

1983

An attributional analysis of the effect of deceptive nonverbal behaviors on simulated jurors' decisions.

Richard Buckey Chesley
University of Massachusetts Amherst

Follow this and additional works at: <https://scholarworks.umass.edu/theses>

Chesley, Richard Buckey, "An attributional analysis of the effect of deceptive nonverbal behaviors on simulated jurors' decisions." (1983). *Masters Theses 1911 - February 2014*. 1393.
Retrieved from <https://scholarworks.umass.edu/theses/1393>

This thesis is brought to you for free and open access by ScholarWorks@UMass Amherst. It has been accepted for inclusion in Masters Theses 1911 - February 2014 by an authorized administrator of ScholarWorks@UMass Amherst. For more information, please contact scholarworks@library.umass.edu.

UMASS/AMHERST



312066013808597

AN ATTRIBUTIONAL ANALYSIS OF THE EFFECT OF
DECEPTIVE NONVERBAL BEHAVIORS ON SIMULATED JURORS' DECISIONS

A Thesis Presented

By

RICHARD BUCKEY CHESLEY

Submitted to the Graduate School of the
University of Massachusetts in partial fulfillment
of the requirements for the degree of

MASTER OF SCIENCE

May 1983

Department of Psychology

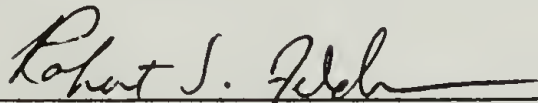
AN ATTRIBUTIONAL ANALYSIS OF THE EFFECT OF
DECEPTIVE NONVERBAL BEHAVIORS ON SIMULATED JURORS' DECISIONS

A Thesis Presented

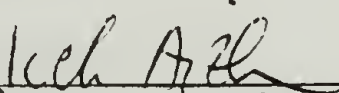
By

RICHARD BUCKEY CHESLEY

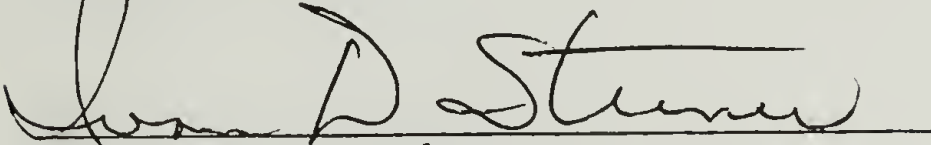
Approved as to style and content by:



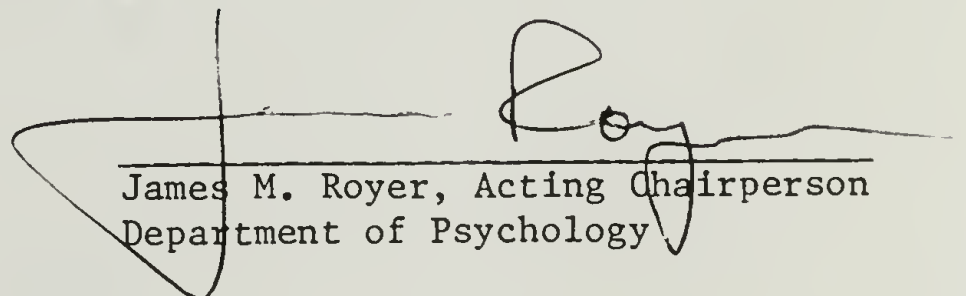
Robert S. Feldman, Chairman of Committee



Icek Ajzen, Member



Ivan Steiner, Member



James M. Royer, Acting Chairperson
Department of Psychology

TABLE OF CONTENTS

LIST OF TABLES iv

LIST OF FIGURES v

Chapter

I. INTRODUCTION 1

II. METHOD 9

 Subjects 9

 Procedure 9

 Dependent Measures 11

 Method of Analysis 12

III. RESULTS 13

 Manipulation checks 13

 Believability of the defendant 17

 Additional defendant ratings 18

 Guilty decisions 18

 Defendant likeability 20

 Jail term 20

 Causal ratings 20

IV. DISCUSSION 22

 Conclusion 29

.

FOOTNOTES 31

REFERENCES 32

APPENDIX A 36

APPENDIX B 43

APPENDIX C 46

LIST OF TABLES

1. Pilot Test One: Comparison of the Nonverbal Behaviors
in each Videotape 15
2. Pilot Test Two: Comparison of the Mean Ratings of
Jurors' Expectations of the Defendant's Emotional
State in each Crime Condition 16
3. Subjects' Mean Ratings of Defendant Believability 19

LIST OF FIGURES

1. The Percentage of Guilty Verdicts on Forced Choice
Measure of Defendant Guilt 21

C H A P T E R I

INTRODUCTION

Interpersonal communication is both verbal and nonverbal. These two channels function most often in a supplementary fashion to each other (Ekman & Friesen, 1969). For example, the message that emanates from a person's facial expression is typically consistent with that person's verbal message. However, these communication modes can sometimes be quite contradictory in the information they impart. In the present study, people's judgements when confronted with incongruent interchannel information were investigated. The focus was on observers' decisions regarding the believability of another's verbal message when delivered in conjunction with nonverbal behaviors characteristic of deception.

It may seem self-evident that the performance of deceptive nonverbal behaviors would act to undermine the credibility of a person's message. There is, in fact, a long history concerning the hypothesis that nonverbal behaviors can reveal the dissembling individual (Darwin, 1872; Freud, 1925; Trovillo, 1939). Nevertheless, with only a few exceptions (e.g., Fay & Middleton, 1941; Marston, 1920), systematic study of the supposition did not begin until rather recently (e.g., Maier, 1966; Mehrabian, 1971). Since then, research has flourished.

Some studies have determined that untrained observers are indeed capable of detecting verbal untruths from nonverbal cues,

albeit with low levels of accuracy. For instance, Ekman and Friesen (1974) placed subjects in a situation in which they were led to say they had enjoyed a negative experience. Results showed that observers could identify when subjects were lying. Similarly, Feldman (1976) led subjects, acting as teachers, to be verbally truthful or deceptive to a student. He found that the judgements of facial nonverbal behaviors reflected whether a student was being truthful or not.

Other research has sought to identify a set of behavioral cues that are reliably indicative of deception. Of interest here are those nonverbal behaviors which are detectable without the aid of special equipment or training. In an exhaustive review of the literature, Zuckerman, DePaulo and Rosenthal (1981) considered all the investigated nonverbal behaviors except those behaviors or combinations of behaviors studied only once. Found to be associated with actual instances of lying were increases in eight behaviors: the frequencies of shoulder shrugs, adaptors (i.e., grooming, scratching, etc.), speech errors, speech hesitations, voice pitch, negative statements made, the degree of pupil dilation, and the amount of irrelevant information verbalized. Found to be associated with judgements of deception or beliefs about how deceivers were expected to act were decreases in gazing, smiling, and speech rate, and an increase in the frequency of voice pitch, postural shifts, speech errors, speech hesitations, and the response latency after being asked a question.

Thus, previous research suggests that certain overt nonverbal behaviors can be indicative of a person's verbal dissembling while other behaviors are included in the behavioral profile expected to characterize the dissembler. The mere presence, however, of certain behaviors does not necessarily guarantee that a judgement of deception will be made.

One reason the behavior-to-judgement relationship is not direct is because the behaviors themselves are not restricted to one meaning. The meaning of a particular nonverbal act is derived in much the same way as are the meanings of more apparent communicative behaviors, like the verbalizations in a conversation, but at a considerably more ambiguous level. Meaning is constructed through an interaction among variables drawn from three general sources: the performer(s) of the act, the interpreter(s) of the act, and the circumstances under which the act is performed.

A major difference between deceptive nonverbal messages and most other kinds of communication is that the message sender usually has no intention of delivering such a signal. It has been suggested that the nonverbal activity engaged in by the person who lies may reflect more generalized internal states such as heightened arousal or may be associated with the increased cognitive processing necessary in constructing and delivering the lie (Zuckerman, et al., 1981). The observer imposes meaning onto the behavior based on his own beliefs or attitudes and his capability to accurately read the accompanying situational cues. These cues are extremely influential on an

observer's interpretation. They can provide a background upon which one might expect deception to occur. For instance, in situations in which the observer surmises a target person can profit from an untruth he may be predisposed to deception interpretations of otherwise ambiguous actions. Because a single behavioral act can convey different messages depending on the kind of complex interaction that takes place among actor, interpreter, and situation, nonverbal signals, per se, should be regarded as having a multi-meaning potential (Knapp, et al., 1978).

Even when deceit actually exists and is accompanied by appropriate cues within a suitable context, there may be individual judgemental differences due to observers' abilities as lie-detectors. For example, DePaulo and Rosenthal (1979) have found that detection ability increases with age when comparing subjects between eight and 33 years of age. Others (Zuckerman, et al., 1975) have found sex differences in the ability to decode nonverbal displays. Individual differences may also be a function of the observers' motivation or some feature of his or her personality (Elliot, 1979; Lipps, 1976; Mitchell & Byrne, 1973), or of attitudes toward unrelated characteristics of the dissembler such as his attractiveness (Izzett & Fishman, 1976), race (Gray & Ashmore, 1976), or socioeconomic status (Gleason & Harris, 1975, 1976).

Several variables have been cited above that may affect the relative strength and meaning of nonverbal cues to deception. An appropriate task for research becomes the specification of those

conditions under which identifiable nonverbal cues are likely to result in judgements of deception.

Attribution theory provides a useful framework for understanding the process involved when an observer utilizes nonverbal cues in making judgements about the meaning of others' behaviors, including those related to deception. Briefly, this theory considers the perceived cause of another's behavior as the basis for the interpretation of that behavior. Observers attribute causes based on their knowledge of personal and environmental forces that are seen to contribute to the target person's actions (Shaver, 1975). Thus, a force perceived to influence the individual's nonverbal behavior should be a critical factor in determining that person's credibility.

Often, an observer is faced with a situation in which several different, sometimes incompatible explanations can be applied to an individual's actions. Both Heider (1958) and Kelley (1971) have indicated that an actor is held less responsible for an action when plausible alternative causes for that behavior are also present. Kelley (1972) has suggested a model for instances in which there are multiple sufficient causes for a given behavior. In these cases, the observer employs a "discounting principle", i.e., any single cause will assume less importance as a determiner of the behavior as other reasons become available for consideration. The relative importance to the observer of one cause will depend on the perceived number and weight of the alternatives. This formulation is

consistent with other analyses of causal attribution (cf., Fishbein & Ajzen, 1975).

Such reasoning would be particularly relevant in the case of judgements made in courtroom trials. Juries must not only consider the evidence, but because factual information is often incomplete and/or contradictory, they must also judge the veracity of the opposing information sources. The credibility of the testifying witnesses is crucial to the judgements made throughout the trial. If, in the course of testifying, a defendant were to display non-verbal cues that could be inferred as indicative of deception, one would expect this information to have a negative impact on a juror's assessment of the believability of that defendant. However, if the juror perceived alternative reasons for the behaviors, one would expect the juror to apply the discounting principle, thus attenuating the relative strength of deception as an explanation.

Deceptive nonverbal behaviors are similar to, and in most cases identical with those cues that have been described as being related to nervousness (Brown, 1961; Kraut & Poe, 1980; Reid & Inbau, 1977). Accordingly, if a person were asked to judge another's believability and if the situation facilitated an interpretation that was consistent with nervousness, then there may be less reliance on deception as a cause for those behaviors. Thus, a target person, albeit appearing anxious, may also be perceived as believable. The circumstances required to create such a situation could be met in the case of a defendant facing relatively serious criminal

accusations.

The discounting principle suggests that in cases of major crimes, where the potential punishment is great, a defendant's non-verbal behaviors, which otherwise could be thought to indicate a lack of verisimilitude, might be more attributable to the defendant's underlying anxiety about severe sentencing. In that case, the defendant would be perceived as relatively believable. In contrast, when the accusation is less serious and the penalties not as great, this alternative would be given less weight in the decision process. Thus, if this attributional model is appropriate, the juror's evaluation should be more directly affected by a deception attribution when the defendant is charged with a relatively minor crime.

In the present experiment, subjects, acting as independent jurors, were presented with a videotaped simulation of a defendant's testimony. The defendant, actually a confederate to the experimenter, was accused of either relatively major or minor crimes. In both cases the verbal testimony was kept identical. In addition, the defendant displayed either behaviors that have been identified as indicative of deception or those that could be described as neutral. Other groups, which read a description of one of the crimes and the transcript of the testimony with no videotape exposure, served to establish a baseline from which the effects of exposure to the nonverbal behaviors could be gauged. So, after reading a description of either a major or minor criminal charge to

which the defendant responded in one of two very different ways nonverbally (or whose nonverbal response was unknown), the subjects responded to questions designed to elicit their impressions of the defendant, particularly his truthfulness in testimony.

C H A P T E R I I

METHOD

Subjects. Subjects were 131 undergraduates, 47 male and 84 female, who volunteered to participate in an experiment described as being related to judgements of criminal suspects. They received extra class credit for participation in the study.¹

Procedure. Subjects met in groups of from five to 15 for approximately 40 minutes. They were told that the experimenter was interested in the process of decision-making within juries and the nature of the information most useful in that process. Subjects were either informed that they would read the transcript of a selected portion of the pretrial hearing for a man accused of a crime or view a videotape of that hearing (purportedly because a film of the actual trial was unattainable). Supposedly, the subjects' judgements concerning the defendant were to be compared to the actual jury decision in his trial. Subjects were led to believe that the videotape had been made with the permission of all parties involved in the hearing.

Subjects were then given a written description of the circumstances related to the crime. They randomly received one of the two versions that had been prepared which constituted the manipulation of the seriousness of crime variable. Each description was

identical except for words and phrases related to naming the crimes and their attendant punishments. In the Major Crime condition, the defendant was accused of assault, battery, and armed grand theft to which he would be subject to a maximum penalty of 55 years in the state penitentiary. The average punishment for conviction on such offenses was said to be 18 years imprisonment with parole possible after ten years. In the less serious Minor Crime condition, the defendant was accused of assault and petty larceny to which he would be subject to a maximum penalty of three years in the state penitentiary. The average punishment if convicted was said to be three years served on probation plus a fine and some compensation paid to the victim. (Descriptions are included in Appendix A.)

After reading the description, subjects either read the transcript of the dialogue heard on the videotapes (contained in Appendix B) or viewed one of the two films which had been constructed. The two videotapes were each approximately 120 seconds in length and contained identical dialogue. Questions were directed to the defendant by an unseen prosecutor (actually a confederate to the experimenter) and were designed to probe the suspect's alibi which was relatively weak. However, the dialogue was factually vague and was intended to be insufficient in itself to allow a judgement of guilt or innocence. The interrogation was described to subjects as being merely a selected portion of the total examination of the defendant.

The critical difference between the two films related to the

nonverbal behavior of the defendant. In one case, the Deceptive Nonverbal Behavior condition, the defendant was shown manifesting some nonverbal behaviors identified in previous research as being indicative of deception. The defendant showed a relatively high magnitude of postural shifts, adaptors or grooming behaviors (touching the head, face, neck, hair, and other body parts with the hands), speech hesitations and errors (such as mispronunciations), and response latency (defined as the amount of time between the end of a question and the beginning of an answer). In the Nondeceptive Nonverbal Behavior condition, the same behaviors occurred, but at a lower magnitude.

The defendant was played by a 20-year-old male Caucasian. An experienced actor, he appeared quite credible in the role. The same actor appeared in both stimulus tapes.

Dependent measures. After viewing the videotape, the subjects were given a series of questions to answer. Most consisted of completing seven-point scales designed to assess the subjects' impressions of the defendant. (A replication of all the dependent measures is included in Appendix C.) The major variables of interest were ratings of the defendant's believability and guilt. While believability was rated on a scale, guilt was assessed in two ways. In one, subjects rated on a scale their impressions of the "real" state of affairs as to the defendant's innocence, independent of the legal definition of guilt. In the second, a dichotomous forced-choice measure of

guilty or not guilty, subjects were urged to answer as they would if they were really a juror, i.e., to base their decisions on the evidence provided and to make guilty judgements only when they thought, beyond any reasonable doubt, that the defendant had committed the crime.

As a check on the experimental manipulations, the subjects were asked to rate on seven-point scales the seriousness of the crimes, and the expected and perceived nervousness of the defendant. Subjects also made estimations of the importance of personal and situational factors in causing the crime, assuming the defendant was really guilty, and indicated how much they could have liked the defendant. Finally, subjects indicated the number of years in jail the defendant should be sentenced assuming he was guilty, and also made open-ended responses as to those characteristics which helped them form their impression of the defendant's believability. After completing the dependent measures, subjects were encouraged to comment on the proceedings and were then debriefed.

Method of analysis. The basic analysis on all scaled measures was a 2 (Major Crime; Minor Crime) x 3 (Deceptive Nonverbal Behavior; Transcript; Nondeceptive Nonverbal Behavior) between subjects analysis of variance. (An analysis of variance revealed no effect for sex of subject and will not be discussed further.) The Duncan multiple comparison procedure was employed to test differences among the means (Duncan, 1955). A chi-square analysis was performed on the forced-choice measure of guilt.

CHAPTER III

RESULTS

Manipulation checks. Several checks, including two pilot tests, were employed to insure that certain experimental manipulations were successful and basic assumptions were met. First, it was necessary that subjects perceive what have been called the major crimes to be, in fact, more serious than the minor crimes. An analysis of variance showed that the subjects were able to distinguish between the two types of crimes in terms of the seriousness of the transgressions, $F(1, 125) = 70.212$, $p < .001$, with the Major Crime rated as more serious than the Minor Crime ($M = 5.15$ and 3.71 , respectively, where $1 =$ not so serious and $7 =$ very serious). Other effects were nonsignificant.

Second, it was necessary that the two experimental films could be distinguished from each other on the basis of the target behaviors. A pilot test conducted prior to this study found the two films to be significantly different from each other. Eighteen subjects viewed each videotape and rated on seven-point scales the frequency of occurrence of each target nonverbal behavior. The order of film presentation was randomized with an equal number of subjects watching the films in each possible order. Each comparison of means yielded t -test values whose probabilities were less than $.001$ (see

Table 1).

A second pilot test confirmed a crucial experimental assumption. In order for the discounting principle to be utilized by the observer in the Major Crime condition, there must be an alternative explanation available, other than deception, for the target behaviors. As indicated previously, one probable explanatory alternative was the attribution of nervousness due to the anxiety associated with the severity of the criminal accusations. A second sample ($n = 38$) was presented with descriptions of the crimes, the charges, and their potential punishments. Each subject read only one description which was assigned randomly with an equal number of subjects reading each description. Subjects indicated a significantly higher expectation of defendant nervousness and other related feelings (concern, anxiousness, and fearfulness) in the Major crime condition when asked to rate their expectations on a seven point scale. This higher expectation was found regardless of whether the defendant was described as really guilty or not (see Table 2). A comparison of means across these related states was highly significant, $t(36) = 8.54$, $p < .001$.

In addition to the results of the second pilot test, an analysis of variance of the ratings by the primary subject sample of the expected nervousness of the defendant further confirmed the assumption that more nervousness would be anticipated when crimes were described as more serious ($M = 5.81$, Major; $M = 5.31$, Minor, where 1 = low and 7 = high expectation of nervousness), $F(1, 125) =$

TABLE 1
 PILOT TEST ONE:
 COMPARISON OF THE NONVERBAL BEHAVIORS IN EACH VIDEOTAPE.

<u>Target Behavior</u>	<u>Mean Rating of Occurrence</u>	
	<u>Deceptive Nonverbal Behavior Condition</u>	<u>Nondeceptive Nonverbal Behavior Condition</u>
Postural shifts	6.00	1.67***
Adaptors	6.00	1.28***
Speech hesitations and errors	4.00	1.78***
Response latency	3.94	1.61***

Combined means of all target behaviors	24.00	8.39***

Larger numbers indicate a higher frequency rating by subjects (n = 16). Scales ranged from one (not very frequent) to seven (very frequent).

***Indicates a t-value probability of less than .001.

TABLE 2

PILOT TEST TWO:
COMPARISON OF THE MEAN RATINGS OF JURORS' EXPECTATIONS
OF THE DEFENDANT'S EMOTIONAL STATE IN EACH CRIME CONDITION.

When the defendant was described as guilty:

<u>Target Emotion</u>	<u>Seriousness of Crime</u>	
	<u>Major</u>	<u>Minor</u>
Nervousness	6.00	4.68***
Concern	5.94	5.00*
Anxiousness	5.16	4.84
Fearfulness	6.11	4.42***

Combined means	23.21	18.95**

When the defendant was described as innocent:

Nervousness	5.37	4.21**
Concern	6.32	5.37*
Anxiousness	5.50	4.53*
Fearfulness	5.47	4.21**

Combined means	22.63	18.32**

Grand combined means	45.84	37.26***
----------------------	-------	----------

Larger numbers indicate a higher expectation rating by subjects (n = 38). Scales ranged from one to seven.

*Indicates a t-value probability of less than .05.

**p < .01.

***p < .001.

4.66, $p < .05$. Other effects were nonsignificant.

Finally, the subjects' perceptions of the defendant's actual nervousness were expected to be a function of the nonverbal behavior to which they were exposed. Ratings by the primary subject sample on seven-point scales clearly differentiated the two behavior patterns. An analysis of variance of those ratings reveal a main effect for type of nonverbal behavior, $F(1, 125) = 84.71$, $p < .001$. As would be expected, the mean of the Deceptive Nonverbal Behavior condition was significantly higher than that of the Transcript condition ($M = 6.68$ and 4.34 , respectively, where $1 = \text{not nervous}$ and $7 = \text{very nervous}$), $p < .01$, Duncan's test. On the other hand, the mean of the Nondeceptive Nonverbal Behavior condition ($M = 2.63$) was significantly lower than that for the Transcript condition, indicating a less nervous looking defendant, $p < .01$, Duncan's test. Other effects were nonsignificant.

Believability of the defendant. The major analysis was carried out on subjects' ratings of the believability of the defendant. The analysis of variance showed a significant main effect for type of nonverbal behavior, $F(1, 125) = 4.88$, $p < .01$. Subjects' ratings in the Nondeceptive Nonverbal Behavior and Transcript conditions ($M = 3.56$ and 3.45 , respectively) were both marginally higher than in the Deceptive Nonverbal Behavior condition ($M = 2.76$, where $1 = \text{not believable}$ and $7 = \text{very believable}$), $p < .07$, Duncan's test.

The analysis also yielded a marginally significant interaction

between type of nonverbal behavior and the seriousness of the crime, $F(1, 125) = 2.93, p < .06$. Examination of the means involved in the interaction, displayed in Table 3, shows that within the Minor Crime condition there was a significant difference between the Deceptive and Nondeceptive Nonverbal Behavior cells in the expected direction, $p < .02$, Duncan's test. In the Major Crime condition, the difference between those behavior cells was nonsignificant. In addition, there was a marginally significant difference within the Deceptive Nonverbal behavior condition between the two crimes ($M = 3.13$, Major Crime; $M = 2.39$, Minor Crime), $p < .07$, Duncan's test. These results, thus, tended to support the major predictions of the study, i.e., that a defendant displaying a relatively high magnitude of the target behaviors and accused of less serious crimes will be perceived as less believable than if he were accused of a more serious crime and he displayed those same nonverbal behaviors.

Additional defendant ratings.

Guilty decisions. Contrary to expectations, no significant differences were found among subjects' forced-choice guilty/not guilty verdicts. When subjects rated the defendant as to their belief in his "real" innocence or guilt, an analysis of variance did show a main effect for the seriousness of the crimes, $F(1, 125) = 7.14, p < .01$. Subjects rated the defendant more guilty when charged with the more serious crime ($M = 4.83$, Major; $M = 4.32$, Minor, where 1 = sure of innocence and 7 = sure of guilt). However, the expected interaction was not found although there was a trend in that direction

TABLE 3
SUBJECTS' MEAN RATINGS OF DEFENDANT BELIEVABILITY.

	<u>Interactive Effects</u>		<u>Main Effects</u>
	<u>Major Crime</u>	<u>Minor Crime</u>	
Deceptive Nonverbal Behavior	3.13	2.39	2.76
Transcript	3.14	3.76	3.45
Nondeceptive Nonverbal Behavior	3.65	3.48	3.56

* p < .07; ** p < .02; *** p < .01. Lines connect means which are significantly different from one another.

Scales ranged from one (not believable) to seven (very believable). Larger numbers indicate a higher rating of believability. Lines connect means which are significantly different from one another.

*** $p < .01$; ** $p < .02$; * $p < .07$

(see Figure 1).

Defendant likeability. An analysis of variance of the ratings of the likeability of the defendant produced no significant results.

Jail term. Significant main effects were found for both the seriousness of the crimes and the type of nonverbal behavior when subjects suggested jail terms for a defendant assumed guilty, $F(1, 125) = 41.42, p < .001$, Crime; $F(1, 125) = 3.26, p < .05$, Nonverbal Behavior. Predictably, serious crime accusations brought longer jail terms ($M = 10.82$ years, Major; $M = 1.85$ years, Minor). Unexpectedly, subjects in the Deceptive Nonverbal Behavior condition were less harsh ($M = 3.93$ years) than subjects in either of the other nonverbal behavior conditions ($M = 7.92$ years, Transcript; $M = 7.03$ years, Nondeceptive Nonverbal Behavior). However, a Duncan multiple comparison test revealed no significant differences among these means. The analysis yielded no interaction.

Causal ratings. Two final ratings were made by the subjects. Assuming the defendant was guilty, subjects were asked to rate the contribution of both personal and situational factors to the commitment of the crimes. An analysis of variance of each variable's ratings revealed no significant effects.

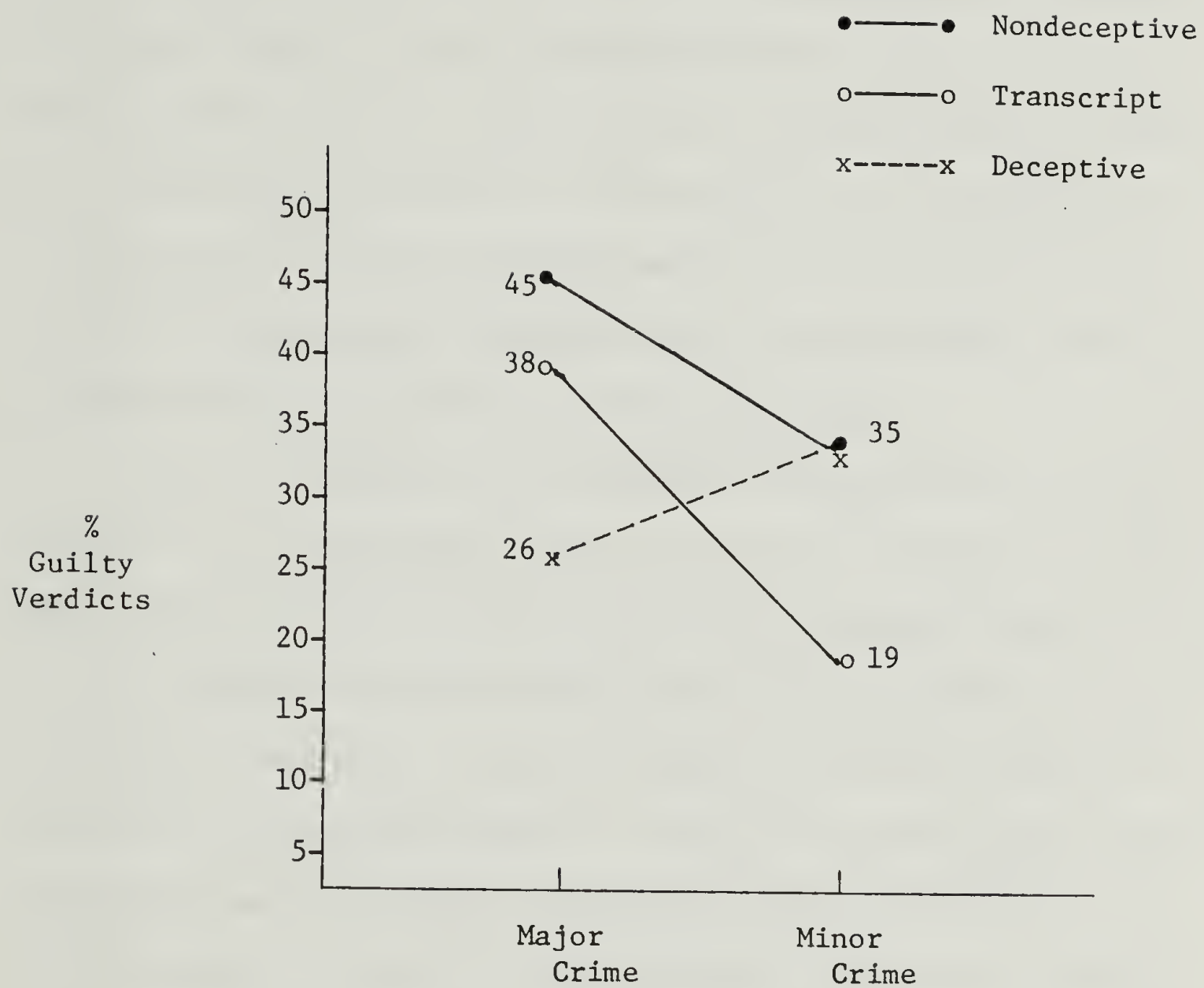


Fig. 1. The percentage of guilty verdicts on forced choice measure of defendant guilt.

C H A P T E R I V

DISCUSSION

The primary hypothesis investigated in this study was that the judgement of a defendant's nonverbal behaviors would be related to the seriousness of the crimes for which the defendant was accused. Based upon Kelley's (1971) discounting principle, it was reasoned that nonverbal behaviors associated with deception would be related more directly to judgements of believability when the defendant was charged with less serious crimes because of the greater number of probable interpretations available for the target behaviors when the defendant was faced with more serious accusations.

Subjects' ratings of the defendant's believability provided support for the hypothesis. First, there was a significant difference between the Deceptive and Nondeceptive Nonverbal Behavior cells in the expected direction within the Minor Crime condition. This differential was greater than that found in the Major Crime condition which was nonsignificant. Second, a marginally significant difference was found within the Deceptive Nonverbal Behavior condition between more and less serious crimes. The mean of ratings in the Minor Crime cell was lower suggesting a defendant who was less believable than his more incriminated counterpart. An examination of Table 3 shows that the means of the believability ratings tend to cluster together, with the exception of the Minor Crime/

Deceptive Nonverbal Behavior cell.

These sets of differences indicate that the presence of non-verbal actions previously found to be related to deception did not have an effect on judgements of a relatively serious criminal charge. The three means within the Major Crime condition were not significantly different from one another. However, there was a direct relationship between the presence of deceptive nonverbal behaviors and judgements when decisions were made concerning a less serious offense. In the latter case, the effect of being exposed to those behaviors was to decrease the believability of the defendant. These results are consistent with prior research (Feldman & Chesley, 1980) and suggest the kind of interaction that was expected between the seriousness of the charges and the kinds of behaviors exhibited.

Several converging pieces of indirect evidence support the proposition that the depressed mean of the Minor Crime/Deceptive Nonverbal Behavior cell was due to a comparative lack of alternative explanations available for the target behaviors. Attribution theory suggests that when there is a match between people's behaviors and an observer's expectations, then there is little need for the observers to avail themselves of explanations other than those implied by the expectation. Subjects expected the defendant to act more nervously when being tried for the more serious crimes. These expectations would have been confirmed when the defendant displayed the target behaviors. Thus, there may have been little reason for

attributing those actions to anything but the nervousness associated with being accused of very serious crimes. However, when the same target behaviors were exhibited in the situation in which a high degree of nervousness was not expected, i.e., in the Minor Crime condition, subjects may have been led to search for other reasons to explain the mismatch between expectations and perceptions. Given the extensive overlap between deceptive-like and more general nervous-like behaviors, and given this particular situation in which lie-detection was a salient concern for the subjects, it is reasonable to see why dissembling explanations were more acceptable in the Minor Crime condition.

Written comments by subjects, though not analyzed quantitatively, were found to justify this conclusion. Judging the nervously acting defendant facing more severe accusations, many described that nervousness as "normal" and one asked "who wouldn't be?" considering his predicament. Yet, when subjects viewed the same defendant under the assumption of less serious crimes, many wrote in the same vein as one who stated the defendant's "nervousness (was) not what (was) expected of an innocent man." Others made the deception attribution directly: the defendant was "nervous about lying" and it was a "likely clue to (his) guilt."

It could be hypothesized that the presence of multiple plausible explanations for behaviors, as in the Major Crime/Deceptive Nonverbal Behavior cell, would be reflected in a larger variance among subjects' ratings of the defendant's believability.

Indeed, a post-hoc comparison of cell variances revealed that the greatest difference between the Major and Minor Crime conditions came within the Deceptive Nonverbal Behavior condition ($\sigma = 2.391$ and $.885$, respectively; other cells ranged from 1.329 to 2.170). That difference was significant, $F(22, 22) = 2.702$, $p < .05$, but not so large a difference as to prove problematic for the homogeneity of variance assumption made in carrying out the analysis of variance.² However, this finding is suggestive of a tendency for greater dispersion among ratings where multiple explanations for behavior are probable.

In designing this study, it was assumed that judgements made concerning a defendant's believability would exert a strong influence on subsequent judgements of his guilt or innocence. When the defendant was seen to be lying, that was expected to increase the probability that he would be judged guilty as well. However, neither of the employed indices of guilt yielded significant results that would demonstrate this expectation, although one set of responses did display the appropriate trend.

One measure required subjects to rate their impressions of the "real" state of the defendant's innocence, independent of the legal definition of guilt. Because subjects had an opportunity to speculate beyond the evidence, it was, at first glance, surprising that no interaction was found between the defendant's nonverbal behaviors and the seriousness of the crimes. In fact, none of the means for the six cells fell more than one unit away from the midpoint of four

on the rating scale (means ranged from 4.05 to 4.95) which was half-way between the ratings of "sure of innocence" and "sure of guilt." Distributions of these ratings were essentially unimodal with little variation, i.e., scores tended to be stacked within the midrange. These ratings might be interpreted as a tendency on subjects' parts to be basically noncommittal to the question of "real" innocence, although with a slight bias favoring guilty judgements. Given the lack of information available as evidence to acquit or convict (remember that the defendant's testimony was described as only a small portion of the total testimony), then perhaps these results are not so unusual after all. The judgement of a defendant's guilt appears to be a much more conservative decision-making process than that made for believability.

Besides the slight bias toward judgements of guilty on this measure, there was also a general tendency for subjects to judge the defendant accused of more severe crimes as more guilty than the defendant facing the relatively minor charges. Because the same negative tendency was found on the believability measure as well, it might be suspected that the more serious accusations resulted in a kind of negative halo effect in which the mere association with those criminal charges had a negative influence on the jurors' judgements.

On the other measure of defendant innocence, subjects were required to play the role of an independent juror and to reach a verdict of "guilty" or "not guilty." Although the differences among cells were

not significant, the pattern of results was consistent with the believability measure. Examination of Figure 1 shows that in both the Transcript and the Nondeceptive Nonverbal Behavior conditions, the percentage of guilty verdicts was greater for more serious rather than less serious crimes. These results are consonant with the main effect found for the seriousness of crime variable discussed in the previous measure of the defendant's "real" innocence or guilt. That is, all else being equal, a defendant facing a relatively more serious crime will tend to be judged guilty more often than if he was faced with the less serious crime.

However, the percentage of guilty verdicts in the Deceptive Nonverbal Behavior condition showed the exact opposite trend. In the Major Crime cell, the defendant was found guilty 26% of the time while in the Minor Crime cell that figure rose to 35%. Just as the defendant was viewed as less believable when acting deceptively and charged with a less serious crime, he was likewise also judged to be guilty a higher percentage of the time. This trend becomes more impressive when considered alongside the other type of nonverbal behavior conditions. The trend demonstrated in the Deceptive Nonverbal Behavior condition is not only in the opposite direction as the other conditions, the cell within the Major Crime condition had the lowest percentage of guilty verdicts within that condition. These results suggest that in the case of the more serious criminal accusations, the target behaviors were not generally considered deceptive and therefore not indicative of guiltiness. Thus, when

forced to decide if a defendant was guilty or not, there was a tendency for some subjects to mirror their judgements of believability, although the differences among conditions were not of sufficient magnitude to reach significance.

The fact that these differences were not significant may not be critical. On this measure of guilt it was stressed that the subject's role was as a juror making decisions in the legal sense. The lack of a significant difference may only reflect a heeding of that directive. If so, then guilty decisions may have been depressed generally, thus minimizing differences among the cells. After all, the evidence presented was largely circumstantial (refer to Appendix A). An actual conviction based on it alone would stand as a highly questionable legal decision.

While the results of the guilty measures were surprising but explicable when given further thought, the findings regarding the sentences suggested for the defendant were puzzling and remain so. It was expected that the pattern of results would also approach that pattern established on the believability measure. This was not the case. While no interactive effect was found, there were significant main effects for both the seriousness of the crime and for the type of nonverbal behavior. Of course, conviction for relatively serious crimes would be expected to carry with it a more severe sentence which was the case. However, a reversal of expectations occurred in the type of nonverbal conditions. Subjects who viewed the target behaviors recommended less harsh jail terms than subjects in either the Transcript or

or the Nondeceptive Nonverbal Behavior conditions, although the differences were not significant. The data does not allow for any conclusions as to why this was the case.

Conclusion. Despite the lack of congruence among the results of some of the measures, the strength of the believability measure results should not be overlooked. Nonverbal behaviors played an important role in how subjects rated the defendant. It is possible that a replication of this study using a larger sample size and with, perhaps, some alternative measures more sensitive to impressions of a person's truthfulness may demonstrate the effects even more conclusively.

Legal experts have long suggested that the demeanor and nonverbal "style" of participants in a trial can have important effects on the outcome (e.g., Keeton, 1973; Morrill, 1971). Researchers are now beginning to obtain empirical evidence that supports such prior anecdotal work. When combined with research that looks at characteristics of defendants such as physical appearance and attractiveness (e.g., Kulka & Kessler, 1978; Landy & Aronson, 1969), we can begin to appreciate the impact of extralegal factors on the judicial process.

A number of important caveats should be pointed out about the present study. Although reference was repeatedly made to the jurors and defendant, in fact, the research was of a laboratory, experimental nature. There were no real jurors, only undergraduate subjects. They did not make group decisions as real jurors do, but individual ones. In addition, the defendant was an actor, and although much effort was

expended to make his behavior appear credible there is the possibility that his performance and/or the video production were lacking some critical element(s). Finally, the subjects were provided with a relatively small sample of behavior to react toward. It is possible that a defendant's nonverbal behavior would have a different impact if a larger sample were provided. On the other hand, it is noteworthy that the small sample provided had the strength of impact that it did. Subjects in different conditions began to form different impressions of the defendant very quickly and based on very little.

Given the aforementioned difficulties, it is still possible to conclude that nonverbal behavior can play an important role in the impressions formed by jurors judging defendants and that attribution theory may be a useful tool in evaluating that role. However, more research is obviously needed in order to make unambiguous statements about the relationship between nonverbal behaviors and judgements of lying, and subsequent decisions, particularly with regard to a juror or jury.

FOOTNOTES

1. The data for eight subjects were excluded from the analysis. Four subjects knew the actor used in the videotapes and therefore could not believe the authenticity of the film. Four other subjects also suspected the films' authenticity as indicated in written or spoken comments following the completion of the dependent measures.
2. Sheffé (1959), in discussing the homogeneity of variance, states that the inequality of variances in the cells has little effect on inferences about means as long as the cells being compared have equal \underline{n} (p. 334-335). The cells compared in this case had equal cell numbers ($\underline{n} = 23$).

REFERENCES

- Brown, J.S. The motivation of behavior. New York: McGraw-Hill, 1961.
- Darwin, C. The expression of the emotions in man and animals.
Chicago: University of Chicago Press, 1965 (original London:
John Murray, 1872).
- DePaulo, B.M., & Rosenthal, R. Age changes in nonverbal decoding
skills: evidence for increasing differentiation. Merrill-
Palmer Quarterly, 1979, 25 (2), 145-150.
- Duncan, D.B. Multiple range and multiple F tests. Biometrics, 1955,
1-42.
- Ekman, P., & Friesen, W. Nonverbal leakage and clues to deception.
Psychiatry, 1969, 32 (1), 88-106.
- Detecting deception from the body or face. Journal of Personality
and Social Psychology, 1974, 29, 288-298.
- Elliot, G.C. Some effects of deception and level of self-monitoring on
planning and reacting to a self-presentation. Journal of Person-
ality and Social Psychology, 1979, 32 (8), 1282-1298.
- Fay, P.J., & Middleton, W.C. The ability to judge truth-telling, or
lying, from the voice as transmitted over a public address system.
Journal of General Psychology, 1941, 24, 211-215.
- Feldman, R.S. Nonverbal teacher disclosure of deception and inter-
personal affect. Journal of Educational Psychology, 1976, 68,
807-816.

- Feldman, R.S., & Chesley, R.B. Who is lying, who is not: the role of nonverbal behavior in jury decisions. Paper presented at the annual meeting of the American Society of Criminology, San Francisco, 1980.
- Fishbein, M., & Ajzen, I. Belief, attitude, intention, and behavior: an introduction to theory and research. Reading, MA: Addison-Wesley, 1975.
- Freud, S. Fragment of an analysis of a case of hysteria. New York: Basic Books, Collected Papers 3, 1905, 1959.
- Gleason, J.M., & Harris, V.A. Race, socio-economic status, and perceived similarity as determinants of judgements by simulated jurors. Social Behavior and Personality,
~~Group dimension and defendant's socio-economic status as determinants of judgements by simulated jurors.~~ Journal of Applied Social Psychology, 1976, 6 (2), 186-192.
- Gray, D.B., & Ashmore, R.D. Biasing influence of defendants' characteristics on simulated sentencing. Psychological Reports, 1976, 38, 727-738.
- Heider, F. The psychology of interpersonal relations, New York: Wiley, 1958.
- Izzett, R., & Fishman, L. Defendant sentences as a function of attractiveness and justification for actions. Journal of Social Psychology, 1976, 100, 285-290.
- Keeton, R.E. Trial tactics and methods (2nd edition), Boston: Little & Brown, 1973.

- Kelley, H.H. Attribution in social interaction, New York: General Learning Press, 1971.
- Causal schemata and the attribution process, Morristown, NJ: General Learning Press, 1971.
- Knapp, M., Wiemann, J.M., & Daly, J.A. Nonverbal communication: issues and appraisal. Human Communication Research, 1978, 4 (3), 271-280.
- Kraut, R.E., & Poe, D. On the line: The deception judgements of customs inspectors and laymen. Manuscript submitted for publication, JPSP, 1979.
- Kulka, R.A., & Kessler, J.B. Is justice really blind? The influence of litigant physical attractiveness on juridicial judgement. Journal of Applied Social Psychology, 1978, 8, 366-381.
- Landy, D., & Aronson, E. The influence of the character of the criminal and his victim on the decisions of simulated jurors. Journal of Experimental Social Psychology, 1969, 5, 141-152.
- Lippa, R. Expressive control, expressive consistency, and the correspondence between expressive behavior and personality. Journal of Personality, 1978, 46 (3), 438-461.
- Maier, N.R. Sensitivity to attempts at deception in an interview situation. Personnel Psychology, 1966, 19 (1), 55-66.
- Marston, W.M. Reaction-time symptoms of deception. Journal of Experimental Psychology, 1920, 3, 72-87.
- Mehrabian, A. Nonverbal communication. Chicago: Aldine-Atherton, 1972.

- Mitchell, H., & Byrne, D. Minimizing the influence of irrelevant factors in the courtroom: the defendant's character, judge's instructions and authoritarianism. Paper presented at Midwestern Psychological Association Convention, Cleveland, OH, May, 1972.
- Morrill, A.E. Trial Diplomacy. Chicago: Court Practice Institute, 1971.
- Reid, J.E., & Inbau, F.E. Truth and deception: The polygraph ("lie-detector") technique. Baltimore, MD: Williams & Wilkins, 1966.
- Shaver, K. An introduction to attributional processes. Cambridge, MA: Winthrop, 1975.
- Trovillo, P. A history of lie detection, Journal of Criminal Law and Criminology, 1939, 29, 848-881.
- Zuckerman, M., DePaulo, B.M., & Rosenthal, R. Verbal and nonverbal communication of deception. In Berkowitz, L. (Ed.) Advances in Experimental Social Psychology. New York: Academic Press, 1981.
- Zuckerman, M., Lipets, M.S., Korvumaki, J.H., & Rosenthal, R. Encoding and decoding nonverbal cues of emotion. Journal of Personality and Social Psychology, 1975, 32 (6), 1068-1076.

APPENDIX A

Crime and Punishment Descriptions that Differentiate
the Seriousness of Crime Conditions.

All parts of text which differ between conditions are contained in double parentheses. Those associated with the Major Crime condition are preceded by a 1. Those associated with the Minor Crime condition are preceded by a 2.

The following is a summary of the description of an alleged crime investigated by the New York City Police Department in the summer of 1980. (NYPD:J80; 7-9214-01). Please read this description carefully and refer to it as often as necessary during this session. It is important that you understand the circumstances surrounding the alleged crime. Only the most pertinent information has been included. It would be helpful to read the summary more than once. You will be given ample time to do so.

After you have read the summary of the police report and feel you understand it, you will be shown an excerpt of a videotape of the pretrial hearing for the accused. Because you will be further asked to make certain judgements about the case, it is important that you understand the following information and then pay strict attention to the videotape.

(PLEASE READ THE SUMMARY OF THE POLICE REPORT NOW.)

On the night of July 16 at 11:47 PM, two New York City police officers responded to a reported mugging. The victim was interviewed at a small Manhattan tavern from which he had made his call to police.

The robbery had occurred in an alley a few blocks from the tavern. The victim reported that he had been at the tavern celebrating his ((1: \$2500/2: \$250)) winnings from OTB (New York Off-Track Betting) earlier in the day. He left the bar at approximately 9:30 PM and was a few blocks away when a man approached him. He claims to have recognized the man as having been in the same tavern while he had been there celebrating. Other than that time, he does not recall having ever seen the man before. The man produced a handgun and then demanded that the victim enter a nearby alley and hand over the money he held. When they entered the alley, the assailant hit the victim several times on the back of the head and neck with the gun butt. He then stole the victim's money which amounted to over ((1: \$2000/2: \$200)). There were no other witnesses to the crime.

The victim was dazed but still conscious. He returned to the tavern where other patrons noticed him to be visibly shaken. The other bar patrons corroborated the victim's claims of having celebrated at the tavern and also of the presence of a man in the bar who fit the description of the alleged assailant. ((1: The victim was taken to a hospital where tests were made. The victim had suffered a mild concussion but was released.))

The following afternoon, the man who had been in the bar was

spotted by two of the patrons of the tavern who had corroborated the victim's report the previous evening. They followed the man to his apartment and reported their actions to the police. At 2:15 PM, July 17, the man was brought in for questioning. Three hundred dollars was found in his possession. No handgun was found in his apartment. However, he denies having anything to do with the robbery.

The man was identified in a police line-up by the victim. He was subsequently charged on two counts: ((1: assault and battery (because of the attack on the victim), and armed grand theft (because of the use of a gun in a robbery of over \$1000)/2: assault (because of the threats used to intimidate the victim) and petty larceny (because the amount stolen was less than \$1000).))

If the defendant is tried and convicted for the crimes with which he is now charged, ((1: assault and battery and armed grand theft/2: assault and petty larceny)), he will be subject to a maximum penalty of ((1: 55/2: three)) years in the state penitentiary. The average punishment for such offenses is ((1: 18 years imprisonment with parole possible after ten years/2: three years probation, a fine approximating the amount stolen, and some compensation to the victim)).

If there are no questions now, please hold all comments until you have completed the judgement questionnaire to be distributed at the end.

What follows is an excerpt of a videotape of the actual pretrial hearing for the defendant. The purpose of the pretrial hearing (a routine procedure in cases such as these) is to assist the state in determining whether there is enough evidence to prosecute and whether (or what) charges should be formally filed.

State laws did not permit the recording of the actual trial but allowed the filming of pretrial hearings. Permission in this case was granted by all parties involved, including the judge, lawyers for both the prosecution and the defense, and the defendant as well. You will not view the entire hearing but only selected portions of the questioning of the defendant and his testimony. You will only see on the screen the defendant. The reason for this procedure is to give you, as a prospective juror, an opportunity to concentrate exclusively on the defendant.

The hearing was held in the judge's chambers in August of 1980.

APPENDIX B

Transcript of the Dialogue Heard in Both Videotapes

The defendant's name is James Fleming. The plaintiff's name is Jon Hastings. The tavern involved is known as Arthur's.

Q: (from the assistant city prosecutor) Mr. Fleming, where were you on the evening of July 16 at approximately 9 p.m.?

A: I was having a couple of beers.

Q: Were you having those beers at Arthur's?

A: Yes, I was there.

Q: How long did you stay at Arthur's?

A: Oh, not long after 9. I'd been there for about an hour already and it was getting pretty dead so I decided to move on.

Q: Had you ever been to Arthur's before that night?

A: Yes, yes, a couple of times but not a long time before that night.

Q: Why did you go to that bar?

A: Oh, I don't know. Just to get a couple of drinks and relax.

Q: Why did you go to that particular bar?

A: I don't know. I guess it just seemed the place to be.

Q: Were you with anyone else or did you talk to anyone else there?

A: No, I didn't know anyone. The only person I did talk to was the bartender to order my beer.

Q: Did you see Mr. Hastings at the bar?

A: Oh, yes. I sort of remember him there. He and his friends were pretty loud and partying it up.

Q: What do you remember about Mr. Hastings and his friends?

A: Look, I saw these guys but I wasn't paying much attention to them. I was watching the Yankee's game mostly.

Q: Where were you sitting in relation to Mr. Hastings?

A: Well, we were all at the bar, so I guess it was pretty close. The bar isn't very big, you know.

Q: Yes, I do know. That's why I'm puzzled that you don't know more of what the plaintiff and his friends were talking about. By your own admission, Arthur's is a small bar, Mr. Hastings was talking loudly, and you were sitting close by. Are you sure you didn't hear any of their conversation?

A: No, no. I didn't hear anything. They were just laughing and toasting different stuff. I don't know what though.

Q: Didn't you hear those gentlemen talking about Mr. Hastings good fortune with the horse races that afternoon?

A: Hey, I don't remember what they were talking about.

----- LATER

Q: Mr. Fleming, where did you go after you left Arthur's?

A: To the subway and then back to my apartment. I didn't see anyone and I didn't see this guy at all (indicating the plaintiff).

Q: At what time did you arrive at your apartment?

A: Not long after 9, I guess.

Q: Do you know of anyone who could verify that?

A: No, I wasn't with anyone.

Q: Are you sure? If you could establish that you were at your apartment at that time, it would have been difficult for you to be at the scene of the robbery.

A: Yes, I know, but I wasn't with anyone. Look, I just went back to my apartment, laid in bed for a while, and then I fell asleep.

Q: Did you stay in your apartment?

A: Yes, I just went to sleep.

APPENDIX C
Dependent Measures.

Pilot Test #1: Measure of nonverbal differences between videotapes.

Evaluate the film along the following dimensions. Choose one number for your answer.

Response Latency: the amount of time that lapses between the end of a question and the beginning of the answer.

The time lapsed between question and answer was generally

<u>Very short</u>					<u>Very long</u>	
1	2	3	4	5	6	7

Postural Shifting: the movement of a person forward and backward, or side to side.

The amount of postural shifting was generally

<u>Infrequent</u>					<u>Frequent</u>	
1	2	3	4	5	6	7

Grooming: the touching of parts of the body, particularly the head, face, neck, and hair, with the hands.

The amount of grooming was generally

<u>Infrequent</u>					<u>Frequent</u>	
1	2	3	4	5	6	7

Eyeblink rate: the amount of times a person blinks his eyes.

Eyeblink rate was generally

<u>Infrequent</u>					<u>Frequent</u>	
1	2	3	4	5	6	7

Speech errors: mistakes made in the spoken word, for e.g., mispronunciations.

The number of speech errors was generally

<u>Infrequent</u>					<u>Frequent</u>	
1	2	3	4	5	6	7

Pilot Test #2: Measure of expectancies of the defendant's reaction to criminal accusations.

The defendant is to appear at a hearing that will consider the charges that have been brought against him. If the defendant is really guilty, what would your expectations be of the defendant on the following dimensions?

Not Nervous							Very Nervous
	1	2	3	4	5	6	7
Not Concerned							Very Concerned
	1	2	3	4	5	6	7
Not Anxious							Very Anxious
	1	2	3	4	5	6	7
Not Fearful							Very Fearful
	1	2	3	4	5	6	7

If the defendant is really not guilty, what would your expectations be of the defendant on the following dimensions?

Not nervous							Very Nervous
	1	2	3	4	5	6	7
Not Concerned							Very Concerned
	1	2	3	4	5	6	7
Not Anxious							Very Anxious
	1	2	3	4	5	6	7
Not Fearful							Very Fearful
	1	2	3	4	5	6	7

Primary dependent measure.

You have received a limited amount of information concerning this crime and this defendant. Despite this, you may have already begun to form certain impressions of the defendant. Utilizing these impressions, try to answer the following questions as best as you can.

1. How serious was the alleged crime?

not serious

extremely serious

1 2 3 4 5 6 7

2. Reflecting on the film clip/transcript that you observed, how plausible did the defendant appear to you. Do not judge his guilt or innocence here. Rather, give your impression of believability of the defendant based on your exposure to his testimony.

not believable

very believable

1 2 3 4 5 6 7

3. Was there some particular characteristic of the defendant or his testimony which helped you form your impression of his believability?

What was it? _____

4. Juries must make decisions based on the evidence. Judgements of "guilty" are made when the juror thinks, beyond any reasonable doubt, that the defendant has committed the crime. Based on the evidence, would you judge the defendant "guilty" or "not guilty?"

5. "Not guilty," of course, does not always mean "innocent." The defendant may be guilty but the evidence may be insufficient to convict him because there is a "reasonable doubt." Based on your impressions of the defendant, how likely do you think he is really guilty?

not likely.
I'm sure the
defendant is
innocent.

very likely.
I'm sure the
defendant is
guilty.

1 2 3 4 5 6 7

6. How much do you feel you could like the defendant?
- not at all very much
- 1 2 3 4 5 6 7
7. If the defendant really is guilty, how long of a jail term do you think would be appropriate? (0 to 100 years) _____
8. If the defendant is guilty, how important were personal characteristics (personality, traits, character, personal style, attitudes) in causing the crime?
- not important very important
- 1 2 3 4 5 6 7
9. If the defendant is guilty, how important were situational factors in causing the crime?
- not important very important
- 1 2 3 4 5 6 7
10. How "nervous" did the defendant seem to be?
- not nervous very nervous
- 1 2 3 4 5 6 7
11. Given the circumstances and the potential punishment at hand, how nervous did you expect the defendant to be?
- not nervous very nervous
- 1 2 3 4 5 6 7

