal cues occurs continuously during interpersonal interactions, and Galloway (1969) discovered that students looked for and responded to the nonverbal code of their instructor. Davitz (1964, pp. 57-59) concluded that nonverbal messages are sent and received largely beyond the conscious awareness of the source or receiver.

Applying the findings of this research to the judge/jury influence process, the assertion can be made that the juror, an untrained layman, can accurately interpret a judge's nonverbal cues. Second, like the student in the classroom, the juror will seek and respond to nonverbal cues. This second notion was supported by Rosenthal (1969, pp. 7-9) who discovered that individuals in a novel context, who desire to behave correctly but are unsure of the proper behavior, may turn to an individual of higher status for guidance. As will be developed momentarily, the judge clearly qualifies as an individual of higher status. Third, the judge may not be aware that he is emitting nonverbal cues nor will the juror always consciously be aware that he is reading them.

8. When a receiver is faced with a contradictory message between the verbal and the nonverbal, he will rely upon the nonverbal. 

Leathers (1976, p. 4) confirmed that when any nonverbal behavior contradicts speech, the nonverbal is more likely to determine the total impact of the message. Mehrabian and Wiener (1966) and Mehrabian and
Ferris (1967) discovered that the resolution of inconsistent messages primarily relies upon facial expression, then paralinguistic cues, and rarely upon the actual words as the true or accurate indicator of meaning. Argyle, et al. (1970) replicated the above findings.

Applying the results of this research to the judge/jury influence process, the assertion can be made that when a juror is faced with a contradictory message from the judge, he will rely upon the nonverbal. As the review of the legal literature has demonstrated, a judge's comments to the jury are highly controlled. If the judge, for example, tells the jury to disregard a piece of damning evidence because he is required by law to so instruct, but does so in a sarcastic voice, this would represent a contradiction between what he is saying and what he means or how he feels. The juror then may resolve that inconsistency by relying upon the nonverbal which would in essence negate the effectiveness of the legal safeguard.

9. Receivers do decode nonverbal cues directed toward others. Mehrabian and Ferris (1967) and Hicks (1972) found that subjects are aware of nonverbal cues directed toward themselves and toward others and that they can interpret both accurately.

Applying the findings of this research to the judge/jury influence process is very important because most nonverbal cues by the judge are not directed toward the jury but rather toward the witnesses, parties, and the attorneys. Therefore, during the testimony of a crucial witness, the juror must decide on the veracity of the witness. If the juror is at all uncertain, either on a point of law or on the credibility of a witness's testimony, he may turn to an authority, probably
the judge, for guidance.

In California and other jurisdictions, the judge is not allowed to comment verbally upon witnesses or the quality of the evidence. Therefore, the juror will have to rely upon the nonverbal cues of the judge toward the witness.

Clearly, nonverbal behavior is an important part of every communication encounter. In experimental research, it has been shown to be a major channel of bias. How justified is it to assert that the nonverbal biasing effect that has occurred in experimental research probably also occurs in the courtroom?

Similarities of Experimental Research to a Trial

Greenbaum (1975) offers detailed speculation as to the similarities between the judge and the juror and the experimenter and the subject. He found similitude in terms of 1) context, 2) juror/subject roles, and 3) judge/experimenter role. A brief review of the likenesses follows.

Context

The courtroom and the behavioral experiment are novel situations for the juror and the subject, and in both situations there is often uncertainty as to the proper way to behave. Incomprehensible Latin phrases, formal procedures, oaths, judicial robes, and highly complicated legal phrases are all factors that contribute to a juror's uncertainty.

Juror/Subject Role

The juror and the subject both are placed in a role where there is often the desire to cooperate with the authority figure and the need
to give the right answer or come to the right verdict.

Orne (1969) found that subjects have a desire to be cooperative with the experimenter. Rosenberg (1969) found many subjects were motivated by a desire to avoid disapproval from the person in charge of the experiment, as did Kalven (1964). Similarly:

(The Juryman) wants to serve and do his duty for to be selected to judge his fellow man is indeed serious business. He knows that he will be called upon for decisions that are much deeper than daily expression of opinion (Brown, 1971, p. 102).

In addition to cooperating with the authority figure, the desire to give the right answers, observed in subjects, is also found in jurors in only a slightly different form. Coffin's research (1941) found that jurors wanted to reach the "proper" decision and thus avoid the sanction of the judge or community for having made a mistake. In short, the juror, like the subject, will try to cooperate with the authority figure and hopes to give the right answer. In many cases, indication of the right answer may be discerned from the judge's non-verbal demeanor.

The Judge/Experimenter Role

Rosenthal (1969) confirmed that when an individual desires to behave correctly but is in a strange or novel context in which the "proper" behavior is unclear, he may turn to an individual of higher status. The experimenter because of his dress, age, education and control, is often seen by the subject as an individual of higher status. Like the experimenter, a judge's dress, education and control over the courtroom all help him appear to be the individual of higher status or authority in the courtroom. Like the subject that turns to the experimenter,
the juror may turn to the judge for cues on proper behavior.

It has been speculated that the similarities between experimental research and a trial occur in terms of the context, juror/subject and experimenter/judge roles. An effective way to test the veracity of this speculation would be to examine the impact of a judge's nonverbal behaviors upon the determination of the credibility of a witness by the juror.

**Source Credibility**

In a comprehensive review, Applbaum and Anatol (1974) present some of the major aspects of source credibility. A brief review of these aspects follows:

**Definition**

The believability or acceptability of a witness is a central concern to a juror during a trial. The decision of guilt or innocence may turn upon the testimony of a particular witness. Part of the judgment process on the part of a juror as to whether to accept or reject a witness's testimony is how believable he appears. Thus, the impact of a person's character, behavior and sincerity on the persuasive process has been studied under the name of "ethos," "status differential research," "opinion leadership," "charisma," and "source credibility." Applebaum and Anatol (1974) define source credibility as the range of credulity, believability or acceptability. Rosenthal (1971) states that a receiver has two distinct objects of focus: the message and the source. Rosenthal suggests that if the message activates the dominant response it is called impersonal persuasion. If aspects of the communicator such as his personality, physical appearance, attire, voice,
diction or self-reference activate the dominant response, it is called personal persuasion.

Components of Source Credibility

What are the relevant components of source credibility? Why do some speakers attract undivided attention while others a scant notice? There are not simple answers to these complex questions; however, one thing is clear. Source credibility is not formed on the basis of a single characteristic of the source. Aristotle in The Rhetoric conjectured that the three major components were good sense, good character, and good will.

Hovland, Janis and Kelly (1953) were able to distinguish between expertness and trustworthiness, as discrete categories of evaluation by the receivers about the source. Subsequent research has followed the procedures developed by Osgood, Suci and Tannenbaum (1957) and employed a form of the semantic differentials. A set of bipolar adjectives are given to the receiver as the basis for his evaluation of the source. Upon completion, the results of the ratings are placed into dependent clusters.

Berlo, Lemert and Mertz (1969;1970) attempted to find the number of dimensions that were used to evaluate a source and which dimensions were independent of each other. The first major factor which emerged was safety. It emerged from the scales of just-unjust, objective-subjective, and is most closely related to trustworthiness of the study by Hovland, Janis and Kelly (1953). The second major factor, qualification, corresponded to their expertness component and emerged from the scales of experienced-inexperienced, trained-untrained. Two other
factors, dynamism and sociability, also emerged independently but were found to be less significant in the evaluation process than were safety and qualification. A study by Whitehead (1968) tends to support the existence of these components.

Concerning the relationship between source and topic, Bower and Phillips (1967) confirmed that a source may be evaluated separately from the topic. Receivers used trustworthiness and competence to evaluate the source-topic relationship as well as the source-topic free situations.

A receiver's perception of a source is sometimes more complex than just being represented by the four components mentioned thus far. Schweitzer and Ginsburg (1966) and Whitehead (1968) were able to identify up to 16 other components. In short, there may be a number of variables by which a source is evaluated by the receiver. The important thing to remember is that source credibility is not dependent upon some objective attributes but rather upon the receiver's perception of the attributes. Tucker's (1971) insightful article on the semantic differential as a method of determining source credibility, demonstrated how the concepts may vary depending upon the subject, time, and context of the communication.

Despite some variance, Applbaum and Anatol (1974) conclude that two general components always emerge regardless of subject, time or context. The two components were trustworthiness and expertness.

The Effect of Source Credibility

This section will demonstrate research on source credibility has ascertained the qualities that make a source successful in producing
attitude change, the impact of an introduction on source credibility, the qualities in a source necessary to produce enduring attitude change, the effect of high and low source credibility over time, and the consequence of organization on ego involved receivers.

Trustworthiness, dynamic and competent, were the qualities of the source in which there was greater acceptance of the message by the receivers (Haiman, 1949). Another study confirmed that a trustworthy source was more effective than a non-trustworthy source in producing attitude change (Hovland and Weiss, 1951).

In addition to the intrinsic qualities of the source, perceived by receivers, the nature of the introduction about the source has been shown to be significant when an audience was warned of a source's unreliability. In such cases, the receivers ignored the message's persuasive appeal. Greenburg and Miller (1966) found that this effect could be counteracted by not identifying the unreliable source until the end of the message.

At this point it would be tempting to conclude that a source perceived as trustworthy, dynamic, competent, or who received a positive introduction would be the most persuasive. However, there are some exceptions to these generalizations.

Visual aids and the use of different modes of presentation have been evaluated for levels of effectiveness. Seiler (1971) discovered that visual aids enhance a speaker's credibility, and Meyer and Gutes (1972) found differences in the ratings of source credibility between live, video and audio presentations. Film was found to have the greatest impact upon enhancing credibility (Addis, 1970, Forston, 1968).
In addition to visual modes, vocal cues, i.e., delivery style, impacts upon credibility. Conversational style delivery was determined to enhance trustworthiness and thus source credibility. (Pearce and Conkline, 1971; Pearce and Brommel, 1972; and Allport and Cantril, 1934.)

Social status, physical attractiveness, sex, race and moral character are some of the extrinsic variables that have been found to have an impact upon source credibility. Stephan (1975), in The Jury System in America, offers an excellent summary of the major findings in these areas.

The important thing to note is that all of these studies have examined the non and extra-verbal dimensions of the source as they affect his own credibility. The one study to look at another's ability to increase or decrease the credibility of a source was by Pearce and Brommel (1972). In that study they found that a verbal introduction affected the source's credibility. A speaker was least effective when he is introduced as lowly credible and uses dynamic delivery and most effective when introduced as highly credible and uses dynamic delivery.

The review of the literature on source credibility has thus demonstrated that research up to this point has investigated the more obvious dimensions of source credibility. Yet to be investigated is the question: Is source credibility transferable? We have seen that it is determined by a speaker's appearance, social status, sex, race, moral character, visual aids, well structured organization, trustworthy, competent, dynamic, and by how and what the speaker has to say. But what about a "relevant other's" reactions to the source? Is a rele-
vant other's reactions considered and is it a modulating or important influence on the final determination of source credibility by the receivers? Specifically, is a judge's reaction toward a witness an important or modulating influence on the juror?

Anderson and Clevenger, in their comprehensive summary of the experimental research in ethos, affirmed the dearth of research on the effects of reactional nonverbal cues by others on source credibility.

Indeed the role which subliminal perception may play in the establishment of ethos has been little clarified by experiments (1963, p. 74).

Rationale and Hypothesis

Nonverbal communication has been shown to be important in the process of communication. The legal system does not acknowledge its importance in the courtroom.

Judicial impartiality is the foundation of our adversary system. However, close examination of the communication process within the courtroom reveals that judicial impartiality may be highly illusory. Kalven and Zeisel (1966) reported that there is concurrence between the judge and jury on a verdict about 75 percent of the time. They reasoned that such concurrence indicated a high degree of understanding of the case on the part of the jury. However, this study proposes an alternative explanation.

The high level of concurrence may result because the judge may subtly and unintentionally communicate to the jury his feelings about the witnesses, the parties on trial, or even the guilt or innocence of the defendant. The juror may observe and then respond to such cues.

The legal system's strenuous efforts to maintain judicial im-
partiality are limited to the control of verbal communication on the part of the judge. But words are but a part of the communication process which includes many other codes, most notably, the nonverbal code.

The impact and importance of this subtle yet powerful code was demonstrated in terms of the artifacts produced in terms of demand characteristics, evaluation apprehension, experimenter's expectancy. In all of the cases the biasing effect was communicated subtly nonverbally and paralinguistically and still managed to significantly change the results.

The similarities between experimental research and the courtroom were demonstrated at three points: context, juror/subject and judge/experimenter roles. These three factors may come together to create the right conditions for a biasing effect to take place in the courtroom as they do in experimental research. The fact that both the experimenter and the judge try to appear neutral or masked may only intensify the subject/juror's need to focus upon the nonverbal and paralinguistic cues for clues on the proper behavior.

Such similarities only serve to heighten the suspicion that the high level of concurrence between judge and jury that was reported by Kalven and Zeisel (1966) may not be due totally to understanding of the case by the juror.

To control only the verbal dimension of a judge's communication denies the importance of nonverbal communication documented in the review of the literature. Extrapolating, then:

1. A judge manifests nonverbal behavior.
2. 60-65 percent of a judge's meaning is transmitted nonverbally.
3. A judge's emotional reactions are transmitted nonverbally.
4. A judge's nonverbal cues in the courtroom are reactions to the immediate situation.
5. A judge's nonverbal reactions are largely beyond his conscious control.
6. A judge's nonverbal reactions are perceived to be free of deception and distortion.
7. A juror will seek to interpret nonverbal cues on the part of the judge.
8. If there is a contradiction between the verbal and nonverbal, the juror will rely on the nonverbal.
9. The juror will notice and decode nonverbal directed toward the witness as well as himself.

The assertion that the biasing effect that takes place in the behavioral research may also occur in the courtroom may be logically valid, but it has not been empirically tested.

There are at least two ways that such a proposition could be tested: an analysis of an actual trial or an examination of a portion of a trial to see if such results could be achieved. The latter is the purpose of this study: to discover by the use of empirical research the degree to which the nonverbal behavior on the part of the judge may affect the determination of the credibility of a witness. It is beyond the scope of this study to give a definitive answer to the question of the effect of nonverbal behavior on the outcome of a trial. While perhaps not definitive, this study will try to demon-
strate a methodology that will be useful both to the social sciences and to the legal community. The review of the literature on source credibility demonstrated that many facets such as a speaker's appearance, social status, sex, race, moral character, visual aids, and presentation, etc. enter into the determination of source credibility. However, little research has examined the question of the ability of a "relevant other" to affect the evaluation of another's credibility. On the basis of the application of the experimenter/subject context to the judge/jury/courtroom context, it is reasoned that a judge's nonverbal behavior will affect the credibility of a witness. Specifically:

Differences in Evaluation of Source Credibility

H1: The more positive the nonverbal behaviors by the judge toward a witness, the more positive the rating of source credibility, than from negative nonverbal behaviors by the judge toward a witness, as determined by the mock juror.

Differences from Head and Body Immediacy

H2: More immediate head orientation by the judge communicates a relatively greater positive attitude toward the witness than does less immediate head orientation by the judge toward the witness as determined by the juror.

H3: More immediate body orientation by the judge communicates relatively greater positive attitude toward the witness, than does less immediate body orientation by the judge toward the witness as determined by the juror.

Definition of Terms in Hypotheses

Immediacy: The degree of directness and intensity of interaction between the judge and the witness (Mehrabian, 1967, p. 325).

Immediacy of head orientation: The percentage of the duration of judge-witness interaction during which the judge's head is directed toward the witness's position. If the judge's head is directed at right
angles to the witness's position for the entire duration of their interac-
tion, then the degree of immediacy of head orientation is zero
(Mehrabian, 1967).

Duration of interaction: This is the length of time during which two
individuals are in each other's presence (Mehrabian, 1967).

Immediacy of body orientation: The percentage of the duration of
judge-witness interaction during which the judge's median plane (i.e.,
the plane perpendicular to the judge's chest) passes through the wit-
ness's position (Mehrabian, 1967).

Perceived attitude: The results of a scale designated "most positive"
to "most negative" presented to the juror, on which he estimates the
degree of the judge's positive versus negative state of mind or feel-
ings toward the witness (dependent variable). This dependent variable
will be measured on an attitude scale developed by Albert Mehrabian
(See Appendix D).

Perceived positive nonverbal behaviors by the judge: The behavior of
the judge during the trial toward the witness. Positive nonverbal
behaviors are reflected in high immediacy of head and body during the
duration of the experiment toward the subject. Positive or high im-
mediacy will be determined both by posture and by the total interaction
time. For example, during the three minutes of testimony by the wit-
nesses (180 seconds), at least 160 seconds of the testimony the judge
would be performing the type of nonverbal behaviors that the particular
cell calls for (For complete instructions see Appendix F).

Perceived negative nonverbal behaviors by the judge toward the witness:
This is reflected in low immediacy of head and body during the duration
of the experiment toward the subject. Again, 80 percent of the duration of the witnesses would be devoted to a low duration of head and body orientation toward the witness. In other words, for 80 percent of the time in the condition H₂+B₂ the judge would not face nor look at the witness while he is testifying.

Perceived source credibility: The measure of credulity, believability or acceptability of the witness testifying in the trial as determined by the experimental juror. Source credibility will be measured by the semantic differential type scales developed by Osgood, Suci and Tannenbaum (1957). (See Appendix C).

Experimental juror: The role that the subjects will take in this experiment.
CHAPTER II

METHODS

Trial Videotaping

The first hypothesis asserted that there is a relationship between positive and negative nonverbal behaviors by the judge and the rating of source credibility. The second hypothesis stated that the longer the head faced the witness, the higher the rating of source credibility. The third hypothesis stated that the longer the body faced toward the witness, the higher the rating of source credibility.

To test the hypotheses, it was first necessary to obtain the videotape of a trial. Since an actual trial was not available, a trial was created using as a model the case used by Kessler (1973) in her research on six and twelve man juries. The subject of the trial was an automobile accident.

To maximize realism, the simulated trial was videotaped at the San Fernando Valley College of Law Moot Courtroom. Two Los Angeles attorneys, Royal Oakes and Paul Glad, played the parts of the lawyers for the plaintiff and for the defendant, respectively. The judge was portrayed by Herbert E. Selwyn, a trial lawyer with thirty years of courtroom experience. Brad Zerbe played the part of the plaintiff and Kevin Dawson played the defendant. The bailiff was acted by Charles Goldstein. All participants were given scripts of the trial two weeks in advance to allow time for familiarization.

Subjects

Subjects were students in speech courses at California State University, Northridge and students in English, history, oceanography, political science, psychology and speech classes at Los Angeles City College. The trial was shown on a large video monitor to groups of sixteen subjects on the average.
Thirty-two subjects participated in Pretest One, thirty-two subjects took part in Pretest Two and three hundred and seventeen subjects were involved in the actual experiment.

**Independent Variables**

Two independent variables were manipulated in this study. Head orientation was broken down into two levels, high/low. In addition, body orientation was also divided into two levels, high/low.

The following were the treatments:

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Condition</th>
<th>Head</th>
<th>Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>(HH) high/high</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>2.</td>
<td>(HL) high/low</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>3.</td>
<td>(LH) low/high</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>4.</td>
<td>(LL) low/low</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

In condition HH, eighty percent of the time during the testimony of the witness, the body and head of the judge were fully facing the witness. The other twenty percent of the time the judge was not looking at and/or facing the witness.

In condition HL, eighty percent of the time during the testimony of the witness, the body of the judge is fully facing the witness but the head is facing away from the witness.

In condition LH, eighty percent of the time during the testimony of the witness, the head of the judge was fully facing the witness but the body is facing away from the witness.

In condition LL, eighty percent of the time during the testimony of the witness, the body and the head of the judge are facing away from the witness. (See Appendix E for a complete description of each condition.)
In order to effectively isolate the nonverbal behaviors of the judge, a second camera simultaneously recorded the trial using identical shots as camera one with one essential difference: When the witness took the stand to testify, camera one showed the judge and the witness, but camera two just the witness. The contents of the trials were identical, just the camera views were different. The jurors (subjects) later seeing the videotapes would see both judge and witness in the treatment condition, and the witness only in the control condition.

The overall design is presented in Figure one.

<table>
<thead>
<tr>
<th>Head Orientation</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body Orientation</td>
<td>High</td>
<td>N = 62</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>N = 27</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>N = 35</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>N = 34</td>
</tr>
</tbody>
</table>

Figure 1. The Experimental Design
Dependent Variable

This investigation employed McCroskey, Holdridge and Toomb's (1974) semantic differential-type scales which had been determined by factor analysis using varimix rotation to measure three distinct factors: trustworthiness, expertness and dynamism. Using 53 scales compiled from McCroskey et al. (1974) and Applbaum and Anatol (1972) as a pool, twenty-five were chosen by the thesis committee as most applicable to evaluating a witness in a trial.

The scales for the trustworthiness factor were: honest-dishonest, friendly-unfriendly, sympathetic-unsympathetic, just-unjust, pleasant-unpleasant, dependable-undependable, good-bad, and attractive-unattractive.

The scales for the expertness factor were: expert-inexpert, valuable-worthless, intelligent-unintelligent, reliable-unreliable, qualified-unqualified, informed-uninformed, competent-incompetent, impressive-unimpressive, believable-unbelievable and cooperative-uncooperative.

The scales for the dynamism factor were: active-passive, aggressive-meek, relaxed-tense, composed-excitable, confident-lacks confidence, calm-anxious, and poised-nervous.

The twenty-five scales were randomly ordered and polarity was randomly reversed to minimize the possibility of order bias.

PROCEDURE

Pretest One

Two weeks prior to the filming of the trials a pretest questionnaire was administered to thirty-two subjects to solicit the student's opinion on the credibility of the witness based upon reading a tran-
script of the trial. The same scales utilized for the actual experiment were used. Each scale was scored from one to seven with one being the most positive rating and seven the most negative. The factors, (trustworthiness, expertness and dynamism) were scored by summing the scores of the scales and dividing by the number of scales in each category. (Appendix A contains complete instructions for Pretest One.)

Pretest Two

Two weeks prior to the videotaping of the trials, a different group of thirty-two subjects was shown photographic slides of 1) the lawyer for the plaintiff, 2) the lawyer for the defendant, 3) the plaintiff, and 4) the defendant. This pretest determined how closely matched the two lawyers and the two witnesses were on the three levels of credibility tested. Physical attractiveness and source credibility were measured on the scales described in the preceding section on dependent variable. One of the scales on the semantic differential measured attractive-unattractive. As each slide was shown, the subject would complete the semantic differential form before the next slide was shown. Thus each subject completed four semantic differentials (two lawyers, two witnesses), one for each slide. (Appendix B contains complete instructions for Pretest Two.)

Experiment

Subjects were assembled in a room that contained chairs and a videotape television monitor. The experimenter explained to the subjects that they had been chosen to be jurors for a trial in an automobile negligence case. (Appendix E contains the complete instructions for the experimenter.)
The subjects were randomly assigned in groups that averaged sixteen to watch the videotape of one of the following eight versions of the trial: 1) high head-high body, 2) high head-low body, 3) low head-high body, 4) low head-low body, 5) high head-high body control, 6) high head-low body control, 7) low head-high body control, and 8) low head-low body control.

As the legal proceedings commenced, the judge entered the courtroom and all of the participants stood up. The two attorneys made very brief opening statements and the trial then proceeded according to the procedures employed by the California trial courts. The first witness was the plaintiff. He testified as to the circumstances of the accident and of the injuries that he sustained. At two points during the three minutes of the plaintiff's testimony, the defendant's counsel objected. At the end of the plaintiff's testimony, the bailiff handed a note to the judge. After reading it, the judge indicated that there were pressing matters that he had to attend to and that the trial would recess until ten o'clock the next morning. He turned in the direction of the jury box, reminding the jurors of their duties and admonished them not to discuss the trial either among themselves or with friends or relatives. At that point, the court was adjourned.

The experimenter then reentered the room and explained that while the tape of the next day's trial was being set up for them to view, he would like them to fill out a few forms. First, the subjects were asked to evaluate the witnesses' credibility on a semantic differential-type scale. (Appendix C). As a manipulation check, (Appendix D) the subjects were next asked to evaluate the attitude of the judge toward
the witness. Then the subjects were told that the experiment was over and they were debriefed.

Data Analysis

For Pretest One, descriptive data were computed. For Pretest Two, a two way factorial analysis of variance was conducted on the three factors of speaker credibility, comparing the two lawyers and the plaintiff and the defendant.

For the experiment, a two by two factorial analysis of variance was computed on the three factors of the plaintiff's source credibility while testifying. The .05 level was required for statistical significance. When a significant F-ratio was affirmed from the analysis of variance, mean differences were determined with the Student-Newman-Keuls. The data were analyzed using the computer program of Nie et. al. (1975) in his Statistical Package for the Social Sciences.
CHAPTER III
RESULTS

Pretest 1

Two weeks prior to the taping of the trial, subjects were given a script of the trial to read in order to determine the level of source credibility that the content elicited. This was done to insure that the content did not evoke a response at the extreme ends of the scale. The descriptive statistics in Table One demonstrate that the three factors were about equal to each other, fell almost exactly in the middle of the seven point scale, and had standard deviations that were about equal.

Table 1. Pretest 1: Descriptive statistics for three factors of source credibility of the witness from reading the content of the trial.

<table>
<thead>
<tr>
<th>Factors</th>
<th>N</th>
<th>X</th>
<th>SD</th>
<th>min.</th>
<th>max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trustworthiness</td>
<td>30</td>
<td>3.34</td>
<td>.83</td>
<td>1.40</td>
<td>5.00</td>
</tr>
<tr>
<td>Expertness</td>
<td>32</td>
<td>3.04</td>
<td>.79</td>
<td>1.85</td>
<td>4.86</td>
</tr>
<tr>
<td>Dynamism</td>
<td>30</td>
<td>3.58</td>
<td>.86</td>
<td>1.25</td>
<td>5.00</td>
</tr>
</tbody>
</table>

Pretest 2

Two weeks prior to the videotaping of the trials, a different group of thirty-two subjects were shown photographic slides of 1) the lawyer for the plaintiff, 2) the lawyer for the defendant, 3) the plaintiff, and 4) the defendant. This pretest determined how
closely matched the two lawyers and the two witnesses were on the three levels of credibility tested.

Table Two demonstrates that when the four individuals were compared with each other, there was no significant differences for the factors of trustworthiness and expertness, but that there was a significant difference for dynamism.

Table 2. Pretest 2: ANOVA on the three factors of source credibility comparing the pictures of the lawyers, plaintiff and defendant.

<table>
<thead>
<tr>
<th>Factor</th>
<th>source of variation</th>
<th>sum of squares</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust</td>
<td>Subject</td>
<td>35.63</td>
<td>31</td>
<td>1.45</td>
<td>.08</td>
</tr>
<tr>
<td></td>
<td>Person</td>
<td>5.45</td>
<td>3</td>
<td>2.30</td>
<td>.08</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>71.81</td>
<td>91</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>112.11</td>
<td>125</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expert</td>
<td>Subject</td>
<td>38.19</td>
<td>31</td>
<td>1.43</td>
<td>.09</td>
</tr>
<tr>
<td></td>
<td>Person</td>
<td>6.08</td>
<td>3</td>
<td>2.36</td>
<td>.07</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>77.05</td>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>120.82</td>
<td>124</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dynamism</td>
<td>Subject</td>
<td>27.60</td>
<td>31</td>
<td>1.49</td>
<td>.07</td>
</tr>
<tr>
<td></td>
<td>Person</td>
<td>5.72</td>
<td>3</td>
<td>3.20</td>
<td>.02</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>54.26</td>
<td>91</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>87.29</td>
<td>125</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In order to determine where the difference might lie, it was necessary to compare the two lawyers. The results on Table Three demonstrate that there were no significant differences on the three factors between the two attorneys. Thus, the two barristers appear to be quite evenly matched.
Table 3. Pretest 2: ANOVA on the three factors of source credibility comparing the pictures of the lawyer for the plaintiff with the lawyer for the defendant.

<table>
<thead>
<tr>
<th>Factor</th>
<th>source of variation</th>
<th>sum of squares</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust</td>
<td>Subject</td>
<td>34.73</td>
<td>31</td>
<td>1.36</td>
<td>.19</td>
</tr>
<tr>
<td></td>
<td>Person</td>
<td>0.05</td>
<td>1</td>
<td>0.06</td>
<td>.99</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>24.60</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>59.37</td>
<td>62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expert</td>
<td>Subject</td>
<td>36.37</td>
<td>31</td>
<td>1.72</td>
<td>.07</td>
</tr>
<tr>
<td></td>
<td>Person</td>
<td>0.06</td>
<td>1</td>
<td>0.09</td>
<td>.99</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>20.45</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>56.89</td>
<td>62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dynamism</td>
<td>Subject</td>
<td>21.70</td>
<td>31</td>
<td>1.30</td>
<td>.23</td>
</tr>
<tr>
<td></td>
<td>Person</td>
<td>1.80</td>
<td>1</td>
<td>3.35</td>
<td>.07</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>16.11</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>39.73</td>
<td>62</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When comparing the plaintiff with the defendant, significant differences emerged on the factors of trustworthiness and dynamism and almost significant difference on expertness (Table Four).
Table 4. Pretest 2: ANOVA on the three factors of source credibility comparing the pictures of the plaintiff and the defendant.

<table>
<thead>
<tr>
<th>Factor</th>
<th>source of variation</th>
<th>sum of squares</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust</td>
<td>Subject</td>
<td>18.41</td>
<td>31</td>
<td>0.60</td>
<td>.99</td>
</tr>
<tr>
<td></td>
<td>Person</td>
<td>4.83</td>
<td>1</td>
<td>4.88</td>
<td>.03</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>29.68</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>52.31</td>
<td>62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expert</td>
<td>Subject</td>
<td>22.91</td>
<td>31</td>
<td>0.06</td>
<td>.99</td>
</tr>
<tr>
<td></td>
<td>Person</td>
<td>4.90</td>
<td>1</td>
<td>4.00</td>
<td>.05</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>35.50</td>
<td>29</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>62.34</td>
<td>61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dynamism</td>
<td>Subject</td>
<td>19.98</td>
<td>31</td>
<td>0.80</td>
<td>.99</td>
</tr>
<tr>
<td></td>
<td>Person</td>
<td>4.34</td>
<td>1</td>
<td>5.41</td>
<td>.02</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>24.06</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>47.45</td>
<td>62</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table Five lists the mean scores for all three factors of source credibility for the two lawyers and for the plaintiff and the defendant. The higher the score the more negative the individual was perceived. Thus the results indicate that the plaintiff, with the significantly higher score on trustworthiness and dynamism, was perceived more negatively than the defendant. The difference was not crucial since the subjects were not deliberating between the two individuals. The physical appearances of the four individuals did not evoke a response at the extreme ends of the scales.
Table 5. Means of the three factors of source credibility for lawyer for the plaintiff, lawyer for the defendant, plaintiff and defendant.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Lawyer P vs. Lawyer D</th>
<th>Plaintiff vs. Defendant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust</td>
<td>3.65</td>
<td>3.68</td>
</tr>
<tr>
<td>Expert</td>
<td>3.56</td>
<td>3.66</td>
</tr>
<tr>
<td>Dynamism</td>
<td>3.56</td>
<td>3.91</td>
</tr>
</tbody>
</table>

* significant at the < .05 level

Manipulation Checks

Five manipulation checks were run after the jurors saw the trial in order to confirm the manipulation of the independent variables. The checks were: 1) judge's attitude toward the witness; 2) head movement of judge toward the witness; 3) body movement of judge toward the witness; 4) tone of voice of judge toward witness; and 5) realism of trial. (Appendix D contains a complete copy of the manipulation checks.)

Table Six demonstrates that there were no significant differences in the judge's attitude, head or body movement, tone of voice or realisms of the trial between the trials that had no judge. Thus, it appears that the second camera was successful in isolating the nonverbal behaviors of the judge toward the witness.
Table 6. ANOVA of the manipulation checks for the four trials with no judge.

<table>
<thead>
<tr>
<th>Manipulation</th>
<th>source of variation</th>
<th>sum of squares</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1</td>
<td>Between</td>
<td>2.26</td>
<td>3</td>
<td>0.57</td>
<td>.62</td>
</tr>
<tr>
<td>Judge's attitude</td>
<td>Within</td>
<td>176.41</td>
<td>135</td>
<td></td>
<td></td>
</tr>
<tr>
<td>toward witness</td>
<td>Total</td>
<td>178.67</td>
<td>138</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M2</td>
<td>Between</td>
<td>1.62</td>
<td>3</td>
<td>0.65</td>
<td>.58</td>
</tr>
<tr>
<td>Head movement of judge toward witness</td>
<td>Within</td>
<td>111.57</td>
<td>135</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>113.19</td>
<td>138</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M3</td>
<td>Between</td>
<td>4.55</td>
<td>3</td>
<td>1.80</td>
<td>.14</td>
</tr>
<tr>
<td>Body movement of judge toward witness</td>
<td>Within</td>
<td>113.53</td>
<td>135</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>118.08</td>
<td>138</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M4</td>
<td>Between</td>
<td>10.13</td>
<td>3</td>
<td>2.08</td>
<td>.10</td>
</tr>
<tr>
<td>Tone of voice of judge toward witness</td>
<td>Within</td>
<td>219.05</td>
<td>135</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>229.19</td>
<td>138</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M5</td>
<td>Between</td>
<td>8.72</td>
<td>3</td>
<td>0.61</td>
<td>.60</td>
</tr>
<tr>
<td>Realism of trial</td>
<td>Within</td>
<td>634.90</td>
<td>134</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>643.62</td>
<td>237</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Conversely, the same five manipulation checks were used on the four trials that showed both judge and the witness. Table Seven reveals that the juror's perception of attitude, head and body movements of the judge, were significantly different for both head and body. In addition, head but not body was significant for the tone of voice manipulation check and neither head nor body affected the perception of the realism of the trial. In short, the manipulation checks confirmed that the two main effects were significant.

There were no two-way interactions for the first three checks, (attitude, head, and body) but there were two-way interactions for voice and realism. It is not surprising that head orientation would influence the perception of the tone of voice of the judge, and given the two camera experimental design, a two way interaction on realism was anticipated as well.
Table 7. ANOVA of the manipulation checks for the four trials of judge and witness.

<table>
<thead>
<tr>
<th>Manipulation</th>
<th>source of variation</th>
<th>sum of squares</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1</td>
<td>Head Orient</td>
<td>115.98</td>
<td>1</td>
<td>41.76</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Body</td>
<td>9.76</td>
<td>1</td>
<td>3.51</td>
<td>.05</td>
</tr>
<tr>
<td></td>
<td>2-way Interactions</td>
<td>0.02</td>
<td>1</td>
<td>0.01</td>
<td>.99</td>
</tr>
<tr>
<td></td>
<td>Orient Body</td>
<td>0.02</td>
<td>1</td>
<td>0.01</td>
<td>.99</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>477.63</td>
<td>172</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>623.79</td>
<td>175</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M2</td>
<td>Head Orient</td>
<td>148.51</td>
<td>1</td>
<td>51.90</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Body</td>
<td>11.61</td>
<td>1</td>
<td>4.05</td>
<td>.04</td>
</tr>
<tr>
<td></td>
<td>2-way Interactions</td>
<td>0.53</td>
<td>1</td>
<td>0.18</td>
<td>.99</td>
</tr>
<tr>
<td></td>
<td>Orient Body</td>
<td>0.53</td>
<td>1</td>
<td>0.18</td>
<td>.99</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>492.16</td>
<td>172</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>678.22</td>
<td>175</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M3</td>
<td>Head Orient</td>
<td>50.58</td>
<td>1</td>
<td>21.46</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Body</td>
<td>74.38</td>
<td>1</td>
<td>31.56</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>2-way Interactions</td>
<td>0.06</td>
<td>1</td>
<td>0.02</td>
<td>.99</td>
</tr>
<tr>
<td></td>
<td>Orient Body</td>
<td>0.06</td>
<td>1</td>
<td>0.02</td>
<td>.99</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>405.39</td>
<td>172</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>562.85</td>
<td>175</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M4</td>
<td>Head Orient</td>
<td>20.89</td>
<td>1</td>
<td>10.60</td>
<td>.002</td>
</tr>
<tr>
<td></td>
<td>Body</td>
<td>0.29</td>
<td>1</td>
<td>0.14</td>
<td>.99</td>
</tr>
<tr>
<td></td>
<td>2-way Interactions</td>
<td>17.90</td>
<td>1</td>
<td>9.08</td>
<td>.003</td>
</tr>
<tr>
<td></td>
<td>Orient Body</td>
<td>17.90</td>
<td>1</td>
<td>9.08</td>
<td>.003</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>338.84</td>
<td>172</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>379.97</td>
<td>175</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M5</td>
<td>Head Orient</td>
<td>0.06</td>
<td>1</td>
<td>0.01</td>
<td>.99</td>
</tr>
<tr>
<td></td>
<td>Body</td>
<td>5.93</td>
<td>1</td>
<td>1.49</td>
<td>.22</td>
</tr>
<tr>
<td></td>
<td>2-way Interactions</td>
<td>27.58</td>
<td>1</td>
<td>6.92</td>
<td>.009</td>
</tr>
<tr>
<td></td>
<td>Orient Body</td>
<td>27.58</td>
<td>1</td>
<td>6.92</td>
<td>.009</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>685.45</td>
<td>172</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>719.04</td>
<td>175</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table Eight shows the means for head and body orientation for each of the manipulation checks. Manipulations one, two and three were significant for head and body and manipulations four and five, while not significant, both had a two way interaction.
Table 8. Means** for head and body orientation for the four trials with judge and witness.

<table>
<thead>
<tr>
<th>Manipulation</th>
<th>source of variation</th>
<th>Condition High*</th>
<th>Condition Low*</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Judge's attitude</td>
<td>Head</td>
<td>2.98</td>
<td>4.74</td>
</tr>
<tr>
<td>toward witness</td>
<td>Body</td>
<td>3.41</td>
<td>4.23</td>
</tr>
<tr>
<td>M2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Head movement of judge</td>
<td>Head</td>
<td>2.93</td>
<td>4.96</td>
</tr>
<tr>
<td>toward witness</td>
<td>Body</td>
<td>3.45</td>
<td>4.33</td>
</tr>
<tr>
<td>M3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body movement of judge</td>
<td>Head</td>
<td>3.22</td>
<td>4.56</td>
</tr>
<tr>
<td>toward witness</td>
<td>Body</td>
<td>3.11</td>
<td>4.70</td>
</tr>
<tr>
<td>M4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tone of voice of judge</td>
<td>Head</td>
<td>3.18</td>
<td>3.91</td>
</tr>
<tr>
<td>toward witness</td>
<td>Body</td>
<td>3.41</td>
<td>3.64</td>
</tr>
<tr>
<td>M5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Realism of trial</td>
<td>Head</td>
<td>2.44</td>
<td>2.37</td>
</tr>
<tr>
<td></td>
<td>Body</td>
<td>2.57</td>
<td>2.20</td>
</tr>
</tbody>
</table>

*HH = High head, high body  
*HL = High head, low body  
*LH = Low head, high body  
*LL = Low head, low body  

** = The higher the mean score, the more negative the evaluation.
Table Nine compares the manipulation checks of the four trials with the judge and witness with the four trials with the judge absent. The first four checks (attitude, head, body, and voice) confirm that the treatment versus no treatment effect was significant. Conversely, the judge present versus judge absent effect was not significant. This result was expected in that the judge's nonverbal behavior was positive two of the trials and negative the other two, thus canceling out any effect when considered in the aggregate.

In addition, Table Nine shows a significant two-way interaction for all five manipulation checks. The two-way interactions occurred because the no-judge trial means remained nearly constant throughout the four trials while the scores on the trials with judge went up or down, depending upon the treatment. Thus, given the nature of this experimental design, the two-way interactions were expected.
Table 9. ANOVA of the manipulation checks comparing the four trials with the judge and witness with the four trials with the judge absent.

<table>
<thead>
<tr>
<th>Manipulation</th>
<th>source of variation</th>
<th>sum of squares</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1 Judge</td>
<td>2.03</td>
<td>1</td>
<td>0.95</td>
<td>.99</td>
<td></td>
</tr>
<tr>
<td>Judge's Treat</td>
<td>82.66</td>
<td>3</td>
<td>12.89</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td>attitude toward witness</td>
<td>65.84</td>
<td>3</td>
<td>10.27</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td>M2 Judge</td>
<td>1.44</td>
<td>1</td>
<td>0.73</td>
<td>.99</td>
<td></td>
</tr>
<tr>
<td>Head movement of judge toward witness</td>
<td>103.19</td>
<td>3</td>
<td>17.43</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td>M3 Judge</td>
<td>3.06</td>
<td>1</td>
<td>1.81</td>
<td>.17</td>
<td></td>
</tr>
<tr>
<td>Body movement of judge toward witness</td>
<td>75.48</td>
<td>3</td>
<td>14.84</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td>M4 Judge</td>
<td>4.87</td>
<td>1</td>
<td>2.67</td>
<td>.09</td>
<td></td>
</tr>
<tr>
<td>Tone of voice of judge toward witness</td>
<td>26.12</td>
<td>3</td>
<td>4.77</td>
<td>.003</td>
<td></td>
</tr>
<tr>
<td>M5 Judge</td>
<td>6.58</td>
<td>1</td>
<td>1.52</td>
<td>.21</td>
<td></td>
</tr>
<tr>
<td>Realism of trial</td>
<td>27.04</td>
<td>3</td>
<td>2.09</td>
<td>.10</td>
<td></td>
</tr>
<tr>
<td>2-way Interactions</td>
<td>15.26</td>
<td>3</td>
<td>1.17</td>
<td>.31</td>
<td></td>
</tr>
<tr>
<td>Residual</td>
<td>1320.35</td>
<td>306</td>
<td>1.17</td>
<td>.31</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1370.95</td>
<td>313</td>
<td>1370.95</td>
<td>313</td>
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</tr>
</tbody>
</table>
Table Ten shows the means for all eight treatments for each of
the manipulation checks.

Table 10. Means** for the manipulation checks for all eight trials.

<table>
<thead>
<tr>
<th>Manipulation</th>
<th>Condition</th>
<th>HH</th>
<th>HL</th>
<th>LH</th>
<th>LL</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1</td>
<td>Judge</td>
<td>2.81</td>
<td>4.49</td>
<td>3.31</td>
<td>4.93</td>
</tr>
<tr>
<td></td>
<td>No judge</td>
<td>3.89</td>
<td>3.88</td>
<td>3.63</td>
<td>3.62</td>
</tr>
<tr>
<td>M2</td>
<td>Judge</td>
<td>2.71</td>
<td>4.77</td>
<td>3.34</td>
<td>5.11</td>
</tr>
<tr>
<td></td>
<td>No judge</td>
<td>4.04</td>
<td>3.85</td>
<td>3.73</td>
<td>3.78</td>
</tr>
<tr>
<td>M3</td>
<td>Judge</td>
<td>2.76</td>
<td>3.74</td>
<td>4.06</td>
<td>5.20</td>
</tr>
<tr>
<td></td>
<td>No judge</td>
<td>4.07</td>
<td>3.88</td>
<td>3.66</td>
<td>3.60</td>
</tr>
<tr>
<td>M4</td>
<td>Judge</td>
<td>2.93</td>
<td>4.26</td>
<td>3.63</td>
<td>3.65</td>
</tr>
<tr>
<td></td>
<td>No judge</td>
<td>4.19</td>
<td>4.09</td>
<td>3.53</td>
<td>3.67</td>
</tr>
<tr>
<td>M5</td>
<td>Judge</td>
<td>2.31</td>
<td>3.06</td>
<td>2.69</td>
<td>1.82</td>
</tr>
<tr>
<td></td>
<td>No judge</td>
<td>2.74</td>
<td>3.12</td>
<td>2.42</td>
<td>2.77</td>
</tr>
</tbody>
</table>

*Treatments
HH = High head, high body
HL = High head, low body
LH = Low head, high body
LL = Low head, low body

** = The higher the mean score, the more negative the evaluation.
In addition to no significant differences on the manipulation checks between the four trials with no judge, Table Eleven quantifies that for the three factors of source credibility, there were no significant differences as well. Trust was nearly significant but did not quite meet the .05 \textit{a priori} level of significance.

Table 11. ANOVA on the three factors of source credibility comparing the four trials with no judge.

<table>
<thead>
<tr>
<th>Factor</th>
<th>source of variation</th>
<th>sum of squares</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>Between</td>
<td>7.55</td>
<td>3</td>
<td>2.60</td>
<td>.05</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>123.92</td>
<td>128</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>131.48</td>
<td>131</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expert</td>
<td>Between</td>
<td>4.06</td>
<td>3</td>
<td>1.20</td>
<td>.31</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>144.18</td>
<td>128</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>148.25</td>
<td>131</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dynamism</td>
<td>Between</td>
<td>5.27</td>
<td>3</td>
<td>1.96</td>
<td>.12</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td>116.47</td>
<td>130</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>121.74</td>
<td>133</td>
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<td></td>
</tr>
</tbody>
</table>
Table Twelve is an analysis of variance of the three factors of source credibility, comparing the four trials with the judge and witness with the four trials with the judge absent.

The results show that one main effect—treatment made a significant difference. In contrast, judge present versus judge absent did not make a significant difference. In addition, there were two-way interactions for each of the three factors of source credibility.

As was the case with the manipulation checks, judge present versus judge absent was not significant because the judge's nonverbal behaviors were positive two of the trials and negative the other two, thus canceling out any effect when considered in the aggregate.

Further, the two-way interactions occurred because the no-judge trials means remained constant throughout the four control trials while the scores on the trials with the judge went up or down, depending upon the treatment. Therefore, given the nature of this experimental design, the two-way interactions were not unexpected.
Table 12. ANOVA of the three factors of source credibility comparing the four trials with the judge and witness with the four trials with the judge absent.

<table>
<thead>
<tr>
<th>Factor</th>
<th>source of variation</th>
<th>sum of squares</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust</td>
<td>Judge</td>
<td>0.03</td>
<td>1</td>
<td>0.02</td>
<td>.99</td>
</tr>
<tr>
<td></td>
<td>Treat</td>
<td>49.19</td>
<td>3</td>
<td>12.62</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>2-way Inter-actions</td>
<td>58.97</td>
<td>3</td>
<td>15.13</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Judge Treat</td>
<td>58.97</td>
<td>3</td>
<td>15.13</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>348.23</td>
<td>268</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>457.08</td>
<td>275</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expert</td>
<td>Judge</td>
<td>0.63</td>
<td>1</td>
<td>0.44</td>
<td>.99</td>
</tr>
<tr>
<td></td>
<td>Treat</td>
<td>50.04</td>
<td>3</td>
<td>11.62</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>2-way Inter-actions</td>
<td>51.69</td>
<td>3</td>
<td>12.00</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Judge Treat</td>
<td>51.69</td>
<td>3</td>
<td>12.00</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>384.62</td>
<td>268</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>486.36</td>
<td>275</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dynamism</td>
<td>Judge</td>
<td>3.86</td>
<td>1</td>
<td>3.63</td>
<td>.05</td>
</tr>
<tr>
<td></td>
<td>Treat</td>
<td>11.43</td>
<td>3</td>
<td>3.59</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>2-way Inter-actions</td>
<td>13.49</td>
<td>3</td>
<td>4.23</td>
<td>.006</td>
</tr>
<tr>
<td></td>
<td>Judge Treat</td>
<td>13.49</td>
<td>3</td>
<td>4.23</td>
<td>.006</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>284.55</td>
<td>268</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>315.18</td>
<td>275</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table Thirteen lists the means of the three factors of source credibility comparing the four trials with the judge and witness with the four trials with the judge absent. Table Thirteen will not appear until the subsequent discussion of Hypothesis One.

In conclusion, all of the manipulation checks point to the fact that the control trials did not differ significantly and that the independent variables were indeed effectively manipulated.

Test of the Hypotheses

The three hypotheses in this experiment were tested by means of a two-way factorial analysis of variance. The \textit{a priori} level designated for all analyses was $< .05$.

\textbf{Hypothesis 1.} The first hypothesis suggested that when a judge's nonverbal behaviors are positive or negative toward a witness, the three factors of source credibility (trustworthiness, expertness, and dynamism) will move in the suggested direction, specifically:

Positive and negative nonverbal behaviors by a judge toward a witness will create correspondingly positive or negative ratings of source credibility of that witness by mock jurors.

Table Thirteen lists the means for every condition and demonstrates that for all four trials versus their controls, over all three factors, the ratings of source credibility moved either in the positive or negative direction as predicted. These findings clearly support Hypothesis One. However, while there was movement in all cases, all of the mean differences were not significant.
Table 13. Means** for the three factors of source credibility for all eight trials.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Condition</th>
<th>HH</th>
<th>HL</th>
<th>LH</th>
<th>LL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust</td>
<td>Judge</td>
<td>2.39</td>
<td>4.00</td>
<td>2.90</td>
<td>4.54</td>
</tr>
<tr>
<td></td>
<td>No judge</td>
<td>3.35</td>
<td>3.38</td>
<td>3.80</td>
<td>3.18</td>
</tr>
<tr>
<td>Expert</td>
<td>Judge</td>
<td>2.27</td>
<td>3.84</td>
<td>2.66</td>
<td>4.55</td>
</tr>
<tr>
<td></td>
<td>No judge</td>
<td>3.21</td>
<td>3.15</td>
<td>3.47</td>
<td>3.01</td>
</tr>
<tr>
<td>Dynamism</td>
<td>Judge</td>
<td>2.89</td>
<td>3.68</td>
<td>3.26</td>
<td>3.90</td>
</tr>
<tr>
<td></td>
<td>No judge</td>
<td>3.79</td>
<td>3.37</td>
<td>3.41</td>
<td>3.79</td>
</tr>
</tbody>
</table>

*Treatments:
HH = High head, high body
HL = High head, low body
LH = Low head, high body
LL = Low head, low body

** = The higher the mean score the more negative the evaluation.

Specifically, Table Fourteen shows that for treatment HH (high head, high body) there was a significant difference for all three factors of source credibility. Treatment HL (high head, low body) was not significant for any of the three factors. Treatment LH (low head, high body) was significant for trustworthiness but not for expertness nor dynamism. Treatment LL (low head, low body) was significant for trustworthiness and expertness, but not for dynamism.
Table 14. Significant variance for the three factors of source credibility comparing each treatment with its control.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Factor</th>
<th>HH</th>
<th>HL</th>
<th>LH</th>
<th>LL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Judge v. no judge</td>
<td>Trust</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Judge v. no judge</td>
<td>Expert</td>
<td>*</td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Judge v. no judge</td>
<td>Dynamism</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Student-Newman-Keuls at the .05 level.

**Treatments**
- HH = High head, high body
- HL = High head, low body
- LH = Low head, high body
- LL = Low head, low body

Hypotheses 2 & 3. The second and third hypotheses predicated a more immediate head and body orientation by the judge toward the witness would communicate a more positive attitude, specifically:

More immediate head orientation by the judge communicates a relatively greater positive attitude toward the witness than does less immediate head orientation by the judge toward the witness, as determined by the juror, and Hypothesis Three:

More immediate body orientation by the judge communicates relatively greater positive attitude toward the witness, than does less immediate body orientation by the judge toward the witness, as determined by the juror.

Table Fifteen, an analysis of variance for the three factors of source credibility, comparing the four trials of judge and witness, concludes that head orientation is significant for all three factors (trustworthiness, expertness, and dynamism) of source credibility.
Clearly, Table Fifteen evidences the assertions contained in Hypotheses Two and Three.

Table 15. ANOVA on the three factors of source credibility comparing the four trials of judge and witness.

<table>
<thead>
<tr>
<th>Factor</th>
<th>source of variation</th>
<th>sum of squares</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust</td>
<td>Head Orient</td>
<td>80.28</td>
<td>1</td>
<td>49.28</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Body</td>
<td>9.78</td>
<td>1</td>
<td>6.00</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>2-way Interactions</td>
<td>0.49</td>
<td>1</td>
<td>0.30</td>
<td>.99</td>
</tr>
<tr>
<td></td>
<td>Orient Body</td>
<td>0.49</td>
<td>1</td>
<td>0.30</td>
<td>.99</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>241.08</td>
<td>148</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>343.38</td>
<td>151</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expert</td>
<td>Head Orient</td>
<td>74.11</td>
<td>1</td>
<td>40.10</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Body</td>
<td>11.55</td>
<td>1</td>
<td>6.25</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>2-way Interactions</td>
<td>2.75</td>
<td>1</td>
<td>1.49</td>
<td>.22</td>
</tr>
<tr>
<td></td>
<td>Orient Body</td>
<td>2.75</td>
<td>1</td>
<td>1.49</td>
<td>.22</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>273.52</td>
<td>148</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>373.97</td>
<td>151</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dynamism</td>
<td>Head Orient</td>
<td>13.85</td>
<td>1</td>
<td>11.79</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Body</td>
<td>1.45</td>
<td>1</td>
<td>1.24</td>
<td>.26</td>
</tr>
<tr>
<td></td>
<td>2-way Interactions</td>
<td>1.84</td>
<td>1</td>
<td>1.57</td>
<td>.20</td>
</tr>
<tr>
<td></td>
<td>Orient Body</td>
<td>1.84</td>
<td>1</td>
<td>1.57</td>
<td>.20</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>173.73</td>
<td>148</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>192.79</td>
<td>151</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Tables Seventeen, Eighteen, and Nineteen compare all eight trials with each other for the three factors of source credibility.

Table 17. Significant variance for the trustworthiness factor of source credibility comparing all eight trial treatments.

<table>
<thead>
<tr>
<th>Treatment**</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8**</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>*</td>
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<td>*</td>
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</tr>
<tr>
<td>3</td>
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<td>*</td>
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<td></td>
</tr>
<tr>
<td>4</td>
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<tr>
<td>5</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

* Student Newman-Keuls at the .05 level.

** The eight trial treatments:
- Treatment 1 = High head, high body
- Treatment 2 = High head, low body
- Treatment 3 = Low head, high body
- Treatment 4 = Low head, low body
- Treatment 5 = High head, high body, control
- Treatment 6 = High head, low body, control
- Treatment 7 = Low head, high body, control
- Treatment 8 = Low head, low body, control
Table 18. Significant variance for the expertness factor of source credibility comparing all eight trial treatments.

<table>
<thead>
<tr>
<th>Treatment**</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>*</td>
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<td></td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td>*</td>
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<td></td>
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<td></td>
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<td>4</td>
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<td>5</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>6</td>
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<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Student-Newman-Keuls at the .05 level.

** The eight trial treatments:
Treatment 1 = High head, high body
Treatment 2 = High head, low body
Treatment 3 = Low head, high body
Treatment 4 = Low head, low body
Treatment 5 = High head, high body, control
Treatment 6 = High head, low body, control
Treatment 7 = Low head, high body, control
Treatment 8 = Low head, low body, control
Table 19. Significant variance for the dynamism factor of source credibility comparing all eight trial treatments.

<table>
<thead>
<tr>
<th>Treatment**</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>*</td>
<td>*</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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* Student Newman-Keuls at the .05 level.

** The eight trial treatments:
- Treatment 1 = High head, high body
- Treatment 2 = High head, low body
- Treatment 3 = Low head, high body
- Treatment 4 = Low head, low body
- Treatment 5 = High head, high body, control
- Treatment 6 = High head, low body, control
- Treatment 7 = Low head, high body, control
- Treatment 8 = Low head, low body, control
While nonverbal communication has been shown to be important in the process of communication, the legal system has not acknowledged its importance in the courtroom. Judicial impartiality is considered the foundation of our adversary system. Close examination of the communication process within the courtroom, however, reveals that judicial impartiality may be highly illusory. Harbinger (1972) and Greenbaum (1975) have speculated that a judge might communicate his feelings about a witness nonverbally and that in doing so would influence the juror. There have been no empirical studies which have investigated the nonverbal judge/juror influence process. Therefore, the purpose of this investigation was to determine the degree to which nonverbal behaviors on the part of the judge could affect the determination of the credibility of a witness by a mock juror.

To test this speculation, a trial was created, with the head and body gestures of the judge toward the witness manipulated positively or negatively. The videotaping of the trial utilized two cameras in order to effectively isolate the nonverbal behaviors of the judge. A second camera simultaneously recorded the trial using identical shots as camera one but with one essential difference: When the witness took the stand to testify, camera one showed the judge and the witness, whereas camera two showed the witness alone.

The results of this study tend to support the hypothesis that positive and negative nonverbal behaviors by a judge toward a witness
did have a significant impact upon the determination of the three factors of source credibility (trustworthiness, expertness and dynamism) as determined by mock jurors. The nonverbal effect was found in the predicted direction confirming a similar phenomena discovered in experimental research by Rosenthal (1967, 1969) and Rosenberg (1969) that subtle nonverbal cues may influence the outcome of an experiment. This also suggests that the same nonverbal influence process that has been documented in the experimental context may occur in the courtroom as well.

In addition, the second and third hypothesis which predicted that more immediate head and body orientation by the judge toward the witness would communicate a more positive attitude was confirmed as well. However, while the nonverbal effect did occur in the predicted direction, the differences were only significant when the independent variable's polarities (positive or negative) were consistent. In other words, (positive) high head/(positive) high body and (negative) low head/(negative) low body produced a significant effect. In contrast, when the polarity was mixed (positive) high head/(negative) low body or (negative) low head/(positive) high body, there was no significant effect. It appears that when the nonverbal behaviors' polarities were mixed they tended to cancel out the influence of each other. This means that different combinations of nonverbal gestures can have a unique impact depending upon the combination. More investigation is needed to determine which combinations of nonverbal gestures will negate each other. The confirmation of these hypotheses does tend to substantiate the suspicions on the part of jurors (Head, 1967),
lawyers (Mckelway, 1944 and Conner, 1965), and social scientists (Greenbaum, 1975) that a judge's nonverbal behaviors might influence the juror's perceptions of a witness.

Despite the confirmation of these hypotheses, there are at least six important methodological shortcomings that mandate caution when making any generalizations from this investigation.

First, pretest two measured the three factors of source credibility on the basis of the mock jurors being shown photographic slides of the two lawyers and the plaintiff and defendant. The results indicated that the plaintiff was viewed as significantly more negative (p < .05) on two of the three dimensions (trustworthiness and expertness) of source credibility. These differences suggest the possibility that the differences discovered in the trial may have been due to physical attractiveness and not to the nonverbal influence of the judge.

This possibility is diminished somewhat when it is remembered that there are many factors that contribute to the mock juror's overall perception of a witness. Besides physical attractiveness, the juror also considers other things such as the witness's demeanor while testifying, what he said, how he said it, his tone of voice, his nonverbal gestures, and the context; all contribute to form the juror's ultimate determination of the witness's credibility.

In contrast to pretest two which showed just two slides of the trial participants, the actual videotaped trial offered the mock juror much more information on which to make a judgment about the plaintiff's credibility. Kukla and Kessler (1978) stated that in an actual trial the juror has more to consider than just physical attractiveness:
In a real trial several nonverbal stimuli other than physical attractiveness and a great variety of verbal information are available to the juror for potential use in their decision making which presumably involves a complex integration of evidential and non-evidential information (p. 369).

In addition Kulka and Kessler (1978) suggested that the potential influence of physical attractiveness may be diminished when other information is available:

...it may well be that the general stereotypic impact of physical attractiveness is less powerful or consistent when sufficient number of other evaluation relevant sources of information are available (p. 375).

Furthermore, the Kulka and Kessler (1978) study found that a comparison between the attractive plaintiff (AP) against the unattractive defendant (UD) yielded no substantial differences between the two on the other measures of source credibility used in that study:

...the impact of physical attractiveness on jurors' decisions may not operate primarily through attributions of credibility, honesty or a general positivity bias. A comparison of mean evaluation of the AP-UD, no slide, and the UP-AD conditions showed no substantial differences in their attributions of honesty, goodness, cautiousness, and trustworthiness (cf. Snyder & Rothbart, 1971) (p. 374).

Despite the potential factors that may have mitigated the influence of the differences in physical attractiveness, it is possible that the differences discovered when showing slides may be a significant confounding variable in this study.

In addition to the problem of physical attractiveness, the fictional nature of this mock-created trial is a second major shortcoming of this study. Bermant, McGuire, McKinely and Salo (1974),
Miller, Bender, Florence & Nicholson (1974), and Kerlinger (1973) discuss the many problems that occur in behavioral research from making generalizations about real life situations from experimentally reconstructed contexts. The case used in this study was actually settled out of court in the plaintiff's favor. Thus, the trial was merely a creation based upon the facts of the case. The nature of the experiment precluded the use of an actual trial thus care should be taken in making generalizations about actual trials from this mock trial.

Third, the subjects in this experiment were college students and not actual jurors. The two groups may not be equally susceptible to the nonverbal influence of the judge. However, Forston (1968) concluded that there was no major difference in employing actual or student jurors for purposes of experimentation.

Fourth, the student jurors only saw a short portion of the trial and did not deliberate. In addition they were questioned immediately about the influence of the judge's nonverbal behavior. Rosnow and Robinson (1967) in their work on primacy and recency found that the impact of communication often diminished over time. Thus, it is possible that in an actual trial the impact of a judge's nonverbal behaviors might also be reduced over the length of the trial.

The fifth shortcoming is that the dependent measure may not have been the most appropriate for the courtroom. As Tucker (1971) pointed out, the semantic differential needs to be changed depending upon the subject, time, and context of the communication. Applebaum and Anatol (1974) concluded that trustworthiness and expertness have emerged from every subject time and context factorial analysis. Therefore, those
two dimensions were probably satisfactory. However, further investigation is needed to determine the most appropriate scales for use in this type of mock courtroom research.

Sixth, this study assumed that the judge was the only significant authority figure in the courtroom. In actual practice this is not the case. Conner (1974) reported that the two lawyers often compete with each other and with the judge as an authority figure and each is capable of influencing the juror. The judge is probably the dominant figure. A recent survey of more than five thousand jurors in Los Angeles, conducted by California Chief Justice Rose Bird's 16 member Special Committee to Study Court Congestion (1978), reported that jurors were six-times more frequently impressed by the judges than the lawyers. Despite this finding that the judge appears to be the dominant authority figure in the courtroom, it is still possible that a lawyer might be able to counteract the nonverbal behaviors of the judge.

IMPLICATIONS

The Legal System

The results of this study might be of interest to the legal system. Figure II is a model of the inadequate procedural safeguards in the present system.

The triangle on the left represents a complete picture of the communication channels actually utilized by every source: in this case, the judge. The small box titled "procedural safeguards" demonstrates how safeguards filter only the tip of the communication channel's messages allowing the nonverbal and paralinguistic channels to be
Figure 2. The Model of the Problem
received unfiltered by the juror.

Greenbaum (1975, pp. 1281-1288) documented the inadequacies of the legal system's procedural safeguards in precluding any nonverbal influence by the judge. He suggested that part of the reluctance by the courts to acknowledge the potential biasing effects of a judge's nonverbal behaviors has been the lack of empirical quantification. Without such evidence, the possible influence of nonverbal behaviors is but intelligent speculation. The results of this study should begin to confirm some of those speculations.

This study took on an added burden of proof by choosing very subtle nonverbal behaviors for investigation. It was reasoned that if very subtle nonverbal behaviors could produce a significant effect on source credibility more overt nonverbal cues might have additional impact.

**Source Credibility Research**

Chapter One surveyed research on extrinsic factors of source credibility including such areas as the verbal introduction, visual aids, various modes of media, delivery styles, social status, physical attractiveness, sex, race and moral character. None of the studies cited examined the impact of nonverbal communication by a third party as it affects the credibility of the source. Pearce and Brommel (1972) found that source credibility was significantly influenced by a relevant other's verbal introduction. The present study found that the same thing might happen on the nonverbal level as well.

Future research should investigate the potential effects both in the courtroom and in other contexts, of smiles, frowns, head shakes,
head nods, leg movements and paper and pencil manipulations. More study is needed to determine which nonverbal gestures in what combinations at what intensity will produce significant changes in source credibility.

Additional Research

At least four additional areas of research are suggested by the results of this study.

For example, states such as Colorado and Florida allow for videotaping of actual trials. A content analysis, similar to that suggested by Forstan (1972) for jury deliberation, of the nonverbal gestures of the judge during the trial may shed additional light on the potential influence of nonverbal communication of the judge toward the credibility of a witness and ultimately the outcome of a trial.

Second, another investigation might direct efforts toward discovering possible antidotes to potential nonverbal bias by the judge. McGuire's (1964) theory of inoculation research discovered that a forewarning of persuasive intent resulted in the forewarned subject significantly resisting the subsequent "persuasive" communication. Might the same process inoculate a subject against nonverbal influence as well? This could be easily tested by warning half the subjects in the study that the judge would be reacting nonverbally toward the witness but that the nonverbal should be ignored. It is hypothesized that inoculation would significantly diminish the potential influence of the judge's nonverbal behavior toward a witness.

Third, physical attractiveness has been found by Kessler and Kukla (1978) and others to be an important factor in a jury trial.
The possible influence of a judge's nonverbal behaviors on physical attractiveness might be another fruitful area of inquiry. For example, an attractive plaintiff and unattractive defendant would each testify, with the judge's nonverbal behavior toward each being manipulated as positive or negative. It is hypothesized that positive nonverbal behaviors by a judge toward an unattractive witness will result in that witness being evaluated as significantly more attractive.

Fourth, little is known about the type of personality, age, sex, and occupation that are most susceptible to the nonverbal influence by the judge. Replication of this study with actual jurors could shed additional light on this question.

Despite the serious shortcomings of the present study, it does offer empirical indication that subtle nonverbal behaviors by a judge may influence a witness's source credibility and, potentially, the outcome of a trial. If judicial impartiality is a goal of the courts then it is time that the legal system acknowledge the potential impact of nonverbal communication. To do so would mean recognizing contemporary theories of human communication that suggest that words are but a part of a larger and more complex process that includes many other codes most notably, nonverbal.
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APPENDIX A
PRETEST ATTITUDE QUESTIONNAIRE
CONTENT
You are about to see slides of four individuals that were involved in an automobile accident negligence trial:

Each one of the four individuals will be flashed onto the screen and their role in the trial identified.

In this study we are trying to determine, just on the basis of their appearance, how credible you find these individuals.

When you have finished evaluating each individual in terms of the twenty-five sets of adjectives, raise your hand and we will then proceed to the next slide.

Please only mark the items that you feel accurately describe the individual. If a particular set of words do not seem to apply then mark the center space. (See Appendix C for scales.)
APPENDIX B
PRETEST ATTITUDE QUESTIONNAIRE
PHYSICAL ATTRACTIVENESS
You are about to see slides of four individuals that were involved in an automobile accident negligence trial:

Each one of the four individuals will be flashed onto the screen and their role in the trial identified.

In this study we are trying to determine, just on the basis of their appearance, how credible you find these individuals.

When you have finished evaluating each individual in terms of the twenty-five sets of adjectives, raise your hand and we will then proceed to the next slide.

Please only make the items that you feel accurately describe the individual. If a particular set of words do not seem to apply, then mark the center space. (See Appendix C for scales.)
APPENDIX C
POST TRIAL ATTITUDE QUESTIONNAIRE
Instructions: The following are a series of attitude scales. You are asked to evaluate the witness in terms of the adjectives on each scale. For example, if you think the witness is very tall, you might mark the following scale as below:


Of course, if you consider the witness to be shorter, you would mark your "X" nearer the short adjective. The middle space on each scale should be considered "neutral." Mark this space if you feel neither adjective on the scale applies to the witness or if you feel both apply equally.

TENSE : ____ : ____ : ____ : ____ : ____ : RELAXED
MEEK : ____ : ____ : ____ : ____ : ____ : AGGRESSIVE
UNATTRACTIVE:ATTRACTION
UNINFORMED:INFORMED
COMPOSED:EXCITABLE
INCOMPETENT:COMPETENT
EXPERT:INEXPERT
PASSIVE:ACTIVE
IMPRESSIVE:UNIMPRESSION
RELIABLE:UNRELIABLE
INTELLIGENT:UNINTELLIGENT
APPENDIX D

POST TRIAL MANIPULATION CHECK
1. In evaluating this trial, how would you rate the attitude of the judge toward the witness?
   positive :_____ :_____ :_____ :_____ :_____ : negative

2. How would you evaluate the head movement, if any, of the judge toward the witness?
   positive :_____ :_____ :_____ :_____ :_____ : negative

3. How would you evaluate the body movement, if any, of the judge toward the witness?
   positive :_____ :_____ :_____ :_____ :_____ : negative

4. How would you evaluate the tone of voice of the judge toward the witness?
   positive :_____ :_____ :_____ :_____ :_____ : negative

5. Given that you saw but a short portion of this trial, how realistic did the judge, lawyers, witnesses, courtroom appear to you?
   realistic :_____ :_____ :_____ :_____ :_____ : unrealistic

6. Did you know any of the participants in this trial?

7. Did you have any knowledge about this study before viewing the trial?

8. Any additional comments you wish to make?
APPENDIX E

INSTRUCTIONS TO STUDENT JURORS

BEFORE AND AFTER THE TRIAL
INSTRUCTIONS TO STUDENT JURORS
BEFORE AND AFTER THE TRIAL

Hello, my name is Tom Miller. You are here to see a videotaped trial in which the two people involved in a car accident will give their account of the incident.

The attorney for each side will make a brief opening statement. The first witness will be the party suing, also known as the plaintiff. When the trial concludes, the judge will instruct you as to the law, then you will be asked to go to the jury room and deliberate the questions of fact and their relationship to the law. You will know what each side claims or "says" the fact are. However, you and the other members of the jury must carefully consider all of the evidence brought before the Court and determine what the facts really are. Once you have deliberated and determined the facts, you will then apply the judge's instructions on the law to the facts which you find to be the correct version.

No notes may be taken by you during the trial. There can be no smoking in this room, however, you may smoke in the deliberation room. There will be a few short breaks during the trial in order to allow changing of the video tape. Please do not discuss this trial with your fellow jurors until you are actually in the deliberation room. You may talk to others, but just not about the trial.

Please consider this as a real responsibility and listen carefully to the trial.

Are you able to see the screen well? Please raise your hand if you are having trouble hearing or seeing the trial at any time.
(After the first break, the experimenter re-enters the room and says:)

While the tape is being set up, would you please fill in the following form? (The subjects are handed the semantic differential.) When you finish the form, please raise your hand and I will pick it up.

(Upon completion, the manipulation check is then distributed to the subjects.) Please raise your hand when you have completed the second form.

(As the second form is completed and picked up, the subjects are orally debriefed.)

INSTRUCTION TO STUDENT JURORS AFTER BOTH QUESTIONNAIRES HAVE BEEN COMPLETED

Thank you very much for your cooperation today (tonight). I know that this has been a long day (night) for you all and we greatly appreciate your help in this study. In order for our experiment to work properly, we must ask that you do not discuss this trial or anything we have asked you to do here today (tonight) with your friends and fellow students. My name is Tom Miller. If you are interested in the results of this study, or in the specific things that we are looking at, please feel free to come to my office (room number is given) to discuss the experiment. Thank you again for working so hard for us today (tonight).
APPENDIX F
INSTRUCTION FOR THE JUDGE'S
NONVERBAL BEHAVIORS
DURING THE TRIALS
Trial One

INSTRUCTIONS FOR JUDGE

Technical name: HIGH HIGH (HIGH BODY, HIGH HEAD)

Behavior: 80% of the time or 4 out of the 5½ minutes of the plaintiff's testimony, you are HIGH HIGH. 20% of the time or about 80-90 seconds of the testimony, you are not HIGH HIGH. You may break the HIGH HIGH by turning your head away, turning your body away, turning both your head and your body away. You will receive time signals from the jury box.

Trial Two

Technical name: HIGH LOW (HIGH HEAD, LOW BODY)

Behavior: 80% of the time your head is facing the plaintiff. 20% of the time or about 80-90 seconds, your head is turned away from the plaintiff. 80% of the time your body is turned AWAY from the plaintiff. 20% of the time or about 80-90 seconds, your body does turn more toward the plaintiff.

Trial Three

Technical name: LOW HIGH (LOW HEAD, HIGH BODY)

Behavior: 80% of the time your head is turned AWAY from the plaintiff. 20% of the time or about 80-90 seconds, you may look at the plaintiff. 80% of the time your BODY is turned TOWARD the plain-
tiff.

20% of the time or about 80-90 seconds, your body turns away from the plaintiff.

Trial Four

Technical name: LOW LOW (LOW HEAD, LOW BODY)

Behavior: 75% of the time your head and body are turned away from the plaintiff.

20% of the time or about 80-90 seconds, you may look at or turn your body toward the plaintiff.
APPENDIX G

TRANSCRIPT OF TRIAL
TRIAL TRANSCRIPT

(Scene opens to bailiff holding up sign identifying the particular treatment, a,b,c,d, and after a full 20 seconds of blank tape, the trial begins. The first shot is of the bench. The judge enters from left and sits down.)

BAILIFF: (B) Hear ye, hear ye, the Superior Court of Los Angeles County is now in session. The Honorable Herbert E. Selwyn now presiding. All rise please.

JUDGE: (J) You may be seated.

B: Call the case of Nichols vs. Dawson.

J: Counsel, would you put your appearances upon the record, please?

(Panel to lawyer's table slowly zoom in.)

PLAINTIFF: (AP) My name is Royal Oakes, Counsel for the plaintiff, your Honor.

ATTORNEY FOR DEFENDANT (AD) My name is Paul Glad and I represent the defendant, Mark Dawson.

(Panel slowly back to judge.)

J: Counsel, do I understand that the jury for this case has already been selected?

AP: Yes, your Honor.

AD: Yes, your Honor.

J: To the defense?

AD: Yes, your Honor.

(Slowly zoom into chest shot of judge.)
We may proceed then. I would say to the jury that you have been selected for a trial that will consist of various parts, the first of which is the opening statement in which counsel for each side will give a brief resume of the facts as they see them and of the legal theories. After the opening statements are completed, testimony by the plaintiff and the defendant will be heard. Closing arguments to you will follow the testimony. Then you will be instructed by me as to the laws that will govern your deliberation. Once the instructions are completed, you will then deliberate to a verdict. We will then start with the opening statements, Counsel for the plaintiff.

Thank you, your Honor. May it please the court, counsel and ladies and gentlemen of the jury, just a preliminary note. I am Royal Oakes, the counsel for the plaintiff in this case, Brad Nichols, who will be seated to my left throughout this case. The plaintiff in a civil matter is the person who complains. The person that brought the suit, that initiated this action, seated at the table next to us, is Mr. Glad, and Mr. Dawson. Mr. Glad is the counsel for the defendant, Mr. Dawson, in this case, the person whom the plaintiff has a complaint against. Now the purpose of
this opening statement is not to tell you any of the facts. It is not to tell you the evidence. It is to tell you what is to come in the trial. The court will instruct you later as to the exact function of the jury, that is to listen to and weigh the evidence together with the laws which the judge will later instruct you.

(Now slowly zoom in to a waist up shot.)

This case started because of an automobile accident that my client, Mr. Nichols, had with the defendant in this case, Mr. Dawson. My client alleges that Mr. Dawson was negligent; that, in fact, while operating his automobile he did not do his duty to act as a responsible citizen. In short, Mr. Dawson was careless in the manner that he operated his automobile, so careless, in fact, that when my client was cut off the road by Mr. Dawson, he had no choice but to drive his 1976 Fiat up the curb and smash into a tree. As a result of that accident, there were numerous injuries to the plaintiff, Mr. Nichols, mostly around the knees and face and he also sustained assorted cuts and bruises. In fact, as a result of this injury, my client will suffer a disability that may last the rest of his life. Because of Mr. Dawson's negligence, we will later ask you to award my client damages.

(Camera stays on lawyers' tables.)
Does the defendant wish to offer an opening statement at this time?

(Camera now focuses on lawyer for the defendant - medium shot - so that plaintiff can also be seen.)

Yes, your Honor. If it pleases the court, counsel, members of the jury: We will contend that my client was not negligent in the operation of his automobile. Unfortunately, we do not have instant replay available to use so we might determine who was actually at fault, so you as jurors will have to hear the facts as they are presented by each side and determine who is telling the truth.

There are three issues that you will be asked to decide in this case. First, was the defendant, Mr. Dawson, negligent or careless in the operation of his automobile so as to cause this accident? Second, was Mr. Nichols contributorily negligent? This means did Mr. Nichols' behavior in any way contribute to this accident? For example, was Mr. Nichols speeding, violating any other rules of the road, or operating his car in an unreasonable manner? We will contend that Mr. Nichols was speeding and that he in fact contributed to the occurrence of this accident. Now why are Mr. Nichols' actions important? They are important because the law says that if you find that Mr. Nichols was negligent or careless in any of the
forementioned areas, you cannot require my client to pay the costs. So even if you do find that my client did have a little to do with the accident, if you also find that Mr. Nichols also contributed to the occurrence of the accident, then you cannot award him any damages. The third issue relates to damages. If you find Mr. Dawson negligent, and Mr. Nichols has not contributed to the accident in any way, then you must decide how much money you will award the plaintiff for damages.

We think that after you carefully consider these three issues, you will conclude that my client, Mr. Dawson, was not negligent, that in fact it was Mr. Nichols, through his high rate of speed, that was the proximate cause of the accident and, therefore, there should be no damages awarded.

(Sits down - camera goes back to judge and pans an authoritative shot.)

J: Plaintiff, are you ready to proceed with your first witness?

AP: Yes, your Honor. Plaintiff calls Brad Nichols.

J: Please be sworn in before you take the witness stand.

(Pans back to show bailiff/witness being sworn in.)

B: Raise your right hand and repeat after me. Do you swear to tell the truth, the whole truth, and nothing but the truth?
NICHOLS: (N)  
I do.

B: You may be seated.

(Camera one shows the judge and the witness, camera two just the witness - (lawyer should stay seated in front of the microphone).)

AP: Now, Brad, will you state your name and local address for the record?

N: My name is Brad Nichols. I reside at 2962 Birch Hollow Drive in Santa Monica.

AP: And how old are you?

N: Twenty-one.

AP: Are you married?

N: Yes, I am.

AP: Are you a licensed driver?

N: Yes, I am.

AP: And how long have you been so?

N: Since the age of 16.

AP: What was the date of the collision in this case?

N: It was on April 26, 1977. Just about 1 year ago.

AP: What kind of car were you driving?

N: I owned and was driving a Fiat 124 Spyder, a two-seater, a roadster convertible.

AP: Was this a new or used car?

N: It was a new car. It was roughly 11 months old at the time of the accident and it was in very good condition.

AP: Where is the car now?
It was declared a total in the collision.

All right, let's go back to the date of the accident, April 26, 1977. Can you tell me what happened?

I was coming home from UCLA and was going down Monroe Street. I then made a left turn on to Madison.

Was it at Madison and Monroe that the defendant forced you off the road?

Objection, your Honor. Counsel is leading the witness.

(Camera two moves to judge then back into original witness only position.)

Sustained. Counsel will refrain from leading the witness.

What occurred as you turned onto Madison?

I began proceeding south on Madison.

What was your speed?

30 miles per hour, 5 miles per hour under the allowable speed limit for Madison.

Then what happened?

I noticed about 6 car lengths ahead of me that the defendant, Mr. Dawson, was pulling onto Madison southbound, into the same lane that I was currently occupying. So I immediately switched to the right hand southbound lane.

Why didn't you brake instead of moving to the right hand lane?

I believed that the car would stay in the left center
lane. I was wrong. The defendant did not remain in the left hand lane but immediately moved into the right hand lane.

AP: Why didn't you brake as Mr. Dawson moved in front of you in the right hand lane?

N: Well, I was so close I would have hit him anyway. Also I noticed that Mr. Dawson had a passenger in the car and had I proceeded I would have hit the passenger door.

AP: Why didn't you pull to the left?

N: Because I noticed there were oncoming cars.

AP: Is then when you hit the tree?

AD: Objection, your Honor. Counsel is leading the witness.

J: The jury will disregard the last question. Please rephrase the question, counsel.

AP: What occurred next?

N: It looked like there would be enough room for me to squeeze in between Mr. Dawson's car and the curb. Unfortunately, there was not. My wheels hit the curb, I lost control of the car and slammed into a tree.

AP: Describe your physical condition after the impact.

N: My head hurt. I was bleeding profusely, my leg and knees hurt. I was taken to the hospital by ambulance.

AP: What happened at the hospital and how long did you remain there?

N: I required surgery on my knees and then my legs were
placed in casts. I remained in the hospital 7 days before being released.

AP: How long was it before the casts were removed and you were up and about?

N: It was 6 weeks before the casts were removed and then it took another 3 months of physical therapy in order for me to walk again.

AP: Were you able to walk during this 4½ month period?

N: No, I was not.

AP: Now that you are back at work, how has this accident affected your performance there?

N: I am unable to bend over and pick up equipment that is stored close to the ground.

AP: What about other problems?

N: I used to ski a lot, but I feel given my present condition, it would be unwise to ski.

AP: Any other problems?

N: In cold and damp weather my legs become stiff and when I partially bend my knees they really ache.

AP: Do you have any idea how long these problems will continue?

N: I feel that I am as recovered as I am going to be. I think there will be little improvement in the future.

AP: I have no further questions.

(Witness goes back to seat. Camera one tightens up on judge only. Camera two swings over to judge only,
J: Tight shot.)

Defendant may cross-examine.

B: Excuse me, your Honor. (Judge is handed document.)

(Bailiff hands judge papers, walking in front of witness to do so.)

J: There are some documents that require my immediate attention. We will recess for one hour. Jurors are reminded of the seriousness of these deliberations. While on your break, do not discuss the trial among yourselves. Any discussion of the case should wait until the end of the trial and I have instructed you as to the rules of law that will govern your deliberation. Court dismissed.

(After long, hard look at jury by judge, camera blacks out.)