THE EFFECTS ON CREDIBILITY, ATTRACTION AND ATTITUDE
OF REWARD AND DISTRACTION THROUGH VIOLATIONS
OF PERSONAL SPACE EXPECTATIONS

By

DON WINSLOW STACKS

A DISSERTATION PRESENTED TO THE GRADUATE COUNCIL OF
THE UNIVERSITY OF FLORIDA
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
DEGREE OF DOCTOR OF PHILOSOPHY

UNIVERSITY OF FLORIDA

1978

ACKNOWLEDGEMENTS

During a time of great unrest several significant others put forth great effort to quell feelings of inadequacy and apprehension; for this I am thankful and appreciative.

To Dr. Judee K. Burgoon, a special note of thanks is due. I am thankful for her gentle questioning and probing of thoughts which just would not come out. What I am today professionally is to a large extent a reflection of her professionalism and interest. I am proud to say that I was her student.

To Dr. Michael Burgoon, to whom I feel both awe and friendship, I owe my start. It has been a long path but his guidance and advice have been of great importance to me. Who would have thought that I would have studied his area?

To Dr. Robert Scholes I wish to thank for his ever ready ear over the last nine months. I also wish to acknowledge his interest in my area and the ones we share together.

To Dr. Marvin Shaw, who taught me a new meaning for the word, "gentleman," I thank him for his time and effort and criticism.

I would like to thank Dr. Norman Markel for his critique of earlier work and counsel during times which we both would like to forget but cannot.

A special note of appreciation and thanks go to my other half, Robin. Without her not so gentle prodding and her commitment to

me this may not have been completed. To her I say, the future lies ahead.

Finally, a note of thanks to Kris Arbuthnot and Gary Steinberg, without whose help the logistics of this study may have kept it in the conceptual stage forever.

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS.	ii
ABSTRACT.	vi
CHAPTER I: INTRODUCTION	1
Review of Literature	2
Factors Influencing Distancing Norms.	4
Interactant Variables.	5
Interactional Variables.	12
Environmental Variables.	13
Effects of Violating Interpersonal Distancing Expectations	15
Theoretical Models	15
Research Paradigms	17
Distraction and Violations of Inter- personal Distancing Norms	28
Derivation of Hypotheses	40
CHAPTER II: METHOD	44
CHAPTER III: RESULTS.	57
Manipulation Checks.	61
Hypothesis 1	66
Hypotheses 2, 3 and 4.	67
Supplemental Analyses on Hypotheses 1 - 4.	71
Hypothesis 5	74
Hypothesis 6	76
Hypothesis 7	77
Hypotheses 8 and 9	80
CHAPTER IV: DISCUSSION	86
Propensity to Counterargue	87
Distraction.	89
Violations of Personal Space Expectations	90
Implications and Suggestions for Future Research.	93
Summary.	97
APPENDIX A: PROPENSITY TO COUNTERARGUE MEASURE	99

	Page
APPENDIX B: MESSAGE.	111
APPENDIX C: EXPERIMENTAL PACKET.	114
APPENDIX D: POSTEXPERIMENTAL MATERIALS	124
APPENDIX E: SUMMARY TABLES	127
REFERENCES	213
BIOGRAPHICAL SKETCH.	224

Abstract of Dissertation Presented to the Graduate Council
of the University of Florida in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

THE EFFECTS ON CREDIBILITY, ATTRACTION AND ATTITUDE
OF REWARD AND DISTRACTION THROUGH VIOLATIONS
OF PERSONAL SPACE EXPECTATIONS

By

Don Winslow Stacks

August, 1978

Chairman: Judee K. Burgoon
Major Department: Speech

The underlying rationale for the effects of distraction in a communicative setting is based upon the disruption of an individual's ability to counterargue. While research investigating the distraction effect has generally relied upon environmental disruptors, this investigation attempted to test the distraction available to a persuader within the communicative setting through the violation of personal spacing expectations. Additionally, research has attempted to examine an individual's propensity to counterargue a message when distracted and the results of the distraction on the source's credibility. Such research predicts that high propensity-to-counterargue individuals will be more resistant to both the message and source than will low propensity-to-counterargue individuals. This investigation sought to: 1) establish the relationship between violations of personal spacing expectations as a distractor; 2) to test the relationship between

propensity to counterargue and message acceptance, source credibility and attraction as mediated by both the distractor and the individual's propensity to counterargue; and 3) to expand previous research on violations of personal space expectations to persuasive attempts.

The results of multiple regression analyses offered limited support for the predicted relationships among reward, distance, propensity and the communication outcomes of credibility, attraction and persuasion. Two dimensions of credibility and one dimension of attraction conformed to the predicted curvilinear relationships when subjects interacted with a rewarding initiator who did or did not violate personal spacing expectations; when interacting with a punishing initiator, obtained outcomes appeared to conform more to the expected relationships for rewarding initiators. For propensity, where significant effects were obtained, the results were in the opposite direction; low propensity subjects were more resistant to the source and message than were high propensity subjects. The relationship between distance and distraction was not supported. Although subjects reported being distracted by the personal space violations, the distraction scores were not significantly different across distances. The relationships between distance, reward and propensity were not supported.

The results were discussed in terms of violations of personal space expectations, distraction and distance, the propensity-to-

counterargue measure and the operationalization of reward. A number of research improvements and extensions, as suggested by the findings of this investigation, were discussed.

CHAPTER I

INTRODUCTION

In a recent review and commentary on persuasion research, Miller and Burgoon (in press) note that an expanded view of persuasion must "allow for reciprocal influence, it must also recognize that persuasive transactions are an essential ingredient of all social situations" (p. 16). This expanded view also suggests that other outcomes than attitude or behavior change might be of importance to persuasive research. They suggest, for example, that attraction and credibility are but two variables which are relevant outcomes of the persuasion process (pp. 16-17). Along this same line, perhaps an expanded view of persuasion should include strategies whereby a source can enhance his/her attractiveness and credibility in a persuasive interpersonal situation.

Within any interpersonal interaction, a myriad of factors serve to influence the potential communicative outcomes of the interaction. Among these factors, interpersonal distancing has been demonstrated to affect perceptions of attraction and credibility between interactants and modify expected interaction outcomes. Of the outcomes investigated in interpersonal distancing studies, very few have focused upon the perceived credibility and attraction of a "violation" who does or does not invade another individual's personal space. Much of the research we do have has

not systematically set out to establish normative distances before violating the expected norm and has instead relied on gross cultural distances as normative behavior. With the exception of Burgoon (1978) and Burgoon, Stacks and Woodall (1977), researchers have been content to approximate interaction distances and ignore the factors which serve to establish actual norms within an on-going interaction. Additionally, what research is available has dealt with only one or two variables of interest to communication researchers. Specifically, more research is needed to integrate such outcomes as attraction, credibility and persuasion in interpersonal interactions. This investigation seeks to demonstrate the effect on communication outcomes of violating interpersonal distancing norms between two interacting individuals. The outcomes of interest are a persuader's influence on another individual and the reciprocal perceptions the targeted individual has of the persuader.

Review Of Literature

The growing amount of research on spatial behavior over the last few years is indicative of the interest in how man structures his day-to-day interactions. The interest in what Hall (1963) observed to be man's unconscious structuring of microspace, or "proxemics," has led researchers to gain a greater understanding of how we can consciously manipulate the space immediately around us. Although the use of space may still be outside most individuals'

conscious control, research has and will lead to greater deliberation about its effects on communicative interactions.

Definitions. The distance between two interactants has been termed "personal space," which may be viewed as the distance which limits and separates individuals during interaction. Personal space has been equated to a body-buffer zone (Horowitz, Duff and Stratton, 1964, p. 651), "the space immediately surrounding an individual which he feels to be personal, to belong to himself" (Dosey and Meisels, 1969, p. 93) or a bubble or sphere that acts to protect an individual from intrusion by others. Hall, using a similar term, personal distance, refers to a distance of between 18 inches and four feet which serves to comfortably separate coacting individuals (Hall, 1969, p. 119). As such, it is but one of four distance zones defined in terms of comfort or intimacy, the other three being intimate distance (less than 18 inches), social distance (four to 12 feet) and public distance (greater than 12 feet). Although recent research has called into question the accuracy of Hall's spatial zones (Burgoon and Jones, 1976; Mazur, 1977; Shuter, 1977), the relative distances still appear sound (Heston and Garner, 1972; Connolly, 1975).

In reviews of personal space literature (e.g., Evans and Howard, 1973; Pederson and Shears, 1973) one finds personal space treated as both a dependent variable and independent variable. First, as a dependent variable, personal space has been viewed as a function of three sets of variables (Burgoon and Jones, 1976:

Watson, 1972): interactant, interactional and environmental; and, secondly, as a variable which affects interaction outcomes. Interactant variables are those variables which the individual brings to the interaction. Interaction variables are those which concern the context within which the interaction takes place. Environmental variables reflect the setting within which the interaction takes place. Second, as an independent variable the effects of violating distancing norms have been examined, both for the effects on the individual violating the norm and the individual whose normative distance has been violated. The effects studied so far have focused largely on generally compensatory and physiological reactions by the recipient of the violation and his/her changes in perceptions of attraction, credibility and persuasiveness of the violator.

Factors Influencing Distancing Norms

The effects of interpersonal distancing expectations are dependent on three sets of variables. Interactant variables are those variables the individual brings to the interaction. Interactional variables are reflected in the type of interaction (e.g., formal, casual, etc.) the individual finds himself/herself. Environmental variables reflect the surroundings in which the interaction takes place. Their importance lies in that distancing norms adopted by any two individuals are a function of all three sets of variables and, as such, are reviewed in detail.

Interactant Variables

Experiments investigating the effects of interactant variables on distancing norms generally cite cultural, demographic and personality variables as factors the individual brings with him/her to any interaction (e.g., Evans and Howard, 1973; Pederson and Shears, 1973; Patterson, 1978). The main thrust of cultural research on distancing norms has been advanced on the assumption that two types of cultures exist; individuals from "contact" cultures are assumed to expect and maintain closer interpersonal distances in an interaction, while those from "noncontact" cultures are assumed to expect and maintain farther interaction distances (Hall, 1969; Watson and Graves, 1966; Watson, 1970). Demographic variables typically include age, sex, status, coorientation and race. The inclusion of race as a demographic variable, however, is questionable as it may be more a cultural or subcultural factor in influencing distance norms (Patterson, 1978) and will be treated as such here. Personality variables are idiosyncratic patterns of behavior which serve to modify distancing norms between individuals; they include such traits as extroversion-introversion, anxiety and aberrant personality.

Culture. The anecdotal and observational work of Hall (1959, 1966) first brought the effects of cultural differences in spacing norms to the attention of researchers. Although several researchers have concluded that such differences are not operationable (Forston and Larson, 1968; Jones, 1971; Mazur, 1977) or

possibly a feature of faulty statistical analysis (Jones, 1971), others have found significant differences between cultures in distancing norms (Watson & Graves, 1966; Baxter, 1970; Shuter, 1976). Baxter observed the distances maintained by individuals from three cultures and found that Mexican/Americans maintained the closest interpersonal distances, Blacks the greatest and Anglos an intermediate distance. The researcher assumed that Mexican/Americans represented a contact culture while the Blacks and Anglos a non-contact culture. Other support for the differentiation comes from research by Lorenz (1976), utilizing a doll placement task in which South Americans placed the stimulus dolls a greater distance apart than did Russians, who, in turn placed greater distance between dolls than did Iraqis. Similarly, Watson and Graves (1966) and Little (1968) found less distances to be the norm between contact than noncontact cultures. Shuter's (1976) observations of normative distances within contact cultures indicates a degree of variability even within supposed contact cultures: Panamanians maintained greater distances than did Colombians than did Cost Ricans; Cook (1970) found the same to be true of noncontact cultures (British subjects maintained greater distances than North Americans).

Within cultures, subcultural differences may also affect distancing norms. Research indicates that racial differences within a culture influence normative distancing but the actual

norms are still tentative. Willis (1966), for instance, found that Blacks maintained a greater distance than did Whites when interacting with members of their own race. Baur (1973), however, found the inverse to be true as Blacks adopted closer "comfortable" distances than did Whites when interacting with members of their own race and sex. Other research suggests that sex and age may also affect racial distancing norms. Rosegrant and McCroskey (1975) found that during an interview, Black males maintained a greater distance from an interviewer than did White males, Black females and White females, and Whites maintained a greater distance than did Blacks from a Black interviewer. Additionally, Jones and Aiello (1973) found that age affected racial distancing among children: first-grade Blacks adopted smaller interaction distances than Whites, but by third-grade the differences were reduced and by the fifth-grade began to reverse.

Why racial differences exist is not clear, but it may be that Blacks and Whites view spatial and temporal use differently. For instance, Connolly (1975) found that Black subjects, who viewed a series of pictures with two interactants at differing distances, perceived less space in an interaction to be appropriate in each situation and indicated later that they may have viewed the sequence of pictures as a continuing sequence of interaction. White subjects, on the other hand, viewed each picture as a different interaction.

It is also possible that the process of adapting to a new culture influences these normative distances; hence, one might expect that subcultural groups would begin to adopt the distances of the dominant culture. The same analysis may be true of Forston and Larson's (1968) finding of no difference between contact and noncontact cultures -- the norms of the dominant (noncontact) culture may have been adopted during the experiment. Forston and Larson did report that contact culture individuals appeared to stand closer together than their noncontact counterparts both before and after the experiment, maintaining distances approximating their true cultures.

Demographics. The age, sex and status of interactants are major factors in determining distancing norms and expectations. Generally, it has been found that in same sex dyads, females maintain closer distances than do males (Dosey & Meisels, 1969; Pellegrini & Empey, 1970; Aiello & Jones, 1971; Rosegrant & McCroskey, 1975; White, 1975). Similar results obtain in groups larger than dyads (Mehrabian & Diamond, 1971; Patterson & Schaeffer, 1975). In opposite sex dyads, the results are not so clear cut. Although Willis (1966) and Giesen and McClaren (1976) report that individuals adopt distances closer to females than to males, a number of researchers report that males tend to approach females closer than females approach males (Dosey & Meisels, 1969; Mehrabian & Friar, 1969; Hartnett, Bailey & Gibson, 1970). Patterson (1978) suggests that this effect is due to the expression of intimacy

being traditionally more acceptable for females than males.

Recently, Tipton, Bailey and Obenchair (1975) reported that non-traditional ("feminist") females approached and maintained closer distances to males than did traditional females but that traditional and nontraditional females did not differ in their distancing when interacting with females.

Age as a determinant of norms seems to interact with sex, subcultural background and status. For example, Lomranz, Shapira, Choresa and Yitzchak (1975) reported that three-year-old children, regardless of sex, maintained closer distances than did five- and seven-year-old children; but when approached by other children, females were allowed to approach closer than males. Doll placement research suggests that between the ages of six and eleven, children of both sexes prefer closer distances with opposite sex children than same sex children (Pederson, 1973). As noted earlier, Jones and Aiello (1973) found age by race differences in distancing preferences in first and fifth-grade children. Research on older individuals suggests that distance is a function of both the age and status of the interactants. Generally, an individual is approached closer by someone his/her own age than someone older or younger (Willis, 1966; Pederson, 1973) and high status individuals are allowed greater distances in both live interaction and doll placement tests (Lott & Sommer, 1967; Mehrabian, 1968; Mehrabian & Williams, 1969; White, 1975; Edwards, 1977).

Personality. Personality variables represent idiosyncratic behaviors which influence an interactant's normative distance (Burgoon & Jones, 1976). Porter, Argyle and Salter (1970) point out the importance of such variables by noting that 90 percent of the variance in their initial study was unaccounted for, which they attributed to idiosyncratic behavior. Williams (1963, 1971) found that extroverts establish closer distances than do introverts. Some research has substantiated this effect for females but not for males (Patterson & Holmes, 1966; Patterson & Sechrest, 1970); other research has failed to support the relationship (Meisels & Canter, 1970; Porter, Argyle & Salter, 1970). Another variable affecting an individual's spacing norm is anxiety. Limited support for the inclusion of this variable comes from Williams (1963), who found that perceived interpersonal distances are judged as being closer by highly anxious females than less anxious ones. Tangentially, Long, Calhoun and Selby (1977) found that neuroticism (partially produced by feelings of anxiety) was the strongest predictor of cross-situational seating in a projective test. Aberrant and/or violent personality also has been demonstrated to influence distancing norms. Fisher (1967) found that emotionally disturbed children place greater distances between stimulus figures than do normal children; abnormal seating and interaction patterns by mental patients have been reported (Sommer, 1959; Winnick & Holt, 1961); and approach distances for mental patients and nonmental

patients were found to be closer when approaching an object than a human (Horowitz, Duff & Stratton, 1964). Research on violent and nonviolent individuals indicate that violent prisoners need two to two and a-half times the distance that normal, nonviolent prisoners need (Roger & Schalekamp, 1976).

Coorientation. The degree of coorientation between any two individuals, which includes such factors as acquaintanceship, mutual liking and attraction and desire for approval, also determines distancing norms (Burgoon & Jones, 1976). The degree of acquaintance has been demonstrated to affect distancing norms such that greater distances are maintained between strangers than acquaintances, who, in turn, maintain greater distances than between friends (Little, 1965; Willis, 1966; Russo, 1967; Edwards, 1977). Little (1965) found that men across all situations set a normative distance between self and acquaintances and self and friends while women only set a standard distance between self and friends. Edwards (1972) obtained similar results with a projective (figure placement) technique for women; although not significant, males also approached closer to friends than to acquaintances and strangers. Research on attraction and liking suggests that individuals who are attracted to each other or wish to demonstrate liking establish closer distances (King, 1966; Lott & Sommer, 1967; Norum, Russo & Sommer, 1967; Mehrabian, 1968; Kleck, et al., 1968; Allgeier & Byrne, 1973; Lerner, 1973; Power & Dabbs, 1976; Storms & Thomas, 1977). Powell and Dabbs (1976), for example, found

that individuals approached a physically attractive person closer than an unattractive person and that females approached attractive members of either sex closer than unattractive ones; males approached attractive females closer than unattractive females but approached attractive and unattractive males about equally. Similarly, approval seeking females have been found to adopt closer distances than approval-avoiding females (Rosenfeld, 1965; Mehrabian & Ksionzky, 1972).

Interactional Variables

This set of variables concerns the interaction in which the individuals find themselves. As noted earlier, Hall's distance zones are based on perceived intimacy or formality, with a great degree of variability within each zone. Scherer and Schiff (1973) and Connolly (1975) found that perceived intimacy varies with distance much as Hall described. In each case, subjects who viewed slides of people interacting at different distances (and at various arrangements in the former study) perceived closer interaction distances as more intimate than farther distances and corner seating as more intimate than side-by-side seating.

The purpose of the interaction also mediates the normative distances adopted by individuals. When the purpose is casual or conversational, seating preferences are generally corner-to-corner or adjacent. Side-by-side seating is usually found in cooperative task situations, while opposite seating arrangement

is normally found in competitive task situations. In coaction situations, farther distances are normally found (Sommer, 1965; Norum, Russo & Sommer, 1967; Cook, 1970; Long, Calhoun & Selby, 1977).

Environmental Variables

The final variables which determine spatial norms concern the environments in which the interaction takes place. Within the environment, type of territory, location, familiarity with the location, number of people within the location and arrangement of furniture all function to determine distancing norms. The location of an interaction is contingent upon the type of territory the individual interactant is in since different distancing patterns are expected in public through private interactions. Lyman and Scott (1967) have delineated four types of territory in terms of accessibility: public, which is open to all; interactional, which is used for social purposes and has social boundaries to limit access; home, where the individual controls access and is allowed a sense of intimacy and freedom within its boundaries; and body, which is the most highly restricted in terms of accessibility. Although research has not compared distancing norms across all four types of territories, the type of territory does determine to a degree the normative distances interactants will adopt and maintain.

In terms of location Edney and Jordan-Edney (1974) found, for example, that while personal distances decreased on a beach (public territory) in interacting groups the group's physical size did not

increase as more people joined the group. Similarly, Fried and DeFazio (1974) reported smaller normative distances in public transportation than in automobiles, public transportation being viewed as interactional territory and the auto as home territory. Generally, it seems to be that the greater the physical area, the more closely the interactants will space themselves (Sommer, 1962).

In addition to location, familiarity with the environment also influences the normative distances adopted in interaction. Edney (1972) found that, with increased familiarity with an environment, distances between individuals interacting within it decreased. Similarly, Vine (1975), Aschoff (1965) and Coleman (1968) also found that familiarity with an environment produced similar distancing norms.

A third variable affecting distancing norms is density. Stokols (1973; 1976) notes that density is more closely related to interaction distance than crowding (a subjective, perceived environmental restriction cued by contextual cues such as hostility). Generally, the greater the density within an environment, the closer will be the normative distances and a more even distribution of space among interactants will occur (Sommer, 1969).

One final variable exerts its influence on distancing norms. Arrangement of the environment plays an important role in establishing distancing norms in that furniture and seating arrangements typically determine interactional distances. Sommer (1962) notes, for example, that the "comfortable conversational distance" is an

arc of about eight feet in a home. Further, individuals generally prefer across to side-by-side seating arrangements up to a point that a comfortable (as determined by interactant and interactional variables) distance is exceeded and then side-by-side seating will be preferred. As noted earlier, when seated around a table, corner-to-corner or adjacent seating is preferred for casual interactions.

Effects of Violating Interpersonal Distancing Expectations

Theoretical Models

Several theoretical models have been proposed to explain the effects of distance on communication outcomes. The earliest, by Argyle and Dean (1965) proposed that an equilibrium point is reached whereby increases or decreases in one or more nonverbal behaviors produce compensatory behaviors leading to a state of equilibrium. The compensatory behaviors act as approach and avoidance factors which balance to reach a steady state of behavior. Two more recent models predict distancing effects to be a curvilinear function of the amount of expected distance between two individuals and the characteristics of one or both of the interactants (Burgoon & Jones, 1976; Sundstrom & Altman, 1976). Of the two, the Sundstrom and Altman model is more restrictive as it only considers the effect of degree of acquaintanceship between individuals (i.e., friends, strangers and strangers who do not expect to interact) on comfort levels in an interaction. The Burgoon and Jones model, on the other hand, considers a wide range

of interactant characteristics, which are used to classify "initiators" as rewarding or punishing (the initiator being the interactant whose deviations are examined for their effect on a reactant). As such, degree of acquaintanceship is but one variable which can reflect on the reward/punishment power of the initiator. Other potential factors might include physical attractiveness, sex composition, racial composition, status, power and positive and negative feedback. The Burgoon and Jones model also considers a wide range of dependent variables, including attraction, credibility, power, liking, comprehension and persuasion. Partial support for the model has been offered by Burgoon (1978) and Burgoon, Stacks and Woodall (1977), with physical attractiveness and positive or negative feedback affecting reactants' perceptions of an initiator's attraction and credibility.

The Burgoon and Jones model also predicts that the relationship between reward, distance and outcome is curvilinear in nature. The shape of the curve is based on the amount and direction of deviation from the expected distancing norm, the reward/punishment power of the initiator of the deviation and the "threat threshold" of the reactant (Burgoon & Jones, 1976). As such, the predicted curves should differ in two ways: first, the rewarding initiator should achieve more favorable communication outcomes than the punishing initiator; second, the apex of the curve for the rewarding initiator should occur at a distance closer than the normative

distance, while the apex for the punishing initiator should occur at the normative distance. Burgoon, Stacks and Woodall (1977) argue that, for the rewarding initiator, any deviation, except within the threat threshold, will produce better outcomes.

Research Paradigms

At least three different research paradigms are identifiable in the research investigating the effects of normative distancing violations. The majority of research in personal spacing has centered on two paradigms: the use of preestablished distances, or structured interaction distances, and invasions of personal space. The structured interaction design does not allow for normative distancing to occur naturally, but instead artifactually imposes a norm for that interaction. Most of the research in this paradigm has relied upon Hall's personal and/or social distance zones (18 inches to 12 feet) for their distance manipulation. As such, it is questionable whether these distances truly represent interactional distances as they fail to consider the effects of the interactant, interaction and environment which contribute to true normative distances. Research utilizing structured interaction distances, however, has been supportive of an effect whereby more "immediate" distances (closer distances between individuals) tend to increase perceptions of an individual's perceived credibility and attractiveness (depending upon the reward or punishment power of the source) and, in some cases, a persuader's perceived influence (e.g., Mehrabian & Williams, 1969; Albert & Dabbs, 1970;

Garner, 1972; Rosegrant & McCroskey, 1975; Imada & Hakel, 1977; Riess, 1977). Research also has demonstrated an effect on violations farther than the norm (Lassen, 1973). Lassen found that anxiety was increased at great distances (nine feet or more) as well as close distances. Patterson and Sechrest (1967), however, found that compensatory reactions decreased at far distances (10 feet), but that ratings of aggressiveness, dominance, extraversion and friendliness decreased as distances increased (Patterson & Sechrest, 1970). Invasion research, on the other hand, has relied on the effect of extremely close distance violations on the individual and has been demonstrated to produce compensatory reactions (e.g., reactions of anxiety, nervousness and flight) and strong physiological reactance from the individual whose space has been violated (e.g., Garfinkel, 1964; McBride, King & James, 1965; Felipe & Sommer, 1966; Middlemist, Knowles & Mather, 1976).

The third paradigm is identifiable by the use of actual interaction distances adopted by the interactants. In this respect the research representative of this approach is interested in allowing interactant, interactional and environmental variables to function to establish a more "natural" interaction distance to be adopted. Burgoon, Stacks and Woodall's (1977) research falls into this paradigm where subjects are allowed to establish their own normative distances from a confederate who then either maintains that norm or deviates closer or farther than the norm. At least two other studies fall between the structured interaction and

subject setting norm approaches. Burgoon (1978) identified the prevailing normative distances for her subject population by pilot test and then had confederates systematically deviate from the preestablished norms. In this way she operated her distance manipulation with more precision than studies based on cross-cultural norms. Albert and Dabbs (1970) also attempted to at least identify distances judged as "uncomfortably close," "average," and "uncomfortably far." Unfortunately, their average and far distances (five to six feet and fifteen feet, respectively) fall outside the personal space zone and include both the social and public zones as defined by Hall (1966).

Effects of Violating Normative Distancing Expectations

Compensatory and Physiological Reactions. As noted earlier, most compensatory and physiological reactions to spatial invasion are the result of extremely close distances between two individuals. These behaviors have been attributed to be the result of anxiety reactions or discomfort arising from the invasion (Argyle & Dean, 1965, p. 293). The behaviors manifested by violations of personal space include changes in eye contact, body lean, increasing distances between violator and subject and actual flight. Probably the most often cited study of personal space invasion is that of Felipe and Sommer (1966) who found such a series of behaviors to occur when an experimenter violated subjects' personal space. More recently, Krail and Leventhal (1976) found an effect for sex on compensatory reactions. Using Felipe and Sommer's method they found

shorter latency periods in compensatory behavior the closer the invader was to the subject. For same sex interactions, males had shorter latency periods than did females and a significant sex of subject by sex of invader interaction was found where a female invader/male subject interaction elicited longer latency periods than did a male invader/female subject interaction. Other researchers have found that extremely close spatial invasions produce anxiety on several indices (Horowitz, Duff & Stratton, 1964; McBride, King & James, 1965; Sommer, 1969; Baxter & Deanovich, 1970; Patterson & Sechrest, 1970; Patterson, Mullens & Romano, 1971; Middlemist, Knowles & Mather, 1976); embarrassment (Garfinkel, 1964); changes in eye contact (Argyle & Dean, 1965; Mehrabian, 1968; Goldberg, Keisler & Collins, 1974); and changes in body orientation and self-manipulations (Argyle & Dean, 1966; Felipe & Sommer, 1966; Patterson, Mullens & Romano, 1971). These effects offer strong support for the existence of a threat threshold as posited by Burgoon and Jones (1976) and suggest that extremely close distances between individuals produce responses which the individual might label as negative.

Attraction and Credibility. The effect of different distances between two individuals has been demonstrated to produce differing perceptions of attraction and credibility. Rosegrant and McCroskey (1975) found that an "invasion" of six inches produced better ratings of credibility on the dimensions of sociability, competence

and composure. Their interviewers were graduate students and, if one assumes their status was higher, the results are not inconsistent with the prediction that rewarding (i.e., high status individuals) interviewers will be perceived as higher in credibility at a close distance. Similarly, Garner (1972) found that an invasion to within six inches of the subject increased ratings of a female interviewer on the credibility dimensions of competence, composure and dynamism. Given that the interviewer was moderately attractive in dress and appearance, it may be inferred that subjects viewed the interaction as rewarding. Moreover, males may have viewed the invasion as having sexual overtones, thus increasing the reward value of the interaction. The same type of results have been found by Patterson and Sechrest (1970) in an interviewer-interviewee situation, Heston (1974) with spatial invasion and Imada and Hakel (1971) in mock employment interviews. Burgoon (1978) also utilizing an interviewer-interviewee situation, found that when rewarding and punishing interviewers (giving positive and negative feedback, respectively) were perceived differently when they sat at differing distances from the reactant. Rewarding interviewers were perceived as more attractive and credible at closer distances. (The apex of the curves peaked at a distance about 18 inches closer than the preestablished normative distance.) The punishing interviewers, however, obtained the highest ratings at the preestablished normative distance. These studies, however, utilized structured interaction distances and, thus, did not allow

natural spacing norms to occur. Burgoon, Stacks and Woodall (1977), however, did allow subjects to establish their own normative distances (a range of one to forty-nine inches) in an interview setting. Testing a number of reward/punishment operationalizations, they found physical attractiveness of the interviewer and positive regard to be the best reward definitions. Again, the reward interviewer obtained higher ratings on attraction and credibility by deviating from the established normative distance while the punishing interviewer obtained highest ratings by maintaining the observed norm. Rewarding interviewers obtained higher ratings in either the close or far distance conditions (deviations of 18 inches closer or farther than the normative distance, respectively) on some outcome variables. Whether the threat threshold (operationalized as a distance of less than six inches between interviewer and interviewee) was reached is questionable. Although there is strong implicit support for such an effect in the literature, it may be that in these experiments the distance was not sufficiently close to generate a feeling of threat or that the laboratory atmosphere and explanation of the task reduced subjects' reactions to extreme physical closeness.

Persuasion. A review of the literature on nonverbal communication and persuasion reveals that very little research has been undertaken in the area of interpersonal distancing and none with violations of distancing expectations. For the most part, the research dealing with spatial effects has found it best to explain

hypothesized results on a post hoc basis. Mehrabian and Williams (1969), for example, used the concept of immediacy and expected that more immediate (i.e., closer) distance cues should be directly related to the intended persuasiveness of encoders and perceived persuasiveness of decoders. Albert and Dabbs (1970) explained their findings of distance effects in terms of reactance theory, while Garner (1972) suggested that derogation of topic or source took place when subjects' space was encroached. Riess (1977), integrating research on communicator attractiveness, expertise, status and distance, hypothesized that distance between a speaker and target would affect perceived persuasiveness when the target was focused on source attractiveness and status. He concluded that distancing cues had no effect on status and attraction but when the focus was on status a trend was obtained for persuasion. Since all four studies used structured interaction distances, natural distancing norms were not operational; however, the results suggest that distancing between individuals does affect persuasiveness.

Mehrabian and Williams (1969) found that subjects, when asked to encode messages of varying degrees of persuasiveness (highly persuasive, moderately persuasive or purely informational), adopted the same approximate distances. In a second study, they employed a decoding methodology, where subjects viewed a video-taped, but silent, communication at two distances (immediate, four feet, and

nonimmediate, 12 feet). A significant main effect was found where the immediate distance between persuader and persuadee was perceived as more persuasive than the nonimmediate distance. Further, significant sex, eye contact and distance interactions were found such that at the far distance males were less persuasive with 90 percent eye contact than 50 percent eye contact; females were less persuasive with 50 percent eye contact than with 90 percent; and at the close distance, eye contact was nonsignificant for either sex. The effect of eye contact, however, may be questioned since the persuaders wore masks with slits for eyes which would make the eyes the most salient physical feature available to the subject. Another factor troubling the Mehrabian and Williams study was the operationalization of distance. Although the immediate distance seems to fall within Hall's personal space zone, the nonimmediate distance lies at the outer boundary of social space and far exceeds Sommer's arc of comfortable conversation. It is plausible that the far distance was perceived by the subjects viewing the interaction as impersonal to the persuadees (c.f., Jones & Davis, 1965) who thus cued in on the mask for curiosity's sake. This might explain the higher order interactions. The sex difference at the far distances may be attributed to normative eye contact patterns which indicates that females maintain more eye contact while speaking than do males (Exline, 1963).

Albert and Dabbs (1970) found that as distance between a hostile persuader and persuadee decreased so did attitude change. They used pretested distances of comfort (uncomfortably close, one to two feet; average, five to six feet; uncomfortably far, fourteen to fifteen feet) between subject and confederate and, while increased distance tended to increase persuasion, attention at both the close and far distances was found to be focused on the speaker's physical appearance. Two interpretations are possible from this study. First, if status is an important characteristic in a persuasive interaction, then the increasing distances adopted by the speaker may have indicated increased status (e.g., Willis, 1966) and subjects who perceived the speaker to be of higher status changed their attitudes in the speaker's direction. Secondly, since the attitude change for the hostile speaker was nonsignificant between the "average" and far distances, one might reinterpret these distances on two grounds. The "average" distance may have approximated the normative expected distance for a punishing (in this case, hostile) source, and the far distance (beyond the outer boundary for Hall's social zone) may have conveyed a status demand so strong as to override the otherwise negative distance effect.

A second study which found decreased attitude change at extremely close distances (Garner, 1972) might have reached subjects' threat threshold. Since the extremely close distance was less than six inches, heightened arousal caused by an attractive interviewer could

have caused subjects to ignore the topic and focus on their physiological reactions to inadequate space. A third study (Riess, 1977) manipulated the seated distance and focus between persuader and persuadee. Distance was operationalized as falling within Hall's social-consultative zone (3.5 to 7 feet) and, although no significant results were found for distance, a trend was obtained whereby perceived persuasiveness increased as distance increased, but only in the status orientation. His results are comparable to Albert and Dabbs' when interpreted from the perspective that higher status individuals are accorded more distance. Again, however, the use of structured interaction distances may be responsible for the lack of significance on distance.

Several potential explanations may be advanced to account for these results which are not completely inconsistent with each other. That spatial invasions (i.e., distances of six inches or less) produce less persuasion should be expected from the nature of the invasion alone; invasions of this sort have been documented to produce anxiety, embarrassment and reactions reflecting general discomfort on the part of the individual whose space has been invaded (e.g., Garfinkel, 1964; Horowitz, Duff & Stratton, 1964; Argyle & Dean, 1965, 1966; Patterson, Mullens & Romano, 1971), as well as strongly analogous behavior in subhuman species (e.g., Calhoun, 1962; Christian & Davis, 1964). Mehrabian and Williams' findings that more immediate distances produce more persuasion could be explained

by noting that the immediate distances which was not close enough to constitute an invasion, may have approximated that an average individual adopts in delivering a persuasive message, but close enough to indicate some degree of attraction between the two individuals. As such, closer distances would indicate both involvement in the task and attraction within the interaction. Albert and Dabbs' find that increased distance produced increased acceptance of the persuasive message and attention to physical appearance is best explained from the status effect. Additionally, the only significant difference was found between the close and average distances. The decreased message acceptance at the close distance suggests that it may have been too close and possibly threatening to the subject. Since the close distance was measured as one to two feet, face-to-face, with the interactants seated facing each other, the actual knee-to-knee distance would necessarily be less than one inch; a distance which should be threatening to the subject. What the results would have been if normative distances had been allowed to be established and then violated has not been answered. A potential rationale for the effects of violating distancing expectations lies in the distractive effect such violations may have on a persuader's attraction, credibility and persuasiveness.

Distraction and Violations of Interpersonal Distancing Norms

Recent research suggests that distraction created by other people or environmental events may mediate an individual's susceptibility to a persuasive message (e.g., Baron, Baron & Miller, 1973). In much of this research the process of counterarguing has been used as an explanatory concept. It has been argued that the ability of a message to be influential is dependent upon the probability of its being received and understood by a receiver, its probability of being discredited and the validity of the arguments in the message which are yielded to (Weyer, 1974). Baron, Baron and Miller (1973) argue that distractive stimuli may facilitate persuasion by dividing a receiver's attention when exposed to counterattitudinal messages, by disrupting the screening of information and inhibiting the production of counterarguments. It is this disruption of counterargument production which leads to increased susceptibility of accepting the message.

Festinger and Maccoby (1964) first reported that persuasion was enhanced by distracting receivers of counterattitudinal messages through the simultaneous presentation of disruptive stimuli. They suggested that distraction interfered with counterarguing, disrupting a subvocal (psychological) process whereby the receiver is prevented from subvocally counterarguing against the message. Along this line of thought, Brock (1967) found that where there was an increase in message discrepancy, there was also an increase in receiver counter-

argument production. Further, Brock's data suggested an inverse relationship between the production of counterarguments and yielding to the message; as counterargument production increased or decreased, yielding to the message decreased or increased.

Since counterarguing is a subvocal, psychological variable, the question arises as to whether distraction interferes with the production of counterarguments. Several studies suggest that it does (Brietrose, 1966; Dorris, 1967; Osterhouse & Brock, 1970; Zimbardo, et al., 1970; Keating & Brock, 1974). Decreased counterarguing was strongly associated with counterargument production where subjects who were distracted had greater acceptance of the message's position and less counterarguing, and, conversely, nondistracted subjects were more resistant to the message and produced more counterarguments. Other researchers (Freedman & Sears, 1965; Kiesler & Mathog, 1968), although not measuring counterarguing, have relied upon the distraction-counterargument production relationship to explain their findings of increased persuasion with distraction.

Miller and Baron (1973) suggest that the counterarguing process consists of two dimensions, one being purely cognitive and the other motivational. The purely cognitive dimension taps activity consisting of content-oriented information being generated by an individual to refute a persuasive message. The motivational aspect reflects an individual's desire to counterargue and resist the persuader's message. High motivation is indicated when an individual increases counterargument production and is reflected in the

presentation of a large number of reasons to reject or discard the persuader's arguments. Brandt, Dinklecker and Stoyanoff (1977) argue that individuals differ in their propensity to counterargue; that just as some people tend to focus on the communication source when processing a persuasive message, others are motivated to focus on the content of the message, testing, attacking and refuting arguments contained in the message. They found support for the hypothesis that individuals with a high propensity to counterargue would be more prone to counterargument production and more resistant to the communicator's influence than individuals with a low propensity to counterargue. Further, they suggested that perceptions of source credibility are also affected by an individual's propensity to counterargue. Festinger and Maccoby (1964) suggested that, other than discrediting the points a communicator makes in a persuasive presentation, counterarguing also takes the form of source derogation. Brandt, et al. (1977) found that subjects with a high propensity to counterargue perceived the message source as significantly less credible than did subjects with a low propensity to counterargue. This result is similar to Cook's (1969) finding that decreased counterarguing is associated with highly competent sources.

Interactional Distance and Distraction. Distractive stimuli have traditionally taken the form of environmentally produced distractors. Distractors employed have ranged from irrelevant

movies and slides, monitoring tasks, and heckling to eating while reading evaluation instructions. Little research has dealt with distracting stimuli which are inherent to a social interaction aside from environmental or outside distraction. In cases where outside stimuli have been employed, audio- or video-taped presentations of messages were employed (e.g., Miller & Baron, 1968; Brandt, et al., 1977; Burgoon, et al., 1978) and have dealt with interactions not specifically of an interpersonal (dyadic) nature. Of interest to communication researchers might be stimuli which are available to a persuader in a social interaction which would increase his/her persuasiveness, credibility and attraction. Violations of interpersonal distancing expectations provide a subtle, yet potentially distracting stimulus, which could be manipulated by a persuader.

The relationship between distraction and the violation of distancing expectations has not been specifically addressed in the literature, nor has a rationale for potential distractive stimuli been advanced. It seems reasonable that a rationale can be derived based on the disruption of an individual's motivation to counter-argue a persuasive message due to (1) the distance the persuader maintains or does not maintain from the subject and (2) the characteristics of the persuader. Additionally, a third variable, propensity to counterargue, may contribute to the distancing-persuasion process.

Based on the assumption that individuals, when presented a counterattitudinal message, screen and counterargue information and arguments advanced by a persuader, it is expected that the distance the persuader adopts in the interaction will either facilitate or inhibit the subject's motivation to counterargue. It is suggested that this effect takes place due to either anxiety from extreme spatial invasion or from attributions concerning hedonic reward and personalism at other distances.

Almost all theories of interpersonal attraction predict that a source's attractiveness enhances the efficacy of his or her persuasive message (Tedeschi, Schlenker & Bonoma, 1973), attractive (rewarding) sources should gain greater compliance to their messages than unattractive sources. Support for source attractiveness is offered by Mills and Aronson (1965) who found that a female who was made to appear physically attractive was more effective in influencing a male audience (when she made clear her intent to influence) than was the same female made physically unattractive.

While reward-punishment power may be a characteristic of the source, the perceived personal involvement indicated by the situation should be affected by the distances adopted and deviated from in the interaction. Proxemic research suggests that individuals who are attracted to one another establish closer normative distances, which should indicate a degree of personalism within that interaction. If one individual deviates from the norm, the

degree of personalism should be proportional to the hedonic relevance of that individual and the direction of the deviation. If the initiator of the deviation is rewarding, perceived personalism should increase with a deviation closer than the norm. If the initiator is punishing (low in hedonic relevance), the degree of personalism should decrease proportionally with the deviation since punishing initiators are not allowed deviation from established norms.

The Burgoon and Jones (1976) model proposes that violations of personal spacing expectations should lead to positive and negative effects depending upon the characteristics of the initiator of the deviation from the distance expectation and the direction and amount of that deviation. As such, four distances can be conveniently, if arbitrarily, identified: the normative distance established at the onset of the interaction, a close distance which is a deviation closer to the individual than the norm, a far distance which is a deviation farther than the norm and a threat threshold which is an extreme spatial invasion. Burgoon, Stacks and Woodall (1977) suggest that the four distances may be operationalized as points on a continuous line set not by preestablished distances but by the actual normative distances selected by the subject and confederate. As such, instead of referring to four distances as structured interactional distances, the distances take on a more natural meaning, except for the threat threshold which is defined as a few inches from the subject.

The Burgoon and Jones model proposes that extreme spatial invasion constitutes a violation of an individual's threat threshold. Effects of such close distancing have been noted to produce both behavioral and psychological reactions which have been labeled as anxiety or embarrassment. These reactions should cause individuals to divert energy from concentrating upon message content to identifying the source of the reactance. This focus might lead to two complementary outcomes. First, the individual could identify the anxiety or embarrassment with the initiator of the invasion. The equating of anxiety with the initiator should cause the individual to derogate the source in terms of perceived credibility and attraction which, in turn, should lead to less acceptance of the initiator's message. Secondly, the extremeness of the invasion might cause the individual to ignore the message completely; that is, in order to overcome or understand the reactance, the individual should be so distracted as to miss the message and its arguments.

These effects could explain Garner's (1972) finding that extreme invasion produced less favorable attitudes toward the topic and Albert and Dabbs' (1970) finding of less attitude change with decreased distance. That subjects engage in source derogation and counter-argument production would seem to intuitively make sense at extremely close distances. If increased counter-arguing is associated with increased source derogation then spatial invasion should facilitate both, as an apparent cause for discomfort is readily

available to the subject. Garner, however, reported that perceptions of competence, composure and dynamism were higher with invasion than noninvasion subjects. As noted earlier, the attractiveness of the confederate in the case of male subjects and the perception of female-female distancing norms in the case of female subjects may have facilitated ratings of credibility. However, given the moderately attractive source, the distance distraction may have interfered with subjects' motivation to derogate the source yet may not have been sufficient to interrupt the subjects' motivation to counterargue the message. It may be that the invasion produced more attention pertinent to source characteristics such that the invasion subjects interpreted the distance as an indication of the source's attraction to them, yet not sufficiently enough to override counterarguing the message. Another explanation may be that standing distances are interpreted differently than seated distances.

An additional finding by Albert and Dabbs (1970) might clarify what happens at "close" distances. They found that attention was focused on the source's physical appearance at the "close" condition and not on the message. Although their "close" distance does not approximate an extreme invasion distance as they operationalize it, reinterpreting the face-to-face distance (12 to 24 inches seated distance) suggests that knee-to-knee distance of less than one inch might be defined as an invasion of personal space. Albert and Dabbs also found that source characteristics affected persuasion. Specifi-

cally, the friendly persuader produced more attitude change across distances than did the hostile persuader. If friendly and hostile characteristics can be equated with rewarding and punishing characteristics, these results suggest that rewarding individuals produce better outcomes than do punishing individuals, which is consistent with the Burgoon and Jones model. In terms of credibility and attractiveness of the initiator of an invasion, Burgoon (1978) and Burgoon, Stacks and Woodall's (1977) findings suggest that deviation produce lower ratings of initiators' credibility and attraction at the threat threshold than the close or normative distances.

In accord with Burgoon and Burgoon, Stacks and Woodall's suggestion that the initial model of violations of personal space expectations be modified in the case of rewarding initiators, any deviation, up to the point of the threat threshold, should produce better communication outcomes for that source. A deviation closer than the norm should indicate attraction and increased liking toward the reactant. Since people are more susceptible to persuasive messages from sources they perceive as liking them (Mills, 1966; Rosnow & Robinson, 1967), their motivation to counterargue a counter-attitudinal message should be disrupted and greater yielding to the message should result. Additionally, a deviation closer by the rewarding source would allow the reactant to engage in quasi-courtship behaviors, which should also decrease motivation to counterargue. With the quasi-courtship behaviors and attraction

there should be an increase in perceived personal involvement in the interaction. This increased involvement reflects upon the reactant's feeling that the influence is mutual, directly motivating the behavior of the initiator.

For the punishing source, however, the effect of distancing violations is to facilitate counterarguing. This facilitation should be coupled with an increased motivation to derogate the source. Although research indicates that, when focused in on negative characteristics of a source, distraction inhibits the counterarguing process (Burgoon, et al., 1978), the distance distraction should be more subtle. Burgoon, et al., has subjects assigned to "critical sets" whereby the subject was instructed to attend to positive or negative source characteristics while the distance manipulation should produce first negative attributions of the source and then a transfer of these attributions to the message. As such, the increased motivation to derogate the source should lead to an increased motivation to counterargue the message.

A deviation farther than the normative distance established between the persuader and reactant should decrease outcomes for the punishing source and increase outcomes for the rewarding source. Aside from indicating less attraction, research suggests that a farther distance is indicative of antipathy (Sommer, 1971), incompatibility (Altman, 1971), aggression and dominance (Patterson & Sechrest, 1967) and anxiety (Lassen, 1973). As such, the reactant should be

motivated to produce counterarguments and engage in source derogation. Since Albert and Dabbs found attention at their far distance also to be centered on the physical appearance of the source, it is reasonable that the farther distance heightens the reactants' perception of the source's attractiveness and provides more motivation to both generate counterarguments and to derogate the source, if that source is punishing. Since the rewarding source is allowed greater deviation from normative behavior the deviation farther than the norm would not appear counternormative but may actually increase his/her attractiveness and status (e.g., Burgoon, Stacks & Woodall, 1977). This would result in less source derogation and counterarguing.

At the normative distance, the rewarding source should produce lower outcomes than at the far or close distances. This effect is reflected in that by maintaining the normative distance the source has done nothing to distract the reactant from counterarguing the message and derogating the source. For the punishing source, the normative distance should produce the best results as deviations from the norm should facilitate reactants' motivation to produce counterarguments and engage in source derogation.

An additional variable, propensity to counterargue, suggests that individuals differ in their ability or proneness to engage in counterarguing. Research suggests that individuals with high propensities to counterargue are not affected by the distractive

stimuli (Brandt, et al., 1977). High propensity individuals would seem to overcome the distraction and continue to focus on the content of the message while still derogating the message source. This suggests that, whatever the distraction, high propensity individuals should be more resistant to a counterattitudinal message, at least for environmental or outside distractive stimuli. The question which has not been addressed is whether the kind and/or variation of similar kinds of stimuli produce the same result. If, as Festinger and Maccoby (1964) and Brandt, et al., (1977) suggest, counterarguing also takes the form of source derogation, it is reasonable to conclude that if a persuader can manipulate the distraction so as to enhance his or her perceived credibility and attraction, it should inhibit the receiver's motivation to engage in counterarguing. In other words, a distraction which increases attraction and credibility should result in less counterarguing. This should hold true for both high and low propensity-to-counterargue individuals. The amount of counterarguing, however, should still be higher for the individual with a high propensity to counterargue.

It should be expected, then, that violations of interpersonal distancing norms, in terms of propensity to counterargue, would produce results similar to those discussed earlier. High propensity subjects, when interacting with a rewarding source who presents a persuasive message, should be most susceptible to influence at deviations closer or farther than the expected normative distance and

less influenced and more critical of the source at extremely close (threatening) and normative distances. When the persuader is punishing, the most influence should occur at the established normative distance. For low propensity subjects, the same result should occur, regardless of the reward/punishment power of the persuader, except that in terms of perceived attraction and credibility and susceptibility to the persuader's influence, low propensity subjects should yield more to the persuader's position and perceive him/her more credible than their high propensity counterparts.

Derivation Of Hypotheses

Based on the preceding rationale, the first four hypotheses parallel those of the modified Burgoon and Jones model. Rewarding (i.e., physically attractive) sources should receive higher ratings of attraction and credibility and be more persuasive than punishing (i.e., physically unattractive) sources. It is also predicted that the rewarding and punishing characteristics of the source will interact with the distance and that two separate curves will result from that interaction.

- H₁: Physically attractive sources, who present subjects with a counterattitudinal message, will receive higher ratings of credibility and attraction and will be more persuasive than physically unattractive sources.
- H₂: The effects of distance on attraction, credibility and persuasion are dependent upon the nature of the rewarding or punishing characteristics of the source, i.e., the effects are interactive rather than additive.

- H₃: For physically attractive sources, the relationship between distance and attraction, credibility and persuasion is curvilinear in nature such that a close or far distance will produce higher ratings of credibility and attraction and more acceptance to the persuasive message than a threat or norm distance.
- H₄: For physically unattractive sources, the relationship between distance and attraction, credibility and persuasion is curvilinear in nature such that a normative distance will produce higher ratings of credibility and attraction and more acceptance to the persuasive message than a threat, close or far distance.

From the research that suggests that individuals differ in their propensity to counterargue, subjects with a low propensity to counterargue should be less resistant to the persuasive message than subjects with a high propensity to counterargue. Additionally, low propensity subjects should rate the message as more credible than their high propensity counterparts.

- H₅: Subjects with a low propensity to counterargue will be less resistant to a source's counterattitudinal message and will perceive the message source as more credible than will high propensity subjects.

It is expected that subjects who interact with physically attractive message sources should yield more to the source's position than to physically unattractive sources. Further, both subjects with a high propensity to counterargue or low propensity to counterargue should be more resistant to a message from an unattractive source than an attractive source, with high propensity subjects more resistant to the message and critical of the source than low propensity subjects.

- H₆: Subjects will be less resistant to counterattitudinal messages from an attractive source than an unattractive source, with high propensity-to-counterargue subjects more critical of the source and resistant to the message than will be low propensity subjects.

High propensity-to-counterargue subjects who are not distracted should be most resistant to the message, while distracted low propensity subjects interacting with an attractive source should be least resistant to the message.

- H₇: Nondistracted, high propensity-to-counterargue subjects will be most resistant to a counterattitudinal message, while distracted low propensity subjects will be the least resistant to the message from an attractive source.

The effect of distance is dependent upon the reward/punishment power of the source. Whereas distance and reward interact to produce two different curves, propensity is additive and should produce two parallel curves for both rewarding and punishing initiators. From the propensity main effect and the hypothesized curvilinear relationship between reward and distance, it is expected that high propensity-to-counterargue subjects will be more resistant to the source's message and rate the source as less attractive and credible than low propensity-to-counterargue subjects. For the physically attractive source, the apex of both curves should occur at the close and far distances, for the physically unattractive source, the apex should be at the established normative distance.

- H_8 : Given high propensity subjects, the relationship between reward and distance and attraction, credibility and persuasion is curvilinear in nature such that a close or far distance for the physically attractive source and a normative distance for the physically unattractive source will produce the highest ratings of attraction and credibility and the most acceptance of the message.
- H_9 : Given low propensity subjects, a curve parallel to that of high propensity subjects will be produced but yield higher ratings of attraction and credibility and more acceptance of the message across all distance conditions.

CHAPTER II

METHOD

The experiment was carried out during the first three weeks of the Spring Quarter, 1978, at the University of Florida. Subjects were initially pretested for propensity to counterargue and assigned to either high or low propensity conditions. Subjects then interacted with a confederate who either maintained or deviated from an established interpersonal distancing norm before presenting an unexpected counterattitudinal message. Following the interaction subjects rated the confederate on measures of credibility, attraction and their attitude toward the topic of the persuasive message. In addition they responded to scales and an open-ended questionnaire designed to measure distraction.

Subjects and Confederates. Subjects were 406 undergraduate students enrolled in speech courses at the University of Florida. However, 56 were excluded from the analysis: six because they knew the purpose of the experiment, five because the confederate either forgot the message or began over again; thirteen because they did not remain seated; and 32 for failure to complete the post measures. Of the 32 excluded from the analyses, ten failed to complete the attitude measures and 22 for failure to complete either the attraction or credibility scales. Participation was voluntary in some cases or for class credit.

The confederates were two male and two female volunteers enrolled in nonverbal communication courses. Initially, twelve volunteers were chosen by the experimenter on the basis of their physical attractiveness. They were then rated for physical attraction by 35 students enrolled in an upper division speech course who did not participate in the actual experiment. Subjects rated each volunteer on a series of subscales developed by McCroskey and McCain (1974) reflecting perceived physical attraction. From the 12 volunteers rated, four were finally selected to participate as confederates in the experiment. Criteria for final selection was based on the ratings of physical attractiveness. The ratings then submitted to an Analysis of Variance and comparison of mean attractiveness scores was used to select the final four confederates. Confederate ratings across the individuals ranged from 22.26 to 12.49 ($p < .05$). Reward was treated two ways: as a categorical variable with four levels and as a continuous variable. Because reward was found to deviate from linearity, a third operationalization was utilized.

Independent Measures. There were three independent variables in this investigation: reward, distance and propensity to counter-argue. Reward was operationalized as a message source's physical attractiveness as rated by McCroskey and McCain's (1974) subscales for physical attractiveness. Confederates' scores were 22.26, 18.60, 15.77 and 12.49; all significantly different from each other ($p < .05$). Reward was operationalized as a simple dichotomy (Burgoon, 1978;

Burgoon, Stacks & Woodall, 1977). In these analyses, the two highest rated confederates' outcomes were collapsed and tested against the collapsed outcomes for the two lower rated confederates. The dichotomy produced significantly different levels of reward ($F = 12.56, p .05$).

Distance was operationalized as the thigh-to-thigh seated distance between the confederate and subject. Instead of using structured interaction distances (e.g., Albert & Dabbs, 1970; Riess, 1977), subjects were allowed to establish their own normative distances from the confederates. The distance manipulation was accomplished in the following manner: once the normative distance was established, a deviation of 18 inches closer than the norm constituted the close distance, whereas a deviation of the same distance farther than the norm constituted the far distance. For the threat distance, the confederate's deviation was less than three inches from the subject. The normative distance was operationalized as no deviation from the established normative distance. Distance was then operationalized in two ways, first, as a categorical variable with four levels (threat, close, norm and far) and, second, as points on a continuous line set by the deviations from the actual norm adopted by the subject. The treatment of distance as four levels was used to arbitrarily set the four distance conditions. The continuous treatment allowed distancing to take on a more natural form. The normative distances adopted by subjects ranged from one to forty-seven inches, indicating that subjects' did not feel constrained to adopt any particular distance. The

advantages of treating distance as a continuous variable were that it avoided the problems of artificially defining distance as rewarding or punishing and it provided a more sensitive test of the hypotheses.

Subjects' propensity to counterargue was measured by scores obtained from a modified technique reported by Brandt, et al. (1977) which taps the content dimension of counterarguing. Additionally, items were added to measure subjects' motivation to derogate the message source. Thirty propositional statements were pretested, each relating to a different topic, to determine which were most discrepant from held beliefs. Sixty-five undergraduates from the Winter Quarter served as pretest subjects. Each responded to the statements on three sets of scales: (1) a seven-point interval scale bounded by "strongly agree" and "strongly disagree;" (2) a set of four semantic differential scales suggested by Osgood, Suci and Tannenbaum (1957) bounded by the adjectives "good-bad," "valuable-worthless," "pleasant-unpleasant," and "wise-foolish;" and the Known Interval Scale, developed by Burgoon (Burgoon, Burgoon & Vaughn, 1976). The first set of scales represent those used by Brandt, et al., while the second and third sets were identical to those used in the experiment. Based on subjects' responses, the following six topics were chosen as most belief discrepant: (1) "The State University System should redesignate areas of study to different universities, i.e., UF should only be allowed to offer hard sciences, FSU only social sciences, USF only

management and marketing, etc.;" (2) "24-hour visitation in dormitories should be abolished at this university;" (3) "Search and seizure limits on police should be abolished;" (4) "The purpose of the university should be primarily research-oriented with teaching at best a secondary orientation;" (5) "There should be an immediate tuition increase at this university;" and (6) "The sale of heroin in the United States should be legalized." The six topics were chosen because they yielded means of 2.1 or less on the belief scale (on a one to seven scale), responses were highly skewed in the direction of opposition and the three sets of scales were highly correlated. Five of the topics were then selected for inclusion in the propensity measure and the remaining topic was used for the actual message (legalization of heroin). Supportive arguments were then generated from various sources (e.g., debate files, speeches, newspapers) for each of the five topics. Additionally, phrases were added which represented derogatory or defamatory statements of a source using these arguments. The arguments and phrases were then randomly ordered in a "check-list" format under the appropriate topic, with the source derogation list appearing after the content list (see Appendix A).

Because Brandt, et al., (1977) made no assumptions concerning the dimensionality of their instrument and because a second set of items were added, estimates of internal reliability were computed for each topic and derogation scale. The estimates were computed by

the Kuder-Richardson Formula 20, as suggested by Guilford (1954), for dichotomous data. Reliabilities obtained were .59, .72, .54, .75 and .75 for each of the five topics, respectively. Reliabilities for the source derogation scales were .59, .75, .80, .72 and .77 respectively. Chronbach's Coefficient Alpha was then computed to determine subjects' frequency of acceptance-rejection across topics for each set of items (Chronbach, 1951). Coefficient Alphas of .69 and .54 were obtained for the content and source derogation measures, respectively. Reliability estimates were lower than expected; consequently the interpretation of results may be suspect. Additionally, correlations between marking behavior for high and low propensity subjects for content and source-oriented item sets were computed. Since it was assumed that subjects with a high propensity to counterargue would also derogate a message source more than their low propensity to counterargue counterparts, the two sets would be correlated. The correlation between content and derogation scales for high propensity subjects was $-.12$ ($p < .10$) and $.02$ (nsd) for low propensity subjects. The correlations were not in the expected direction for high propensity nor as strong as desired.

The validity of the instrument was treated in three ways. First, in the same manner as Brandt, et al., (1977), it was expected that an inverse relationship between propensity to counterargue and communication acceptance would occur and, to the extent that subjects' responses to the measure corresponded to that expectation, some

measure of validity would be obtained. Secondly, if the results obtained were similar to those of Brandt, et al.'s, then some measure of validity could be expected. Finally, a separate sample of subjects ($n = 29$) was administered the propensity-to-counterargue measure, exposed to a randomly selected recording of the experimental message and then, requested to react to the message in essay form. Statements were then categorized according to whether they were content- or source-oriented and were counted. The number of statements were then correlated with the subjects' scores on the propensity measures. Because the experimental message was heard before the essay was written it was expected that correlation between the number of counterarguments and derogatory statements would be high for the essay measure. The obtained correlation ($r = .82$, $p < .05$) indicate the statements were related. Because the message provided subjects with a "live" source and arguments stated in a logical order, any positive correlation with the propensity measure was taken as a measure of concurrent validity. A correlation of .05 (nsd) was obtained between the two measures for propensity and .09 (nsd) for derogation, indicating the two measures were not correlated.

Message. The topic of the persuasive message argued in favor of the legalization of heroin in the United States (see Appendix B). The message was written by graduate students for a previous study (Burgoon, et al., 1978) and found to be extremely persuasive. The message contained 491 total words with an average sentence length of

21.20 words. Comprehension was rated as extremely high on the Contingency Index (Becker, Bavelas & Braden, 1961), with an index of 6.65. The Gunning-Fog Readability Index (Gunning, 1952) indicated the readability of the message was comprehensible to those with over 12 years of formal education. Since the intensity of the language used in a message has been demonstrated to effect attitude change (Burgoon & Miller, 1971), the message was created to be moderately intense with highly intense metaphors and extreme adverbial qualification not used.

The message was memorized by each confederate. It was rehearsed until a verbatim delivery of approximately the same rate was reached. The message took approximately three and one half minutes to deliver. To ensure that the messages did not differ across distance and reward conditions, all messages were taped via a two-way speaker system without the knowledge of the confederate, and one message from each confederate was randomly selected. These messages were rated by 20 undergraduates on credibility and attitude scales. Mean ratings were then compared to determine if any systematic variation had occurred. No significant differences were found. Additionally, six tapes per confederate were randomly selected and timed. No significant differences were found for length of message either between or within confederates.

Dependent Measures. There were three dependent measures in this investigation: source credibility, source attraction and attitude. Additionally, two dependent measures were added as manipulation

checks. Subjects rated the confederates on credibility via a series of semantic differential scales recommended by McCroskey, Jensen and Valencia (1973) which measure peer credibility. Altogether five dimensions were tapped: competence, character, composure, extroversion and sociability. Attraction was measured by a series of twelve Likert-type statements that reflect physical, social and task attraction (McCroskey & McCain, 1974). Separate dimension scores were used as the dependent measures for attraction and credibility. Attitude was measured two ways. First, by using the evaluative dimension suggested by Osgood, Suci and Tannenbaum (1957) which consisted of four semantic differential items and, second, by the Known Interval Scale (KIS) (Burgoon, Burgoon & Vaughn, 1976). The KIS measure was used to help gain support for the measure and as the first test of the eleven point scale. The correlation between the two attitude scales was .86 ($p < .05$).

The two distraction self-report measures were used to establish if the distance deviations were distracting. The first check consisted of a series of adjectives bounding a seven-point semantic differential-type scale. Scale boundaries were selected to represent dimensions of distraction which should have occurred in the experimental setting. As such, the items bounding the scales were: "calm-anxious," "comfortable-uncomfortable," "distracted-not distracted," "relaxed-tense" and "attentive-inattentive." The scales were submitted to factor analysis with varimax rotation which produced

one factor with all five scales loading greater than .60.

A second manipulation check was administered after the subjects had completed all experimental conditions and consisted of having subjects list any factors which made them pay more or less attention to the persuasive message.

Experimental Procedures. Two weeks prior to the experiment, students enrolled in sophomore and junior level speech classes completed the propensity to counterargue measure. The instrument was introduced as part of on-going research being conducted by the Center for Human Communication Research. Results indicated a mean of 65.7 percent rejection, with a standard deviation of 14.45. The sample median (66%) was used to establish high and low groups.

Following training of the confederates, subjects were asked to report to a room to participate in a study on coverbal word use. The room, which was equipped with a two-way speaker system that permitted audio-taping, had the appearance of a clinic waiting room. It was carpeted and arranged with a row of armless, padded chrome chairs which, when placed side-by-side, formed a bench-like surface that occupied most of the wall. Three identically furnished rooms were counterbalanced within the design.

Prior to entering the room, subjects were paired with a confederate and informed that a short delay had occurred and that they would be placed in a "waiting room". In each case the confederate entered the room first and sat at the far end of the bench, approximately 20 inches from the end. The subject then took a seat and an

assistant handed each a "subject informed consent form" to be completed. The subject's form indicated the nature of the coverbal interview which was to take place and asked that he/she sign the form. The confederate's form accomplished two tasks: (1) it allowed him/her to record the normative distance adopted by the subject on the form and (2) it contained the assigned distance condition he/she was to adopt. Once the forms were completed the assistant collected them and informed the pair that he/she would be back shortly. After a few seconds, the confederate stood up, crossed the room and closed the door, which the assistant had "accidentally" left ajar. Upon returning, he/she adopted the assigned distance condition. Once seated, the confederate inquired whether or not the subject was enrolled in a speech course and whether he/she was taking public speaking. The confederate then stated that he/she had to deliver a memorized speech in class (indicating that the topic he/she had chosen was from a survey filled out earlier in the course) and asked if he/she might practice it on the subject. All but three subjects agreed to hear the speech (the three who did not were in threat conditions and immediately crossed the room, refusing to cooperate).

During the message presentation all other nonverbal behaviors were kept constant. Eye contact was practiced and maintained at fifty percent and the same body angle and orientation was maintained by each confederate at all distance conditions.

Following the message the subject and confederate were taken to separate rooms. While the subject reported to the next room, the confederate exited from the area by means of a back stairway and returned to the original starting position. Once in the room, the subject was informed that since the study was designed to explore in the difference between human-human and human-machine coverbal behavior, the experimenters needed some information about the subject and the person with whom he/she had been waiting. Subjects were led to believe that they might be paired with the other person and were instructed:

Since part of our study deals with the interface between humans and machines versus interface between humans and humans, we need you to fill out some additional information about the individual with whom you were waiting. Additionally, we need some information about you.

A copy of the questionnaire appears in Appendix D. It contains

1) the source credibility scales and 2) the attraction scales, 3) the first distraction manipulation check and 4) the attitude statement, which is among five other statements. It was explained to subjects that the attitude section was not part of the current experiment, but was included for someone else collecting survey data on campus. It was hoped that the subject would equate this section with the survey mentioned by the confederate earlier. Additionally, subjects were informed that they did not have to complete the survey, but that it would help the other researchers if they did.

Following completion of the dependent measures, the subject then reported to a second room, was partially debriefed and asked to complete the second manipulation check. All subjects were then debriefed and sworn to secrecy. The second manipulation check and debriefing statement also appear in Appendix D.

CHAPTER III

RESULTS

Multiple regression analysis was used to test the nine hypotheses. The dependent variables of attitude, credibility and attraction were regressed on reward, distance, propensity to counterargue and the resultant interactions. The experimentally manipulated distance was treated as both categorical and continuous data. Reward was manipulated in three ways: first, as a simple dichotomy; second, as four levels, with each confederate representing a separate level of reward; and third, as a continuous variable, with each confederate's score on the physical attraction subscales as a point on a continuum.

Reliabilities for all dependent measures, with the exception of the Known Interval Scale (KIS) and the second manipulation check were computed with Cronbach's (1951) Coefficient Alpha. Reliability coefficients for source credibility measures were: .91 for composure, .69 for character, .65 for competence, .70 for sociability and .73 for extroversion. Reliability coefficients for attraction measures were: .88 for physical attraction, .89 for task attraction and .79 for social attraction. Reliability coefficients for the scalar distraction measure and the semantic differential measure of attitude were .77 and .96, respectively.

TABLE 1. ANALYSIS OF VARIANCE AND MEANS SUMMARY TABLE
ON ATTITUDE SCORES FOR KIS

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Due to Model	1	103.19	103.19	15.08	<.05
Due to Error	319	2183.23	6.84		
Total	320	2286.43			

<u>Treatment</u>	<u>Mean</u>	<u>$\bar{D}$</u>	<u>t</u>	<u>p¹</u>
Experimental	3.99	2.04	4.00	<.05
Control	1.95			

¹Critical value $t_{.95} = 1.96$

TABLE 2. ANALYSIS OF VARIANCE AND MEANS SUMMARY TABLE
ON ATTITUDE SCORES FOR SEMANTIC DIFFERENTIAL
ATTITUDE

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Due to Model	1	555.06	555.06	12.24	<.05
Due to Error	319	14460.95	45.33		
Total	320	15016.01			

<u>Treatment</u>	<u>Mean</u>	<u>$\bar{D}$</u>	<u>t</u>	<u>p¹</u>
Experimental	10.71	4.27	3.55	<.05
Control	6.44			

¹Critical Value $t_{.95} = 1.96$

TABLE 3. ANALYSIS OF VARIANCE AND MEANS SUMMARY TABLE
ON ATTITUDE SCORES FOR KIS

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Due to Model	4	148.09	37.95	5.28	< .05
Due to Error	316	2216.59	7.01		
Total	320	2364.58			

<u>Treatment</u>	<u>Mean</u>	<u>$\bar{D}$</u>	<u>t</u>	<u>p¹</u>
1 ²	4.07	2.09	3.80	< .05
2	4.02	2.01	3.60	< .05
3	4.33	2.35	4.29	< .05
4	3.52	1.50	2.88	< .05

¹Critical Value $t_{.95} = 2.44$

²₁ = most rewarding, 4 = least rewarding

TABLE 4. ANALYSIS OF VARIANCE AND MEANS SUMMARY TABLE
ON ATTITUDE SCORES FOR SEMANTIC DIFFERENTIAL
ATTITUDE

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Due to Model	4	774.17	193.54	4.29	<.05
Due to Error	316	14241.84	45.06		
Total	320	15016.01			

<u>Treatment</u>	<u>Mean</u>	<u>$\bar{D}$</u>	<u>t</u>	<u>p¹</u>
1 ²	11.13	4.96	3.38	< .05
2	10.39	3.95	2.78	< .05
3	11.77	5.33	3.87	< .05
4	9.45	3.01	2.14	NSD
Control	6.44			

¹Critical Value $t_{.95} = 2.44$

²1 = most rewarding, 4 = least rewarding

Manipulation Checks

As a check on whether the message was persuasive and to establish a baseline for determining message acceptance, the attitude scores of the no message control group were compared to the means of the experimental group.

Analyses of variance, summarized in Tables 1 and 2, yielded significant F-values for the KIS measure (15.08, $p < .05$) and the semantic differential measure of attitude (12.24, $p < .05$). Dunnett's t-tests (Winer, 1973) also yielded significant t's for the KIS (4.00, $p < .05$) and the semantic differential measure (3.55, $p < .05$).

A check on whether the message was persuasive across the four levels of reward, when compared to the no message control group, indicated that three of the four confederates differed from the control. Significant F-values were obtained for the KIS measure (5.28, $p < .05$) and the semantic differential measure (4.29, $p < .05$). The first three levels differed significantly from the control but the fourth, and lowest, did not for the semantic differential measure of attitude (see Tables 3 and 4). Because reward was found to deviate from linearity and because the least attractive confederate did not differ from the control, an additional manipulation check was computed with reward treated as a dichotomous variable. An analysis of variance, summarized in Tables 5 and 6,

yielded significant F-values for the KIS (8.61, $p < .05$) and the Semantic Differential measure of attitude (6.12, $p < .05$) for reward treatments.

TABLE 5. ANALYSIS OF VARIANCE OF ATTITUDE SCORES FOR KIS

Source	df	SS	MS	F	p
Due to Model	2	121.47	60.73	8.61	$< .05$
Due to Error	318	2243.11	7.05		
Total	320	2364.59			

TABLE 6. ANALYSIS OF VARIANCE OF ATTITUDE SCORES FOR SEMANTIC DIFFERENTIAL ATTITUDE

Source	df	SS	MS	F	p
Due to Model	2	556.38	278.19	6.12	$< .05$
Due to Error	318	14459.63	45.47		
Total	320	15016.01			

All comparisons were significantly different from the control beyond the .05 level of confidence by Dunnett's t-test (Winer, 1971). Table 7 summarizes the results of these comparisons. The message had some impact on all experimental subjects. A check on whether the message was persuasive across distances when compared to the no message control group indicated that all subjects were

TABLE 7. COMPARISONS BETWEEN TREATMENT AND CONTROL MEANS

Treatment	Mean	$\bar{D}$	t	p ¹
Reward	10.78 ²	4.34	3.37	< .05
	3.40 ³	2.05	4.04	< .05
Punishment	10.64 ²	4.21	3.29	< .05
	3.88 ³	1.93	3.83	< .05
Control	6.44 ²			
	1.95 ³			

¹Critical Value $t_{.95} = 2.21$

²Semantic Differential measure

³KIS

significantly different from the control at each distance. Analyses of variance, summarized in Tables 8 and 9, yielded significant F-values for the KIS (4.46, $p < .05$) and the semantic differential measure of attitude (3.29, $p < .05$). All comparisons were signifi-

TABLE 8. ANALYSIS OF VARIANCE OF ATTITUDE SCORES FOR KIS

Source	df	SS	MS	F	p
Due to Model	4	126.47	31.61	4.46	< .05
Due to Error	316	2238.11	7.08		
Total	320	2364.59			

TABLE 9. ANALYSIS OF VARIANCE OF ATTITUDE SCORES FOR SEMANTIC DIFFERENTIAL ATTITUDE

Source	df	SS	MS	F	p
Due to Model	4	600.73	150.18	3.29	< .05
Due to Error	316	14415.28	45.61		
Total	320	15016.01			

cantly different from the control beyond the .05 level of confidence by Dunnett's t-test. Table 10 summarizes the results of these comparisons. The message had some impact on all experimental subjects.

TABLE 10. COMPARISONS BETWEEN TREATMENT AND CONTROL MEANS

Treatment	Mean	$\bar{D}$	t	p ¹
Threat	11.27 ²	4.83	3.45	< .05
	4.10 ³	2.48	4.50	< .05
Close	10.51 ²	4.07	2.88	< .05
	3.93 ³	1.98	3.54	< .05
Norm	10.22 ²	3.78	2.70	< .05
	3.72 ³	1.77	3.21	< .05
Far	10.86 ²	4.42	3.13	< .05
	4.02 ³	2.07	3.77	< .05
Control	6.44 ²			
	1.95 ³			

¹Critical Value $t_{.95} = 2.44$
²Semantic Differential measure
³KIS

As a check on distraction, two self-report measures were utilized to test whether the violation of distancing expectations was distracting. It was expected that deviations from the established normative distance would be distracting, with the deviation into the threat threshold yielding the most distraction. The results of the semantic differential measure failed to find any significant differences for distraction between distances. The means also indicated that the close deviation was most distracting. The analysis of variance and means are presented in Table 11.

TABLE 11. ANALYSIS OF VARIANCE AND MEANS SUMMARY TABLE FOR DISTRACTION

Source	df	SS	MS	F	p
Due to Model	3	152.24	50.74	1.67	.17
Due to Error	283	8515.63	30.33		
Total	286	8737.87			

N	Distance Condition	Mean Distraction Score
73	Threat	27.39
69	Close	29.07
74	Norm	28.36
71	Far	27.28

The second manipulation check asked subjects to list factors which made them pay more or less attention to the persuasive message.

This check was administered after subjects had completed the experiment. No significant differences were obtained between subjects who listed more or less ($\chi^2 = 1.60$, $df = 1$) or between distances ($\chi^2 = 2.13$, $df = 3$).

A final manipulation check found that subjects rated the confederates' in terms of physical attraction in the expected rank ordering. From most to least rewarding, confederates ratings were: 22.62, 18.47, 16.58 and 14.08.

Hypothesis 1

Hypothesis 1, which posited a main effect for reward such that rewarding initiators would produce better outcomes than would punishing initiators, was partially supported for credibility and attraction. Significant F-values ($df = 3, 271$, $p < .05$) were obtained for competence (6.79), composure (20.48), sociability (17.16) extroversion (15.71), social attraction (7.31), task attraction (7.28) and physical attraction (51.30). For both measures of attitude, F-values were nonsignificant. (See Appendix E, Tables 1 through 10, for analysis of variance summary tables.) It was originally planned to treat reward as a continuous variable, assuming that it was linear. An analysis of the means, however, found that some deviation from linearity existed (see Table 12). Reward, therefore, was treated as a categorical variable. (Power < .90.)

TABLE 12. MEANS FOR CONFEDERATES ON TEN COMMUNICATION OUTCOMES

	Reward*			
	1	2	3	4
Competence	22.10	22.39	21.66	19.53
Composure	19.10	19.91	17.07	13.28
Character	21.34	21.98	21.50	20.29
Sociability	23.19	25.12	24.22	21.06
Extroversion	22.73	24.27	22.92	20.00
Social Attraction	23.21	22.97	22.58	20.44
Physical Attraction	22.62	18.47	16.58	14.08
Task Attraction	21.60	21.59	21.09	19.39
KIS	4.04	3.96	4.29	3.45
Semantic Differential	11.13	10.39	11.78	9.46

*1 = most attractive; 4 = least attractive

Because later analysis required that reward be treated as a dichotomy, the two highest rated confederates were collapsed into a reward condition and the two lowest rated confederates into a punishment condition. Main effects were obtained on the same variables as in the previous analysis (see Appendix E, Table 11 through 20). An examination of the means (see Table 13) indicated that on all variables, rewarding initiators produced better results than did punishing initiators (power < .90).

Hypotheses 2, 3 and 4

Hypothesis 2. The second hypothesis, which predicted an interaction between distance and reward, was not supported. One significant interaction was obtained for extroversion with distance

TABLE 13. MEANS FOR REWARD ANALYSES ON COMMUNICATION OUTCOMES

	Reward	Punishment
Competence	24.24	20.62
Composure	19.48	15.22
Character	21.65	20.91
Sociability	24.11	22.68
Extroversion	23.46	21.50
Social Attraction	23.09	21.54
Physical Attraction	20.65	15.36
Task Attraction	21.50	20.26
KIS	3.99	3.88
Semantic Differential	10.78	10.65

treated as a continuous variable ($F = 8.25$, $df = 1$, 283 , $p < .05$). The summary tables for the analyses of variance are reported in Appendix E, Tables 11 through 30. The means for the reward by distance interactions are reported in Table 14. (Power analyses ranged from .10 on the nonsignificant interaction to $< .90$ on the significant interaction.)

Hypotheses 3 and 4. The third and fourth hypotheses predicted that the relationship among distance, reward and the communication outcomes of credibility, attraction and persuasion would be curvilinear in nature, with a close or far distance producing the most positive outcomes for the rewarding initiator and the normative distance for the punishing initiator. The hypotheses were analyzed by treating reward as a dichotomous variable and treating distance as a continuous variable. Polynomial equations were generated by

TABLE 14. MEANS FOR REWARD x DISTANCE ANALYSES ON
OUTCOME VARIABLES*

	Threat	Distance		
		Close	Norm	Far
<u>COMPETENCE</u>				
Rewarding Initiator	22.66	21.83	21.51	23.07
Punishing Initiator	20.53	21.65	20.46	19.97
<u>COMPOSURE</u>				
Rewarding Initiator	19.71	19.62	21.23	21.25
Punishing Initiator	15.63	14.35	16.35	14.51
<u>CHARACTER</u>				
Rewarding Initiator	21.77	22.23	21.32	21.25
Punishing Initiator	20.68	21.85	20.70	20.51
<u>SOCIABILITY</u>				
Rewarding Initiator	23.34	24.17	24.70	24.19
Punishing Initiator	22.18	24.08	21.76	22.82
<u>EXTROVERSION</u>				
Rewarding Initiator	23.06	23.37	23.14	24.38
Punishing Initiator	21.87	22.82	20.51	20.92
<u>SOCIAL ATTRACTION</u>				
Rewarding Initiator	23.20	23.00	23.24	22.90
Punishing Initiator	20.16	22.03	21.38	22.62
<u>PHYSICAL ATTRACTION</u>				
Rewarding Initiator	20.54	20.40	20.76	20.91
Punishing Initiator	14.63	15.85	15.16	15.85
<u>TASK ATTRACTION</u>				
Rewarding Initiator	21.14	22.17	21.41	21.69
Punishing Initiator	19.23	20.68	20.03	20.59
<u>KIS</u>				
Rewarding Initiator	3.91	4.19	3.91	3.99
Punishing Initiator	4.27	3.67	3.52	4.04
<u>SEMANTIC DIFFERENTIAL</u>				
Rewarding Initiator	10.63	10.63	10.89	11.00
Punishing Initiator	11.87	10.38	9.54	10.74

*With distance treated as a categorical variable

using the linear, quadratic, cubic and quartic terms in the regression analyses. For rewarding initiators, the cubic or quartic terms were selected as representative of the Burgoon (1978) model as each could fit the predicted relationship. The means were then examined to determine the best fit. For punishing initiators, the cubic term was selected as best representing the model. Additionally, significant quadratic terms would also be indicative of curvilinear relationships. As such, two separate analyses were computed for the rewarding and punishing initiators. For each analysis, the regression equation was plotted to determine if the regression line conformed to the predictions.

Rewarding initiators produced significant curvilinear relationships for extroversion, competence and task attraction ($df = 1, 134, p < .05$). For extroversion, significant partials were obtained for the linear ($F = 3.15$), quadratic ($F = 5.86$), cubic, ($F = 6.88$) and quartic (sequential and partial $F = 7.39$) terms. For competence, the quartic sequential and partial terms were significant ($F = 4.10$). For task attraction, the cubic (partial $F = 3.92$) and the sequential and partial terms obtained significance ($F = 4.29$). The regression summary tables are reported in Appendix E, Tables 31 through 40. When plotted, extroversion and task attraction appeared to conform to the predicted curves (see Table 14).

The expected relationship between punishing initiators and distance was not supported (see Appendix E, Tables 41 through 50). When plotted, all means deviated from the expected pattern for punishing initiators and seemed to conform instead to the predicted reward and distance relationships (see Table 14).

Given the lack of significant relationships for both punishing and rewarding initiators with distance, hypotheses 3 and 4 were only partially supported.

Supplemental Analyses on Hypotheses 1 - 4

An examination of the variances associated with the confederates suggested that two other factors may have been operating to affect perceptions of reward: sex of the confederate and sex composition of the dyad. Previous research (Burgoon, Stacks & Woodall, 1977) had defined these variables as rewarding and punishing where females were seen as more rewarding than males and opposite-sex interactions more rewarding than same-sex interactions. The analyses were performed in the same manner as before.

Confederate sex. Significant main effects for confederate sex were obtained for composure ($F = 5.14$, $df = 1, 279$, $p < .05$), physical attraction ($F = 32.07$) and Social Attraction ($F = 6.67$). Tables summarizing the analysis of variance for each dependent variable are reported in Appendix E, Tables 51 through 70. The means are reported in Table 15. The interaction between confederate sex and distance was obtained only for extroversion, with

TABLE 15. MEANS FOR CONFEDERATE SEX ON COMMUNICATION OUTCOMES

Outcome	Female	Male
Competence	21.87	20.90
Composure	18.06	16.45
Character	21.41	21.10
Sociability	23.72	23.00
Extroversion	22.83	22.04
Physical Attraction	19.54	16.18
Task Attraction	21.34	20.44
Social Attraction	22.89	21.65
KIS	4.17	3.69
Semantic Differential	11.46	9.91

distance treated as a continuous variable ($F = 4.90$, $df = 1$, 283, $p < .05$). The means are reported in Table 16. An examination of the R^2 statistic found no substantial increase in variance for most dependent variables when taking confederate sex into account. This, coupled with the lack of significance for main effects and interactions, made further analysis fruitless. (Power for all non-significant effects was $< .25$; power for significant effects was $< .90$).

Sex composition of the dyad. Only one significant main effect was obtained whereby opposite-sex initiators were rated as more physically attractive than same-sex initiators. No significant interactions were obtained (see Appendix E, Tables 71 through 90). An examination of the R^2 statistic found no substantial increase in the variance for most dependent variables

TABLE 16. MEANS FOR CONFEDERATE SEX x DISTANCE
ANALYSES ON COMMUNICATION OUTCOMES*

	Distance			
	Threat	Close	Norm	Far
<u>COMPETENCE</u>				
Female Confederate	22.10	21.83	22.13	21.39
Male Confederate	20.91	21.65	19.71	21.34
<u>COMPOSURE</u>				
Female Confederate	18.97	16.63	19.31	17.11
Male Confederate	16.00	17.44	15.77	16.60
<u>CHARACTER</u>				
Female Confederate	21.51	21.91	21.49	20.78
Male Confederate	20.85	22.18	20.49	20.91
<u>SOCIABILITY</u>				
Female Confederate	22.97	24.40	24.05	23.50
Male Confederate	22.47	23.85	22.31	23.37
<u>EXTROVERSION</u>				
Female Confederate	22.31	23.26	22.54	23.28
Male Confederate	22.59	22.94	21.03	21.66
<u>SOCIAL ATTRACTION</u>				
Female Confederate	22.05	23.60	23.21	22.75
Male Confederate	21.12	21.41	21.31	22.74
<u>PHYSICAL ATTRACTION</u>				
Female Confederate	19.38	19.83	20.13	18.78
Male Confederate	15.26	16.44	15.54	17.46
<u>TASK ATTRACTION</u>				
Female Confederate	20.97	22.03	21.54	20.86
Male Confederate	19.82	20.82	19.80	21.31
<u>KIS</u>				
Female Confederate	4.64	4.37	3.67	3.99
Male Confederate	3.47	3.47	3.77	4.05
<u>SEMANTIC DIFFERENTIAL</u>				
Female Confederate	12.44	11.80	10.08	11.58
Male Confederate	9.94	9.18	10.37	10.11

*With distance treated as a categorical variable

when taking the sex composition of the dyad into account. Further analyses were not attempted. The means are reported in Tables 17 and 18. (Power for all significant effects was $< .90$; power for all nonsignificant effects was $< .20$.)

TABLE 17. MEANS FOR SEX COMPOSITION ON COMMUNICATION OUTCOMES

Outcome	Same-sex	Opposite-sex
Competence	21.82	21.11
Composure	17.46	17.16
Character	21.51	21.10
Sociability	23.22	23.49
Extroversion	22.49	22.42
Physical Attraction	16.87	16.68
Task Attraction	20.71	21.05
Social Attraction	22.39	22.22
KIS	3.83	4.02
Semantic Differential	10.60	10.80

Hypothesis 5

The predicted main effect for propensity on source credibility, attraction and message acceptance was not supported. Low propensity subjects, on all outcomes except extroversion, rated confederates as less attractive and credible than did high propensity subjects. Significant differences in the opposite direction were obtained for competence ($F = 4.95$, $df = 1, 279$, $p = .05$), composure ($F = 11.27$) and task attraction ($F = 5.05$). The analysis of variance summary tables are reported in Appendix E, Tables 91

TABLE 18. MEANS FOR SEX COMPOSITION x DISTANCE ON COMMUNICATION OUTCOMES*

	Distance			
	Threat	Close	Norm	Far
<u>COMPETENCE</u>				
Opposite Sex	21.04	22.18	20.13	21.13
Same Sex	22.65	21.19	21.94	21.68
<u>COMPOSURE</u>				
Opposite Sex	17.76	17.24	17.00	16.50
Same Sex	17.22	16.77	18.34	17.32
<u>CHARACTER</u>				
Opposite Sex	20.76	22.55	20.36	20.85
Same Sex	22.17	21.42	21.74	20.84
<u>SOCIABILITY</u>				
Opposite Sex	22.66	23.74	23.28	23.53
Same Sex	22.91	23.38	23.17	23.32
<u>EXTROVERSION</u>				
Opposite Sex	22.24	23.24	21.97	22.30
Same Sex	22.87	22.94	21.66	22.71
<u>SOCIAL ATTRACTION</u>				
Opposite Sex	21.66	28.55	21.56	22.30
Same Sex	21.52	21.66	23.14	23.32
<u>PHYSICAL ATTRACTION</u>				
Opposite Sex	18.34	19.50	18.26	18.75
Same Sex	15.57	16.52	17.63	17.32
<u>TASK ATTRACTION</u>				
Opposite Sex	20.54	22.24	20.46	21.15
Same Sex	20.22	20.45	21.00	21.00
<u>KIS</u>				
Opposite Sex	4.34	3.73	3.94	3.97
Same Sex	3.56	4.17	3.47	4.08
<u>SEMANTIC DIFFERENTIAL</u>				
Opposite Sex	11.88	9.74	10.51	10.73
Same Sex	9.96	11.45	9.89	11.03

*With distance treated as a categorical variable

through 100. For message acceptance, low propensity-to-counterargue subjects appeared to be more resistant to the message than high propensity-to-counterargue subjects. The means are reported in Table 19. (Power analyses ranged from $< .10$ on nonsignificant effects to $< .90$ on significant effects.)

TABLE 19. MEANS FOR PROPENSITY TO COUNTERARGUE ON COMMUNICATION OUTCOMES

	Propensity	
	High	Low
Competence	22.01	20.90
Composure	18.47	16.31
Character	21.63	20.97
Sociability	23.68	23.11
Extroversion	22.41	22.48
Social Attraction	22.56	22.07
Physical Attraction	18.35	17.57
Task Attraction	21.51	20.41
KIS	4.11	3.80
Semantic Differential	10.94	10.53

Hypothesis 6

The predicted interaction between reward and propensity to counterargue was not supported when reward was treated as four levels for credibility, attraction or message acceptance (see Appendix E, Tables 91 through 100). The means are reported in Table 20. When reward was treated as two levels (i.e., rewarding and punishing) a significant interaction was obtained for the KIS measure of attitude ($F = 5.15$, $df = 1, 283$, $p < .05$). When analyzed,

TABLE 20. MEANS FOR REWARD x PROPENSITY ON COMMUNICATION OUTCOMES

	Reward*			
	1	2	3	4
<u>COMPETENCE</u>				
High Propensity	22.63	22.36	22.38	20.39
Low Propensity	21.68	22.42	20.97	18.98
<u>COMPOSURE</u>				
High Propensity	20.18	20.70	18.27	14.04
Low Propensity	18.17	19.12	15.92	12.80
<u>CHARACTER</u>				
High Propensity	21.44	22.18	21.59	20.79
Low Propensity	21.27	21.79	21.08	19.98
<u>SOCIABILITY</u>				
High Propensity	23.16	25.12	24.41	21.64
Low Propensity	23.22	25.12	24.05	20.68
<u>EXTROVERSION</u>				
High Propensity	22.75	24.03	22.54	19.93
Low Propensity	22.71	24.52	22.28	20.05
<u>SOCIAL ATTRACTION</u>				
High Propensity	22.97	23.55	22.78	20.64
Low Propensity	23.39	22.39	22.38	20.32
<u>PHYSICAL ATTRACTION</u>				
High Propensity	22.38	18.88	17.14	14.71
Low Propensity	22.80	18.06	16.05	13.68
<u>TASK ATTRACTION</u>				
High Propensity	21.66	22.09	21.68	20.43
Low Propensity	21.56	21.09	20.53	18.73
<u>KIS</u>				
High Propensity	3.60	3.93	4.92	3.82
Low Propensity	4.38	3.98	3.70	3.21
<u>SEMANTIC DIFFERENTIAL</u>				
High Propensity	10.16	10.27	12.41	10.68
Low Propensity	11.90	10.52	11.18	8.68

*1 = most attractive; 4 = least attractive

however, the pattern of means deviated from the predicted order. As predicted, high and low propensity subjects did not differ significantly across reward ($t = 1.44$, $df = 260$, $p < .05$), while low propensity subjects differed significantly between rewarding and punishing sources ($t = 1.84$, $df = 260$, $p < .05$). For punishing sources, however, low propensity subjects were significantly more resistant to the message than were high propensity subjects ($t = 2.24$, $df = 260$, $p < .05$). Since high propensity subjects were predicted to be more resistant to the message than low propensity subjects, regardless of the reward power of the source, Hypothesis 6 was not confirmed for attitude. All other interactions were nonsignificant (see Appendix E, Tables 101 through 110). The means are presented in Table 21. (Power on the analyses ranges from less than .50 on the nonsignificant analyses to greater than .90 on the significant KIS analysis.)

Hypothesis 7

The key to hypothesis 7 was a two-way interaction between propensity and distraction where high or low propensity would raise or lower attitude scores depending on whether subjects were distracted or not distracted. Because of the predicted interaction between reward and propensity, the hypothesized interaction had to be three-way. The interaction between reward, propensity and the distance distraction was not supported (KIS $F < 1$; semantic differential $F < 1$). For this analysis, the threat, close and far

TABLE 21. MEANS FOR REWARD x PROPENSITY ON COMMUNICATION OUTCOMES

	Reward	
	Reward	Punish
<u>COMPETENCE</u>		
High Propensity	22.49	22.52
Low Propensity	22.01	19.92
<u>COMPOSURE</u>		
High Propensity	20.49	16.45
Low Propensity	18.59	14.27
<u>CHARACTER</u>		
High Propensity	21.82	21.45
Low Propensity	21.50	20.43
<u>SOCIABILITY</u>		
High Propensity	24.15	23.22
Low Propensity	24.07	22.27
<u>EXTROVERSION</u>		
High Propensity	23.40	21.42
Low Propensity	23.51	21.57
<u>SOCIAL ATTRACTION</u>		
High Propensity	23.26	21.86
Low Propensity	21.95	21.29
<u>PHYSICAL ATTRACTION</u>		
High Propensity	20.60	16.09
Low Propensity	20.69	14.80
<u>TASK ATTRACTION</u>		
High Propensity	21.88	21.14
Low Propensity	21.35	19.58
<u>KIS</u>		
High Propensity	3.77	4.45
Low Propensity	4.20	3.44
<u>SEMANTIC DIFFERENTIAL</u>		
High Propensity	10.22	11.66
Low Propensity	11.28	9.86

were collapsed and treated as distracting and the normative distance as not distracting. An examination of the means indicated that nondistracted low propensity subjects at the fourth, and lowest, level of reward were most resistant to the message while nondistracted high propensity subjects at the second level of reward were least resistant. The analysis of variance and means summary table for the KIS measure is reported in Table 22 and the semantic differential measure in Table 23.

Hypotheses 8 and 9

In order to confirm Hypotheses 8 and 9, the curvilinear relationships between distance and reward had to conform to the predicted shapes and main effects for propensity had to be obtained. The expected curvilinear relationships were obtained only for extroversion and task attraction. For each outcome, however, the propensity main effect was not significant. Hence, any significant interaction among distance, propensity, reward and the communication outcomes of credibility, attraction and attitude could not be interpreted as supporting the hypothesized shape or parallelism of the curves (see Appendix E, Tables 111 through 130). The means are reported in Tables 24 and 25 and significant polynomial terms are summarized in Table 26.

TABLE 22. ANALYSIS OF VARIANCE AND MEANS SUMMARY TABLE
FOR DEPENDENT VARIABLE KIS

Source	df	SS	MS	F	P	R ²
Due to Model	15	114.08	7.60	1.04	NSD	.05
Due to Error	271	1974.23	7.28			
Total	286	2088.31				

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>P</u>
Propensity (A)	1	6.73	6.73	0.92	NSD
Distraction (B)	1	5.07	5.07	0.70	NSD
Reward (C)	3	25.96	8.65	1.19	NSD
A x B	1	17.85	17.85	2.45	NSD
A x C	3	42.16	14.05	1.93	NSD
B x C	3	10.40	3.47	0.48	NSD
A x B x C	3	5.93	1.97	0.27	NSD

<u>Propensity</u>			<u>Propensity</u>	
	<u>High</u>	<u>Low</u>	<u>High</u>	<u>Low</u>
Reward* 1	3.56	3.56	3.61	4.27
2	5.08	3.47	3.49	4.15
3	4.75	2.96	4.98	3.96
4	3.80	2.79	3.84	3.33
<u>Not Distracted</u>			<u>Distracted</u>	

*1 = most attractive; 4 = least attractive

TABLE 23. ANALYSIS OF VARIANCE AND MEANS SUMMARY TABLE FOR DEPENDENT VARIABLE SEMANTIC DIFFERENTIAL

Source	df	SS	MS	F	p	R ²
Due to Model	15	654.89	43.65	0.92	NSD	.05
Due to Error	271	12917.68	47.66			
Total	286	13572.57				

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Propensity (A)	1	11.94	11.94	0.25	NSD
Distraction (B)	1	25.00	25.00	0.52	NSD
Reward (C)	3	214.80	71.60	1.50	NSD
A x B	1	101.30	101.30	2.13	NSD
A x C	3	152.72	50.90	1.07	NSD
B x C	3	114.35	38.11	0.80	NSD
A x B x C	3	34.75	11.58	0.24	NSD

		<u>Propensity</u>		<u>Propensity</u>	
		<u>High</u>	<u>Low</u>	<u>High</u>	<u>Low</u>
Reward*	1	10.13	10.58	10.17	12.45
	2	13.22	9.60	9.17	10.84
	3	11.44	8.20	12.71	12.21
	4	10.86	8.10	10.60	8.85
		<u>Not Distracted</u>		<u>Distracted</u>	

*1 = Most attractive; 4 = least attractive

TABLE 24. MEANS FOR PROPENSITY x PUNISHING INITIATORS x DISTANCE ON COMMUNICATION OUTCOMES*

	Threat	Distance		
		Close	Norm	Far
<u>COMPETENCE</u>				
High Propensity	22.33	22.50	20.94	20.38
Low Propensity	18.90	21.05	20.05	19.70
<u>COMPOSURE</u>				
High Propensity	18.17	16.21	17.94	13.13
Low Propensity	13.35	13.05	15.00	15.48
<u>CHARACTER</u>				
High Propensity	21.56	22.50	21.41	20.44
Low Propensity	19.90	21.40	20.10	20.57
<u>SOCIABILITY</u>				
High Propensity	23.72	24.57	22.06	22.69
Low Propensity	20.80	23.75	21.50	22.91
<u>EXTROVERSION</u>				
High Propensity	21.56	23.21	20.53	20.63
Low Propensity	22.15	22.55	20.50	22.13
<u>SOCIAL ATTRACTION</u>				
High Propensity	21.44	21.79	21.59	22.69
Low Propensity	19.00	22.00	21.20	22.56
<u>PHYSICAL ATTRACTION</u>				
High Propensity	15.27	16.86	16.47	15.94
Low Propensity	14.05	15.15	14.05	15.78
<u>TASK ATTRACTION</u>				
High Propensity	21.39	22.00	20.71	20.56
Low Propensity	18.35	19.75	19.45	20.61
<u>KIS</u>				
High Propensity	5.48	3.19	4.28	4.57
Low Propensity	3.18	3.98	2.88	3.68
<u>SEMANTIC DIFFERENTIAL</u>				
High Propensity	13.72	8.71	11.18	12.43
Low Propensity	10.29	11.55	8.15	9.57

*With distance treated as a categorical variable

TABLE 25. MEANS FOR PROPENSITY x REWARDING INITIATORS
x DISTANCE ON COMMUNICATION OUTCOMES*

	Threat	Distance		
		Close	Norm	Far
<u>COMPETENCE</u>				
High Propensity	23.07	21.50	22.06	23.60
Low Propensity	23.35	22.18	21.05	22.58
<u>COMPOSURE</u>				
High Propensity	19.00	21.11	19.41	22.47
Low Propensity	20.25	18.06	18.50	17.29
<u>CHARACTER</u>				
High Propensity	20.87	22.06	21.82	22.47
Low Propensity	22.45	22.41	20.90	20.18
<u>SOCIABILITY</u>				
High Propensity	22.53	23.67	24.88	25.53
Low Propensity	23.95	24.71	24.55	23.00
<u>EXTROVERSION</u>				
High Propensity	22.80	23.11	23.12	24.67
Low Propensity	23.35	23.64	23.15	24.12
<u>SOCIAL ATTRACTION</u>				
High Propensity	23.00	22.78	22.65	24.80
Low Propensity	23.35	23.34	23.75	21.24
<u>PHYSICAL ATTRACTION</u>				
High Propensity	20.07	20.39	20.35	21.67
Low Propensity	20.90	20.41	21.10	20.24
<u>TASK ATTRACTION</u>				
High Propensity	20.93	21.83	21.18	23.67
Low Propensity	21.30	22.53	21.60	19.94
<u>KIS</u>				
High Propensity	3.49	4.10	4.36	2.96
Low Propensity	4.22	4.29	3.52	4.91
<u>SEMANTIC DIFFERENTIAL</u>				
High Propensity	9.80	10.72	11.76	8.27
Low Propensity	11.25	10.53	10.15	13.41

*With distance treated as a categorical variable

TABLE 26. SUMMARY TABLE OF SIGNIFICANT OBTAINED TRENDS
FOR HYPOTHESES 8 AND 9*

	Linear F	Quadratic F	Cubic F	Quartic F
<u>COMPETENCE</u>				
High Propensity/Rewarding ¹	3.77	4.57	5.08	6.01
<u>CHARACTER</u>				
High Propensity/Rewarding ¹	7.73	7.26	7.73	7.78
<u>SOCIABILITY</u>				
High Propensity/Rewarding ¹	7.89	7.57	7.81	8.04
High Propensity/Punishing ²	3.01	4.30	4.93	
<u>EXTROVERSION</u>				
High Propensity/Rewarding ¹	5.99	6.94	7.66	8.00
<u>TASK ATTRACTION</u>				
High Propensity/Rewarding ¹	4.85	6.29	7.35	7.95
<u>KIS</u>				
High Propensity/Rewarding ¹	7.70	6.87	5.77	
High Propensity/Punishing ³		4.07	4.18	
<u>SEMANTIC DIFFERENTIAL</u>				
High Propensity/Punishing ²	4.49	4.04		
*p .05				
¹ df = 1, 60				
² df = 1, 60				
³ df = 1, 61				

CHAPTER IV

DISCUSSION

The underlying rationale for the effects of distraction in a communicative setting is based upon the disruption of an individual's ability to counterargue. Several studies have demonstrated a distraction effect upon subjects' acceptance of a persuasive message and their perceptions of the source's credibility but with mixed results. It seems that the nature of the distractor acts to intervene in the counterarguing process, producing more resistance or less resistance to the message, depending upon the nature of the distractor. Additionally, research has attempted to examine an individual's propensity to counterargue a message when distracted and the results of the distraction on the source's credibility. Such research predicts that high propensity-to-counterargue subjects will be more resistant to both the message and the source than will low propensity-to-counterargue subjects. This study attempted to: (1) establish the relationship between violations of personal spacing expectations as a distractor during a social influence attempt; (2) to test the relationship between propensity to counterargue and message acceptance, source credibility and attraction as mediated by both the distractor and the subject's propensity to counterargue; and (3) to expand previous research on violations of personal space expectations to persuasive attempts.

The results of multiple regression analyses failed to support the predicted relationships among reward, distance, propensity and the communication outcomes of credibility, attraction and persuasion. For the test of the Burgoon (1978) model, only two outcomes conformed to the predicted relationships; for extroversion and task attraction, subjects interacting with rewarding initiators conformed to the predicted curvilinear relationship. For subjects interacting with punishing initiators, the obtained outcomes appeared to conform more to the expected pattern of means for rewarding initiators. For propensity, where significant effects were obtained, the effects were in the opposite direction; low propensity subjects rated the source less credible and attractive than did high propensity subjects. The relationship between distance and distraction was not supported. Subjects appeared to be equally distracted at any distance. The predicted parallelism of high and low propensity curves for rewarding and punishing initiators across distance was not found, instead high and low propensity curves intersected at one or more distances. In the case where parallelism was obtained, the interaction term failed to obtain significance and the two curves may have been a chance outcome.

Propensity to Counterargue

One major reason for the lack of support for the hypothesized relationships was the propensity measure. The correlations between

source derogation and counterarguing were not significant, indicating that the relationship between counterarguing was not reliable. The reliabilities for each scale also indicated that the measure was not highly reliable (.69 for counterarguing and .54 for source derogation).

A second consideration on the propensity measure is its validity. Validity was analyzed in three ways: first, a correlation was obtained for counterarguing and source derogation between the propensity measure and another measure; second, the results of this investigation were compared to those of the Brandt et al. (1977) investigation, which used a similar measure; and third, the results themselves were considered a source of validity: if the predicted relationships obtained, they would be considered support for the validity of the measure. The three criteria were not met. The correlations between the essay measure of counterarguing and source derogation and the propensity measure were nonsignificant. The scores for the propensity measure did not reflect the results; high propensity subjects were more susceptible to the message and source than were low propensity subjects.

The second criterion, that the Brandt et al. results be comparable to the results obtained in this investigation, might be an artifact of the method. In the Brandt et al. study, the interaction was tape recorded, played back and attributed to a high status source. In the present study, the message was delivered by a live source with equal status. Brandt et al.'s study utilized

a message created from arguments used in the propensity measure which their subjects had been previously exposed to via the propensity measure. In their study, they may have inadvertently inoculated subjects to the message by pretest. High propensity subjects may have been threatened by the arguments on the pretest and engaged in more counterarguing upon receipt of the message. Low propensity subjects, on the other hand, may not have been threatened if, by nature, they do not key on the arguments and became more susceptible to the later message. In the present study, subjects were not exposed to the arguments contained in the persuasive message.

In terms of credibility results, there are no good explanations for the differences between the two studies. However, it may have been that the use of a live source in the present investigation mediated credibility results. High propensity subjects may have evaluated the sources as poor communicators and not engaged in counterarguing while low propensity subjects may have been threatened by the sources and engaged in increased counterarguing.

Distraction

It was proposed that violations of personal spacing expectations would be distracting. This effect was not supported. Subjects reported being almost equally distracted at all four distances on the semantic differential-like measure used as a

manipulation check. The second manipulation check indicated that subjects did not differ in the amount of attention paid to the message. Since this check was obtained after the experiment was completed, its reliability may be questionable. Assistants also reported that a majority of subjects did not know they had received a persuasive message. This finding also casts doubt on the reliability of the measure.

That the distance deviations were not distracting is surprising, especially at the threat distance. Previous research (e.g., McBride, King & James, 1965) had established that extremely close physical distances produced physiological responses in people. A deviation to within three inches of the subject should have been distracting in that the subject should have felt discomfort. Subjects indicated, however, that the threat distance was slightly less distracting than the close or norm distances. A more sensitive measure of distraction is needed in future research which utilizes distance deviations as a distractor.

Violations of Personal Space Expectations

The test of the modified Burgoon model (1978) of personal space violations offers limited support for the model. Upon closer examination, however, stronger support is indicated. The lack of distance by reward interactions may have been due in part to the reward variable. It was originally planned to treat reward as a continuous variable, assuming that it was linear. Because it

deviated from linearity, reward was treated as a dichotomous variable by collapsing the two highest rated confederates into a reward condition and the two lowest rated confederates into a punishing condition. Whether or not this produced punishing initiators is questionable. The punishing initiators' attraction ratings for one confederate were found to be greater than the attraction ratings of Burgoon, Stacks and Woodall's (1977) punishing initiators, thus more in the range of rewarding initiators. When the means are reinterpreted from this perspective, the punishing initiators' outcomes conform to the model's predicted curvilinear relationship between distance and rewarding initiators for the credibility and attraction outcomes. For the attitude outcomes, however, the most message acceptance occurred at any deviation from the norm. Although it was originally posited that any deviation from the norm for the less rewarding initiator would cause the subject to derogate the source and produce more counter-arguments resulting in less message acceptance, subjects apparently cued in on the positive characteristics of the source and enhanced the effect of the message.

For rewarding initiators, the results are not easily interpretable. Of the two outcomes which conformed to predictions, task attraction conformed to earlier findings (e.g., Burgoon, 1978; Burgoon, Stacks & Woodall, 1977) but extroversion produced a curve where rewarding initiators were rated most extroverted at

the far and close distances, rather than the inverted U-shaped curve found by Burgoon, Stacks and Woodall. In terms of message acceptance, although significant results were not obtained, plots of the rewarding initiators' curves appeared to conform for the KIS measure, with the greatest message at the close and far distances. For the semantic differential measure, however, the most message acceptance was obtained at the far distance, although the differences across distances were minimal.

The relationships among distance, reward, propensity and the communication outcomes of credibility, attraction and message acceptance are not explainable given the lack of reliability for the propensity measure. Where significant interactions were obtained, the high and low propensity curves were not parallel but intersected at one or more distance. When the individual curves were plotted, the configuration of means for several outcomes did appear to be curvilinear; the punishing initiators' curves again conformed more to the expected relationships for rewarding initiators.

The finding that two other factors might interact with distance to affect communication outcomes was unexpected. An inspection of R^2 's indicated, however, that in this investigation they did not improve the amount of variance accounted for. Additionally, both sex of the confederate and sex composition of the dyad failed to produce reward main effects on significant

interactions. Future research might examine these relationships more closely.

A factor which may have influenced the results was the behavior of the confederates. Although all confederates were trained to keep other nonverbal behavior constant during the interaction, it could not be monitored. The third confederate (a female ranked as moderately attractive) continuously received high ratings. Something in her behavior or demeanor may have produced higher ratings of credibility and attraction for several dimensions. Additionally, the second most attractive confederate was rated higher than the first for several credibility and attraction dimensions. However, it is difficult to say just what behaviors may have influenced subjects who interacted with her. Future research might add other factors, such as head nods and smiles, to the reward definition.

A final factor which might have contributed to the lack of support for the hypotheses was the low power of the nonsignificant effects. For almost all nonsignificant effects, the power was less than .20. Larger cell sizes in future research might produce more significant relationships.

Implications and Suggestions for Future Research

Future research is needed to explain many of the findings of this investigation. More research is needed on propensity to counterargue, the potential distractors which may be present

in a communicative interaction and on violations of personal space expectations.

The area of propensity to counterargue needs much work. If the variable does influence communication outcomes such as message acceptance, credibility and attraction, a more reliable instrument must be devised. Future research might modify the measure so that the arguments are presented in message form with spaces for subjects to indicate acceptance or rejection of the arguments instead of being randomly listed. The source derogation measure might be assembled in the same manner.

The area of distance deviations as distractors needs more work. In this investigation the distance manipulation failed to support the distractive effect of violating personal spacing norms. One possible explanation for this result may have been the self-report manipulation checks used. Subjects may simply have not noticed the distraction and failed to report it due to that fact. Second, since subjects reported being unaware that they had received a persuasive message, the factors they listed on the post experiment manipulation check may not have measured distraction. Future research will need to find better manipulation checks on distraction.

The violation of personal space expectations model seems to be supported, if the punishing initiators were actually viewed as rewarding. In this investigation the degree of punishment may

not have been sufficient to produce the predicted curvilinear relationship between distance and punishing initiators. In terms of message acceptance, apparently enhancing the source's credibility and attraction by deviating from normative distances made subjects focus on positive source characteristics and left them susceptible to the message (e.g., Burgoon, Cohen, Miller & Montgomery, 1978). For the extremely rewarding source, however, the two attitude measures did not produce the same configuration of means and the results are not easily explained. However, if enhancing the source's credibility and attraction does distract the subject from counterarguing, then modification of the model may be necessary. Any distance deviation from the expected norm for a moderately rewarding initiator should produce more message acceptance. Distance deviations by a punishing initiator should produce attributions of a poor communicator which should result in subjects being unpersuaded by the message. Given the failure to manipulate reward and punishment in this investigation, future research should examine this relationship. If distraction is the underlying rationale used in the future, research should center on both distance and reward as distractors, i.e., distance deviations alone may not be distracting but with the reward power of the initiator the deviation may distract subjects from the message.

More research is needed on the effects of violations of personal space expectations. Previous research has utilized the interview setting, whereby subjects may enter the interaction with a preconceived notion of what behaviors are appropriate for the interviewer (e.g., Burgoon, 1978; Burgoon, Stacks & Woodall, 1977). In this investigation the confederate's behavior should have more closely approximated the behaviors found in normal interactions. Even this is questionable since almost all subjects felt as though they were being observed in the room (apparently from the wall speaker and shuttered two-way mirrors in the room). Future research needs to be conducted outside the laboratory. In the laboratory, expectations held by subjects may later the results of expected distancing outcomes -- even when the interaction is made to be as "real" as possible. The experimental atmosphere of the laboratory, or even the anticipation of participating in an experiment, may cause subjects to behave differently than in a normal interaction. This effect may help to explain the lack of support for the posited existence of the threat threshold. The predicted relationships between distance, reward and communication outcomes may need refinement. Previous research based on violations of personal spacing expectations models (e.g., Burgoon, 1978; Burgoon, Stacks & Woodall, 1977) have predicted that the relationships between outcomes, distance and reward would be similar. The model may need refinement whereby the relationships among distance,

reward and individual dimensions of credibility and attraction are specified.

Summary

This investigation sought to establish the distractive influence of violations of interpersonal distancing expectations on message acceptance and perceptions of a source's credibility and attractiveness for high and low propensity-to-counterargue subjects. It was predicted that the relationships among propensity, reward, distance and communication outcomes would produce two different curves for rewarding and punishing sources with propensity producing two parallel curves across distance for each source.

Multiple regression analyses were used to test the nine hypotheses and supplemental analyses. The dependent variables of attitude, credibility and attraction were regressed on reward, distance, propensity to counterargue and the resultant interactions. The results failed to support the predicted relationships. The discussion was centered on the failure to support the predicted relationships, improvements needed and areas of future research were suggested.

APPENDIX A
PROPENSITY TO COUNTERARGUE MEASURE

UNIVERSITY OF FLORIDA CENTER FOR
HUMAN COMMUNICATION RESEARCH

One of the purposes of the Center for Human Communication Research is to assess current issues and topics. Additionally, the Center is engaged in activities which evaluate messages and message sources. In this regard we would like you to complete the tasks which follow. Basically you are asked to respond to a series of arguments which have frequently appeared in messages which support the topic or issue and then to indicate how you would feel about a source who might use such arguments as support for their topic or issue. As such, the first part asks you to evaluate arguments and the second part to evaluate a source who uses such arguments. Please read each item carefully, but do not dwell too long on each item.

Thank you for your help.

PLEASE PLACE THE LAST FOUR (4) DIGITS OF YOUR
SOCIAL SECURITY NUMBER HERE: _____

The following items represent lines of argument frequently appearing in persuasive messages. Please read each item carefully and place a check in the space opposite the time if you find it acceptable and valid or if you believe the argument could be used to effectively alter your original position on the issue. If, on the other hand, you question or refute the argument, leave the space blank.

THE STATE UNIVERSITY SYSTEM SHOULD REDESIGNATE
AREAS OF STUDY TO DIFFERENT UNIVERSITIES,
I.E., UF SHOULD BE ALLOWED TO OFFER HARD
SCIENCES, FSU ONLY SOCIAL SCIENCES, USF
ONLY MANAGEMENT AND MARKETING, ETC.

- _____ Redesignation of universities by major areas of study would equalize distribution of funding between universities.
- _____ By redesignating universities according to emphasis, students would find it much easier to choose the university and faculty they want to study under.
- _____ If all faculty were concentrated in one university according to their area of study, research and education would be of higher quality.
- _____ Universities would be able to make better use of state and federal funds because distribution within the universities could be made on more objective and realistic terms.
- _____ It is much easier to attract qualified professors to a university which is known for its academic and research specialization.
- _____ Morale of faculty would be increased by redesignation of areas of study.
- _____ By combining the existing scattered programs at one university would be seen as more prestigious and attract more funding.
- _____ If the universities responsible for educating people were specified according to resources available in the community, costs of internships and training programs would be less for both the university and the student.
- _____ Currently, researchers are wasting university money by needlessly duplicating research taking place at other universities.
- _____ Redesignation would concentrate faculty in one area leading to greater productivity.
- _____ The amount of money needed to maintain nine universities with similar programs would be greatly reduced by having each university responsible for only one or two programs.
- _____ The cost to students and the state would decrease if each university had only one or two specialized areas because duplication of effort and money spent in contacting other researchers would be eliminated.

The following list of statements reflect on sources of messages. Please read each item carefully and place a check next to each item you agree with. If you question the statement or do not agree with it, leave the space blank. Each item deals with a source who might use the arguments you have just read.

- ☐ The source is very narrow-minded and stubborn.
- ☐ A source using these arguments would be biased toward his/her topic.
- ☐ A source using all or some of these arguments would be unqualified to speak on the topic.
- ☐ The source is informed.
- ☐ Only an educated person would use these arguments.
- ☐ I would consider the source of such arguments highly egotistical.
- ☐ A source who uses such arguments is obviously incompetent.
- ☐ I think the source of such arguments would be quite honest.
- ☐ The source who uses such arguments would be highly unethical.
- ☐ The source would be extremely unsociable.
- ☐ A source arguing along these lines would be very irritating.
- ☐ Such arguments indicate that the source has not researched the topic well and is not aware of the issues.
- ☐ Obviously, the source of such arguments thinks his/her audience is stupid.
- ☐ These arguments indicate that the source has researched the topic well and is aware of the issues.
- ☐ If a source used these arguments in a message he/she would have to be very unsure of him/herself.

The following items represent lines of argument frequently appearing in persuasive messages. Please read each item carefully and place a check in the space opposite the item if you find it acceptable and valid or if you believe the argument could be used to effectively alter your original position on the issue. If, on the other hand, you question or refute the argument, leave the space blank.

24-HOUR VISITATION IN DORMITORIES SHOULD
BE ABOLISHED AT THIS UNIVERSITY

- _____ 24-hour visitation does not provide students with a quiet and conducive time period to study.
- _____ Dormitory residents have expressed concern for their personal safety since the visitation policy has been instituted.
- _____ The university has reported an increase in general property damage since the visitation policy has been in effect.
- _____ Open (24-hour) visitation restricts a person's comfort since they must always be prepared and dressed for visitors.
- _____ 24-hour visitation has hampered police efforts in determining who should or should not be allowed in dormitory areas.
- _____ Open (24-hour) visitation has resulted in inadequate room security.
- _____ Generally, a majority of dormitory residents surveyed opposed the 24-hour visitation policy.
- _____ 24-hour visitation infringes upon the rights of roommates.
- _____ The amount of reported theft from dormitories with 24-hour visitation is significantly greater than dormitories with restricted or nonvisitation policies.
- _____ Students have complained that the 24-hour visitation policy has not allowed them to get adequate sleep due to excessive noise.
- _____ 24-hour visitation is in direct contradiction to basic American morals.
- _____ Formerly public areas in dormitories have become dangerous to residents due to strangers walking about at all hours.

The following list of statements reflect on sources of messages. Please read each item carefully and place a check next to each item you agree with. If you question the statement or do not agree with it, leave the space blank. Each item deals with a source who might use the arguments you have just read.

- ___ The source is very narrow-minded and stubborn.
- ___ A source using these arguments would be biased toward his/her topic.
- ___ A source using all or some of these arguments would be unqualified to speak on the topic.
- ___ Only an educated person would use these arguments.
- ___ The source is informed.
- ___ I would consider the source of such arguments highly egotistical.
- ___ A source who uses such arguments is obviously incompetent.
- ___ I think the source of such arguments would be quite honest.
- ___ The source who uses such arguments would be highly unethical.
- ___ The source would be extremely unsociable.
- ___ A source arguing along these lines would be very irritating.
- ___ Such arguments indicate that the source has not researched the topic well and is not aware of the issues.
- ___ Obviously, the source of such arguments thinks his/her audience is stupid.
- ___ These arguments indicate that the source has researched the topic well and is aware of the issues.
- ___ If a source used these arguments in a message he/she would have to be very unsure of him/herself.

The following items represent lines of argument frequently appearing in persuasive messages. Please read each item carefully and place a check in the space opposite the item if you find it acceptable and valid or if you believe the argument could be used to effectively alter your original position on the issue. If, on the other hand, you question or refute the argument, leave the space blank.

SEARCH AND SEIZURE LIMITS ON POLICE
SHOULD BE ABOLISHED

- _____ Strict search and seizure requirements allow the guilty to go free.
- _____ These laws only protect the guilty, not the innocent.
- _____ These laws have caused good policemen to quit the law enforcement career due to frustration.
- _____ Criminals already have more protection than they should have.
- _____ The police are not actually deterred from illegal behavior by current search and seizure requirements.
- _____ The police should decide whether to search a person because, unlike judges, they are on the streets.
- _____ Administrative sanctions alone have been shown to deter police from illegal searches.
- _____ There was no problem with search and seizure before the current laws were adopted.
- _____ Police do not search people unless they have a good reason to do so.
- _____ These laws do not exist in most countries whose crime rates are at least equal to ours and have been shown to hinder police from solving crime in those countries.
- _____ Research indicates that judges' interpretations of the search and seizure laws are inconsistent.
- _____ There are, in reality, really very few illegal search and seizures each year.

The following list of statements reflect on sources of messages. Please read each item carefully and place a check next to each item you agree with. If you question the statement or do not agree with it, leave the space blank. Each item deals with a source who might use the arguments you have just read.

- _____ The source is very narrow-minded and stubborn.
- _____ A source using these arguments would be biased toward his/her topic.
- _____ A source using all or some of these arguments would be unqualified to speak on the topic.
- _____ Only an educated person would use these arguments.
- _____ The source is informed.
- _____ I would consider the source of such arguments highly egotistical.
- _____ A source who uses such arguments is obviously incompetent.
- _____ I think the source of such arguments would be quite honest.
- _____ The source who uses such arguments would be highly unethical.
- _____ The source would be extremely unsociable.
- _____ A source arguing along these lines would be very irritating.
- _____ Such arguments indicate that the source has not researched the topic well and is not aware of the issues.
- _____ Obviously, the source of such arguments thinks his/her audience is stupid.
- _____ These arguments indicate that the source has researched the topic well and is aware of the issues.
- _____ If a source used these arguments in a message he/she would have to be very unsure of him/herself.

The following items represent lines of argument frequently appearing in persuasive messages. Please read each item carefully and place a check in the space opposite the item if you find it acceptable and valid or if you believe the argument could be used to effectively alter your original position on the issue. If, on the other hand, you question or refute the argument, leave the space blank.

THE PURPOSE OF THE UNIVERSITY SHOULD BE PRIMARILY
RESEARCH-ORIENTED WITH TEACHING AT
BEST A SECONDARY ORIENTATION

- _____ A research orientation would bring in funds which could be used to hire more faculty.
- _____ Faculty engaged in research will be more motivated to expand and include their students in research, resulting in a "total" education for the student.
- _____ As a university gains recognition for research more federal funds are received which lowers the total cost of education to the student and the state.
- _____ By adopting a research orientation, professors would be forced to keep up with current findings in their field, leading to a better education for their students.
- _____ A strict research orientation would lead to better educated undergraduates from our university.
- _____ With more research would come better and more modern equipment which would lead to a higher quality education for students.
- _____ Various sources suggest that more research is needed at our universities to keep the U.S. competitive with other advanced nations.
- _____ The more research emanating from a university, the higher its prestige and more sought are its graduates.
- _____ Increased funding from a primarily research-oriented faculty would lead to lower tuition for undergraduates.
- _____ More research at our university would lead to a better standard of living for all Americans, as evidenced by the advanced technology other university researchers have introduced to date.
- _____ Research and teaching go "hand-in-hand", without research a professor gets stale and his/her teaching ability decreases.
- _____ Surveys from advanced degree granting institutions indicate that students who graduated from universities well known for research are admitted to more graduate programs.

The following list of statements reflect on sources of messages. Please read each item carefully and place a check next to each item you agree with. If you question the statement or do not agree with it, leave the space blank. Each item deals with a source who might use the arguments you have just read.

- _____ The source is very narrow-minded and stubborn.
- _____ A source using these arguments would be biased toward his/her topic.
- _____ A source using all or some of these arguments would be unqualified to speak on the topic.
- _____ Only an educated person would use these arguments.
- _____ The source is informed.
- _____ I would consider the source of such arguments highly egotistical.
- _____ A source who uses such arguments is obviously incompetent.
- _____ I think the source of such arguments would be quite honest.
- _____ The source who uses such arguments would be highly unethical.
- _____ A source arguing along these lines would be very irritating.
- _____ Such arguments indicate that the source has not researched the topic well and is not aware of the issues.
- _____ Obviously, the source of such arguments thinks his/her audience is stupid.
- _____ These arguments indicate that the source has researched the topic well and is aware of the issues.
- _____ If a source used these arguments in a message he/she would have to be very unsure of him/herself.

The following items represent lines of argument frequently appearing in persuasive messages. Please read each item carefully and place a check in the space opposite the item if you find it acceptable and valid or if you believe the argument could be used to effectively alter your original position on the issue. If, on the other hand, you question or refute the argument, leave the space blank.

THERE SHOULD BE AN IMMEDIATE TUITION
INCREASE AT THIS UNIVERSITY

- _____ Operating expenses at the university have increased 26% over the last two years, necessitating an immediate tuition increase.
- _____ Failure to immediately increase tuition will result in a continued deterioration of quality education at this university.
- _____ Top rate faculty are not applying for positions at this university because of low salary offers.
- _____ A trend has developed whereby state support per capita student has decreased by 11% over the past four years.
- _____ Faculty pay increases have failed to match the cost of living increases.
- _____ Without an immediate tuition increase already badly neglected and obsolete equipment would be forced upon students resulting in an out of date education.
- _____ Federal spending on education has decreased by at least 22% over the last few years, a trend which appears to be getting worse.
- _____ A tuition increase would lead to hiring of more qualified professors leading to lower student-teacher ratios, resulting in higher quality education.
- _____ Competent administrators are not applying for positions here due to inadequate and noncompetitive salaries.
- _____ An immediate tuition increase would decrease students' personal monetary outlays for course materials.
- _____ Qualified faculty members are leaving this university because of low pay.
- _____ Alumni contributions to the university have decreased substantially since 1972.

The following list of statements reflect on sources of messages. Please read each item carefully and place a check next to each item you agree with. If you question the statement or do not agree with it, leave the space blank. Each item deals with a source who might use the arguments you have just read.

- _____ The source is very narrow-minded and stubborn.
- _____ A source using these arguments would be biased toward his/her topic.
- _____ A source using all or some of these arguments would be unqualified to speak on the topic.
- _____ Only an educated person would use these arguments.
- _____ The source is informed.
- _____ I would consider the source of such arguments highly egotistical.
- _____ A source who uses such arguments is obviously incompetent.
- _____ I think the source of such arguments would be quite honest.
- _____ The source who uses such arguments would be highly unethical.
- _____ The source would be extremely unsociable.
- _____ A source arguing along these lines would be very irritating.
- _____ Such arguments indicate that the source has not researched the topic well and is not aware of the issues.
- _____ Obviously, the source of such arguments thinks his/her audience is stupid.
- _____ These arguments indicate that the source has researched the topic well and is aware of the issues.
- _____ If a source used these arguments in a message he/she would have to be very unsure of him/herself.

APPENDIX B
MESSAGE

Most responsible citizens realize that something must be done to curb the rising crime rate in this country. But most people do not realize, however, that in our major cities a high percentage of the crime reported is committed by heroin addicts seeking money to support their habit. A prominent journal recently noted that in England, where the government controls the legal sale of heroin to addicts, heroin-related crimes are almost non-existent. In short, the relationship between heroin use and crime is not caused by the drug itself, but rather by the laws which prohibit its use.

Those who support the legalization of heroin argue from several points of view. However, we feel that the arguments related to crime are of primary importance. While we do not encourage the use of heroin, we still must view the problem realistically. In this society we tolerate the use of alcohol, tobacco and other dangerous drugs in the belief that individuals should have considerable freedom in choosing their own lifestyles.

Strictly speaking, heroin use itself only harms the user. However, the fact that it is illegal results in it not only harming the addict, but others as well. Since heroin cannot be obtained legally, addicts are forced to commit crimes against innocent people to get money to pay high black market prices for the drug. Moreover, they must turn to the underworld for their supplies of heroin, making organized crime richer and more powerful. Thus, legalizing heroin sales would reduce crime in at least two ways. First, if heroin were legalized, it would be relatively inexpensive and the addict would not be forced to prey upon innocent citizens for money to pay exorbitant prices for the drug. And, secondly, it would help in the fight against organized crime by taking away an important source of the underworld's income.

Another often neglected fact is that the illegal sale of heroin is a prime source of police corruptions. Several independent commissions have pointed out that the trafficking of heroin is one of the most common and lucrative sources of graft available to policemen. Consequently, current laws are counter-productive. They undermine the goal of reducing drug related crime and increase the possibility of corrupting our police departments by turning them into illegal suppliers of heroin.

A major goal of any program concerning heroin use should be the rehabilitation of the heroin addict. However, several researchers have concluded that the fear of arrest keeps many addicts from seeking help. Thus, the laws making heroin illegal are actually preventing the rehabilitation of the heroin addict.

Obviously, we as a nation cannot condone the use of heroin. And, certainly there are often points which support its legalization. However, we feel that reducing the crime rate, fighting organized crime, reducing a major source of police corruption and aiding in the rehabilitation of heroin addicts are reasons that provide sufficient justification for a policy of legalizing heroin sales in the United States.

APPENDIX C
EXPERIMENTAL PACKET

Since part of our study deals with the interface between humans and machines versus interface between humans and humans, we need you to fill out some additional information about the individual with whom you were waiting. Additionally, we need some information about you. Please fill in the rest of this questionnaire carefully. After this has been done, you will be requested to complete the task assigned to you.

EVALUATION OF OTHER PERSON

Below are a series of adjective pairs on a 1 to 7 scale. Please rate the person you were just with by placing an "X" in the space that best reflects your evaluation.

Competent	_____	Incompetent
Sociable	_____	Unsociable
Unjust	_____	Just
Active	_____	Passive
Unselfish	_____	Selfish
Nervous	_____	Poised
Outgoing	_____	Withdrawn
Honest	_____	Dishonest
Tense	_____	Relaxed
Qualified	_____	Unqualified
Energetic	_____	Tired
Cheerful	_____	Gloomy
Lacking Confidence	_____	Confident
Informed	_____	Uninformed
Illogical	_____	Logical
Cruel	_____	Kind
Irritable	_____	Good Natured
Anxious	_____	Calm
Unfriendly	_____	Friendly
Silent	_____	Talkative

Please rate how you felt when interacting with the other person.

Comfortable	_____	Uncomfortable
Calm	_____	Anxious
Distracted	_____	Not Distracted
RElaxed	_____	Tense
Attentive	_____	Inattentive

Below are a series of statements about the other person.
Please place an "X" in the space which best reflects the
degree to which you agree or disagree with the statement.

1. I think he/she could be a friend of mine.

Strongly agree _____ Strongly disagree

2. I couldn't get anything accomplished with him/her.

Strongly agree _____ Strongly disagree

3. It would be difficult to meet and talk with him/her.

Strongly agree _____ Strongly disagree

4. He/She is very sexy looking.

Strongly agree _____ Strongly disagree

5. If I wanted to get things done, I could probably depend on
him/her.

Strongly agree _____ Strongly disagree

6. I find him/her very attractive physically.

Strongly agree _____ Strongly disagree

7. We could never establish a personal friendship with each other.

Strongly agree _____ Strongly disagree

8. He/She would be a poor problem solver.

Strongly agree _____ Strongly disagree

9. I think he/she is quite handsome/pretty.

Strongly agree _____ Strongly disagree

10. I have confidence in his/her ability to get the job done.

Strongly agree _____ Strongly disagree

11. I would like to have a friendly chat with him/her.

Strongly agree _____ Strongly disagree

12. I don't like the way he/she looks.

Strongly agree _____ Strongly disagree

DEMOGRAPHIC INFORMATION: Please answer the following questions to the best of your ability.

Birthplace _____ (State in which you were born)

Current home state _____

Sex _____

Age _____

Major _____

University classification _____

Please indicate your reactions to the following statements by placing an "X" in the space that most accurately reflects your opinions of those statements.

- At least 50% of a student's college coursework should consist of required courses, designated by the university.

On the scales below the closer your mark is to one of the words, the more you feel that word indicates your attitude towards the statement. A mark in the center scale indicates a neutral attitude toward the statement.

Good	:	:	:	:	:	:	:	Bad
Foolish	:	:	:	:	:	:	:	Wise
Pleasant	:	:	:	:	:	:	:	Unpleasant
Worthless	:	:	:	:	:	:	:	Valuable

On the following scale place a mark directly above the word that you feel best represents your opinion of the statement.

Like	Intensely	Excellent	Very Good	Good	Fair	Neutral	Poor	Bad	Very Bad	Terrible	Dislike	Intensely
------	-----------	-----------	-----------	------	------	---------	------	-----	----------	----------	---------	-----------

- Women's sports should receive equal funding with men's sports.

Unpleasant	:	:	:	:	:	:	:	Pleasant
Wise	:	:	:	:	:	:	:	Foolish
Bad	:	:	:	:	:	:	:	Good
Valuable	:	:	:	:	:	:	:	Worthless

Like	Intensely	Excellent	Very Good	Good	Fair	Neutral	Poor	Bad	Very Bad	Terrible	Dislike	Intensely
------	-----------	-----------	-----------	------	------	---------	------	-----	----------	----------	---------	-----------

3. Graduate students who teach courses at this university should not be required to pay tuition.

Unpleasant	:	:	:	:	:	:	:	Pleasant
Wise	:	:	:	:	:	:	:	Foolish
Good	:	:	:	:	:	:	:	Bad
Worthless	:	:	:	:	:	:	:	Valuable

Dislike Intensely	Terrible	Very Bad	Bad	Poor	Neutral	Fair	Good	Very Good	Excellent	Like Intensely
----------------------	----------	-------------	-----	------	---------	------	------	--------------	-----------	-------------------

4. The sale of heroin in the United States should be legalized.

Pleasant	:	:	:	:	:	:	:	Unpleasant
Wise	:	:	:	:	:	:	:	Foolish
Bad	:	:	:	:	:	:	:	Good
Valuable	:	:	:	:	:	:	:	Worthless

Dislike Intensely	Terrible	Very Bad	Bad	Poor	Neutral	Fair	Good	Very Good	Excellent	Like Intensely
----------------------	----------	-------------	-----	------	---------	------	------	--------------	-----------	-------------------

5. The practice of professors requiring books they have written as texts in their courses should be considered a conflict of interest.

Good	:	:	:	:	:	:	:	Bad
Valuable	:	:	:	:	:	:	:	Worthless
Unpleasant	:	:	:	:	:	:	:	Pleasant
Wise	:	:	:	:	:	:	:	Foolish

Dislike Intensely	Terrible	Very Bad	Bad	Poor	Neutral	Fair	Good	Very Good	Excellent	Like Intensely
----------------------	----------	-------------	-----	------	---------	------	------	--------------	-----------	-------------------

APPENDIX D

POSTEXPERIMENTAL MATERIALS

You have now completed all experimental materials and tasks. Would you please answer a few last questions to help us assess our procedures?

1. What do you feel was the purpose of the study?
2. Were you suspicious about any of the procedures? Yes___ No___
If yes, why?
3. Did you know the other person? Yes___ No ___
4. Do you have any suggestions for improving the procedures?

Because of the nature of this experiment it is important that people's observations and reactions be as natural as possible without any prior influence, we ask that you not discuss any part of this experiment with others. Even casual comments could bias the way others respond. We will be coming to all classes whose students participated in the experiment to explain it more fully and report the results. Thank you for your cooperation and silence.

Don W. Stacks

Now that you have actually finished the experiment we need one more thing from you. During the course of your participation you were subjected to a persuasive message. This message was one of the areas of interest to the experiment and, as such, we would like you to list below any factors which might have caused you to pay more or less attention to the message. Please take a few minutes to help us and list those factors below.

-

APPENDIX E

SUMMARY TABLES

TABLE 1
Analysis of Variance Summary Table for
Dependent Variable Competence

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R</u> ²
Due to Model	15	567.29	37.82	2.15	< .05	.11
Due to Error	271	4761.81	17.57			
Total	286	5329.10				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	22.26	7.42	0.42	NSD	
Reward	3	357.74	119.24	6.79	< .05	
Reward X Dist	9	187.29	20.81	1.18	NSD	

TABLE 2
Analysis of Variance Summary Table for
Dependent Variable Composure

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R</u> ²
Due to Model	15	2221.29	148.08	4.94	<.05	.21
Due to Error	271	8125.27	29.92			
Total	286	10346.56				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	33.21	11.07	0.37	NSD	
Reward	3	1842.26	614.08	20.48	< .05	
Reward X Dist	9	345.81	38.42	1.28	NSD	

TABLE 3
Analysis of Variance Summary Table for
Dependent Variable Character

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R</u> ²
Due to Model	15	203.11	13.54	0.84	NSD	.04
Due to Error	271	4373.22	16.13			
Total	286	4576.34				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	59.27	19.75	1.22	NSD	
Reward	3	103.80	34.60	2.14	NSD	
Reward X Dist	9	40.04	4.44	0.28	NSD	

TABLE 4
Analysis of Variance Summary Table for
Dependent Variable Sociability

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R</u> ²
Due to Model	15	840.98	56.06	4.43	< .05	.20
Due to Error	271	3432.12	12.66			
Total	286	4273.10				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	70.66	23.55	1.86	NSD	
Reward	3	651.91	217.30	17.16	< .05	
Reward X Dist	9	118.40	13.15	1.04	NSD	

TABLE 5
Analysis of Variance Summary Table for
Dependent Variable Extroversion

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MF</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	15	873.59	58.24	4.07	<.05	.18
Due to Error	271	3877.41	17.30			
Total	286	4751.00				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	58.32	6.48	1.36	NSD	
Reward	3	674.39	74.93	15.71	< .05	
Reward X Dist	9	140.88	49.96	1.09	NSD	

TABLE 6
Analysis of Variance Summary Table for
Dependent Variable Physical Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MF</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	15	3029.87	201.99	10.97	< .05	.38
Due to Error	271	4990.43	18.41			
Total	286	8020.30				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	22.16	7.38	0.40	NSD	
Reward	3	2833.77	944.57	51.30	< .05	
Reward X Dist	9	173.93	19.32	1.05	NSD	

TABLE 7
Analysis of Variance Summary Table for
Dependent Variable Task Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R</u> ²
Due to Model	15	399.05	22.60	1.31	NSD	.07
Due to Error	271	4688.59	17.30			
Total	286	5027.64				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	40.18	13.39	0.77	NSD	
Reward	3	238.11	79.37	4.59	.05	
Reward X Dist	9	60.75	6.75	0.39	NSD	

TABLE 8
Analysis of Variance Summary Table for
Dependent Variable Social Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R</u> ²
Due to Model	15	570.51	38.03	2.37	< .05	.12
Due to Error	271	4348.90	16.04			
Total	286	4919.41				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	51.64	17.21	1.07	NSD	
Reward	3	352.02	117.34	7.31	< .05	
Reward X Dist	9	166.84	18.53	1.16	NSD	

TABLE 9
Analysis of Variance Summary Table for
Dependent Variable KIS

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	15	86.77	5.78	0.78	NSD	.04
Due to Error	271	2001.54	7.38			
Total	286	2088.31				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	5.97	0.66	0.27	NSD	
Reward	3	27.53	9.17	1.24	NSD	
Reward X Dist	9	53.26	5.91	0.80	NSD	

TABLE 10
Analysis of Variance Summary Table for
Dependent Variable Semantic Differential

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	15	923.98	61.59	1.32	NSD	.07
Due to Error	271	12648.58	46.67			
Total	286	13572.56				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	45.67	15.22	0.33	NSD	
Reward	3	216.77	72.25	1.55	NSD	
Reward X Dist	9	661.54	73.50	1.57	NSD	

TABLE 11
Analysis of Variance Summary Table for
Dependent Variable Competence

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	293.73	41.96	2.33	< .05	.06
Due to Error	279	5035.37	18.04			
Total	286	5329.10				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	4	22.26	7.42	0.41	NSD	
Reward	1	187.22	187.22	10.37	< .05	
Reward X Dist	3	84.25	28.08	1.56	NSD	

TABLE 12
Analysis of Variance Summary Table for
Dependent Variable Composure

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	1415.24	202.17	6.32	<.05	.14
Due to Error	279	8931.32	32.01			
Total	286	10346.56				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	33.21	11.07	0.35	NSD	
Reward	1	1294.95	1294.95	40.45	< .05	
Reward X Dist	3	87.07	29.02	0.91	NSD	

TABLE 13
Analysis of Variance Summary Table for
Dependent Variable Character

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	99.94	14.27	0.89	NSD	.02
Due to Error	279	4476.34	16.04			
Total	286	4576.38				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	59.27	19.75	1.23	NSD	
Reward	1	35.99	35.99	2.24	NSD	
Reward X Dist	3	4.67	1.55	0.10	NSD	

TABLE 14
Analysis of Variance Summary Table for
Dependent Variable Sociability

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	288.64	41.23	2.89	<.05	.07
Due to Error	279	3984.46	14.28			
Total	286	4273.10				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	70.66	23.55	1.65	NSD	
Reward	1	142.79	142.79	10.00	<.05	
Reward X Dist	3	75.18	25.06	1.75	NSD	

TABLE 15
Analysis of Variance Summary Table for
Dependent Variable Extroversion

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R</u> ²
Due to Model	7	425.84	60.83	3.92	<.05	.09
Due to Error	279	4325.17	15.50			
Total	286	4751.01				

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	58.32	19.44	1.25	NSD	
Reward	1	275.06	275.06	17.74	<.05	
Reward X Dist	3	92.45	30.81	1.99	NSD	

TABLE 16
Analysis of Variance Summary Table for
Dependent Variable Physical Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R</u> ²
Due to Model	7	2044.48	292.07	13.64	<.05	.25
Due to Error	279	5975.82	21.41			
Total	286	8020.30				

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	22.16	7.38	0.34	NSD	
Reward	1	2003.12	2003.12	93.52	<.05	
Reward X Dist	3	19.19	6.39	0.30	NSD	

TABLE 17
Analysis of Variance Summary Table for
Dependent Variable Task Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	168.42	24.06	1.38	NSD	.03
Due to Error	279	4859.21	17.41			
Total	286	5027.63				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	40.18	13.39	0.77	NSD	
Reward	1	126.77	126.77	7.28	< .05	
Reward X Dist	3	1.47	0.49	0.03	NSD	

TABLE 18
Analysis of Variance Summary Table for
Dependent Variable Social Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	302.32	43.19	2.61	< .05	.06
Due to Error	279	4617.08	16.54			
Total	286	4919.40				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	51.64	17.21	1.04	NSD	
Reward	1	174.63	174.63	10.53	< .05	
Reward X Dist	3	76.04	25.34	1.53	NSD	

TABLE 19
Analysis of Variance Summary Table for
Dependent Variable KIS

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	15.51	2.21	0.30	NSD	.008
Due to Error	279	2027.45	7.26			
Total	286	2042.96				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	7.01	2.33	0.32	NSD	
Reward	1	0.89	0.89	0.12	NSD	
Reward X Dist	3	7.59	2.53	0.35	NSD	

TABLE 20
Analysis of Variance Summary Table for
Dependent Variable Semantic Differential
Attitude

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	109.66	15.66	0.32	NSD	.008
Due to Error	297	13462.90	48.24			
Total	286	13572.56				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	45.67	15.22	0.32	NSD	
Reward	1	1.74	1.74	0.04	NSD	
Reward X Dist	3	62.25	20.75	0.43	NSD	

TABLE 21
Analysis of Variance Summary Table for
Dependent Variable Competence

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	253.41	84.47	4.71	<.05	.05
Due to Error	283	5075.70	17.93			
Total	286	5329.11				

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	6.27	6.27	0.35	NSD	
Reward	1	239.39	239.39	13.35	<.05	
Reward X Distc	1	7.73	7.73	0.43	NSD	

TABLE 22
Analysis of Variance Summary Table for
Dependent Variable Composure

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	1431.73	477.24	15.51	<.05	.14
Due to Error	283	8914.83	31.50			
Total	286	10346.56				

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	16.78	16.78	0.53	NSD	
Reward	1	1389.34	1389.34	44.10	<.05	
Reward X Distc	1	25.60	25.60	0.81	NSD	

TABLE 23
Analysis of Variance Summary Table for
Dependent Variable Character

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	64.66	21.55	1.35	NSD	.01
Due to Error	283	4511.67	15.94			
Total	286	4576.33				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	20.91	20.91	1.31	NSD	
Reward	1	38.66	30.66	2.43	NSD	
Reward X Distc	1	5.08	5.08	0.32	NSD	

TABLE 24
Analysis of Variance Summary Table for
Dependent Variable Sociability

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	199.86	66.62	4.63	< .05	.05
Due to Error	283	4073.23	14.39			
Total	286	4273.09				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	0.00	0.00	0.00	NSD	
Reward	1	166.89	166.89	11.60	< .05	
Reward X Distc	1	32.96	32.96	2.29	NSD	

TABLE 25
Analysis of Variance Summary Table for
Dependent Variable Extroversion

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	425.42	141.80	9.23	< .05	.09
Due to Error	283	4325.59	15.28			
Total	286	4751.01				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	4.45	4.45	0.30	NSD	
Reward	1	290.64	290.64	19.02	<.05	
Reward X Distc	1	130.24	130.24	8.25	NSD	

TABLE 26
Analysis of Variance Summary Table for
Dependent Variable Physical Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	2811.03	937.01	50.90	<.05	.35
Due to Error	283	5209.28	18.40			
Total	286	8020.31				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	23.25	23.25	1.28	NSD	
Reward	1	2763.15	2763.15	150.11	<.05	
Reward X Distc	1	24.30	24.30	1.32	NSD	

TABLE 27
Analysis of Variance Summary Table for
Dependent Variable Task Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	179.65	59.88	3.50	<.05	.04
Due to Error	283	4847.98	17.13			
Total	286	5027.63				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	1.68	1.68	0.10	NSD	
Reward	1	175.60	175.60	10.25	<.05	
Reward X Distc	1	2.37	2.37	0.14	NSD	

TABLE 28
Analysis of Variance Summary Table for
Dependent Variable Social Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	305.54	101.84	6.25	<.05	.06
Due to Error	283	4613.86	16.30			
Total	286	4919.40				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist c	1	1.27	1.27	0.08	NSD	
Reward	1	268.37	268.37	16.46	<.05	
Reward X Dist c	1	35.89	35.89	2.20	NSD	

TABLE 29
Analysis of Variance Summary Table for
Dependent Variable KIS

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	7.96	2.65	0.36	NSD	.004
Due to Error	283	2080.35	7.35			
Total	286	2088.31				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	0.32	0.32	0.04	NSD	
Reward	1	7.63	7.63	1.04	NSD	
Reward X Distc	1	0.00	0.00	0.00	NSD	

TABLE 30
Analysis of Variance Summary Table for
Dependent Variable Semantic Differential Attitude

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	80.70	26.90	0.56	NSD	.006
Due to Error	283	13491.86	47.67			
Total	286	13572.56				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	0.53	0.53	0.01	NSD	
Reward	1	52.03	52.03	1.09	NSD	
Reward X Distc	1	28.12	28.12	0.59	NSD	

TABLE 31
Regression of Competence on Distance
for Rewarding Initiators

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>	
Due to Model	4	136.64	34.16	2.12	NSD	.06	
Due to Error	134	2158.52	16.10				
Total	138	2295.16					
<u>Source</u>	<u>df</u>	<u>Sequential SS</u>	<u>F</u>	<u>p</u>	<u>Partial SS</u>	<u>F</u>	<u>p</u>
Linear	1	5.96	0.37	.54	12.12	0.75	NSD
Quadratic	1	13.86	0.86	.36	34.04	2.11	NSD
Cubic	1	50.72	3.15	.08	53.41	3.32	NSD
Quartic	1	66.09	4.10	.04	66.09	4.10	<.05
<u>Source</u>	<u>B</u>	<u>t</u>	<u>p</u>				
Intercept	21.866						
Linear	0.296	0.87	NSD				
Quadratic	-0.037	-1.45	NSD				
Cubic	0.001	1.82	NSD				
Quartic	-0.000	-2.03	<.05				

TABLE 32
Regression of Composure on Distance
for Rewarding Initiators

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>	
Due to Model	4	178.18	44.45	1.49	NSD	.04	
Due to Error	134	4002.52	29.86				
Total	138	4180.70					
<u>Source</u>	<u>df</u>	<u>Sequential SS</u>	<u>F</u>	<u>p</u>	<u>Partial SS</u>	<u>F</u>	<u>p</u>
Linear	1	11.62	0.39	.53	30.16	1.03	NSD
Quadratic	1	52.52	1.76	.19	63.11	2.11	NSD
Cubic	1	18.87	0.63	.43	85.11	2.85	NSD
Quartic	1	95.15	3.19	.08	95.15	3.19	NSD
<u>Source</u>	<u>B</u>	<u>t</u>	<u>p</u>				
Intercept	18.69						
Linear	0.47	1.01	NSD				
Quadratic	-0.05	-1.45	NSD				
Cubic	0.00	1.69	NSD				
Quartic	-0.00	-1.78	NSD				

TABLE 33
Regression of Character on Distance
for Rewarding Initiators

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	4	39.55	9.88	0.58	NSD	.02
Due to Error	134	2274.17	16.97			
Total	138	2313.72				
<u>Source</u>	<u>df</u>	<u>Sequential SS</u>	<u>F</u>	<u>p</u>	<u>Partial SS</u>	<u>F</u> <u>p</u>
Linear	1	1.07	0.06	.80	2.25	0.13 NSD
Quadratic	1	23.46	1.38	.24	7.88	0.46 NSD
Cubic	1	2.32	0.14	.71	11.38	0.67 NSD
Quartic	1	12.68	0.75	.39	12.68	0.75 NSD
<u>Source</u>	<u>B</u>	<u>t</u>	<u>p</u>			
Intercept	21.784					
Linear	0.127	0.36	NSD			
Quadratic	-0.018	-0.68	NSD			
Cubic	0.001	0.82	NSD			
Quartic	-0.000	-0.86	NSD			

TABLE 34
Regression of Sociability on Distance
for Rewarding Initiators

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>	
Due to Model	4	46.93	11.73	0.91	NSD	.03	
Due to Error	134	1728.45	12.89				
Total	138	1775.38					
<u>Source</u>	<u>df</u>	<u>Sequential SS</u>	<u>F</u>	<u>p</u>	<u>Partial SS</u>	<u>F</u>	<u>p</u>
Linear	1	24.30	1.88	.17	18.34	1.42	NSD
Quadratic	1	9.19	0.71	.40	14.34	1.11	NSD
Cubic	1	0.30	0.02	.88	13.40	1.04	NSD
Quartic	1	13.12	1.02	.31	13.12	1.02	NSD
<u>Source</u>	<u>B</u>	<u>t</u>	<u>p</u>				
Intercept	22.606						
Linear	0.364	1.19	NSD				
Quadratic	-0.024	-1.05	NSD				
Cubic	0.001	1.02	NSD				
Quartic	-0.000	-1.01	NSD				

TABLE 35
Regression of Extroversion on Distance
For Rewarding Initiators

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>	
Due to Model	4	126.22	31.55	3.02	<.05	.08	
Due to Error	134	1400.30	10.45				
Total	138	1526.52					
<u>Source</u>	<u>df</u>	<u>Sequential SS</u>	<u>F</u>	<u>p</u>	<u>Partial SS</u>	<u>F</u>	<u>p</u>
Linear	1	42.22	4.04	.05	47.34	4.53	.05
Quadratic	1	1.25	0.12	.73	61.22	5.86	.05
Cubic	1	5.50	0.53	.47	71.93	6.88	.05
Quartic	1	77.23	7.39	.01	77.23	7.39	.05
<u>Source</u>	<u>B</u>	<u>t</u>	<u>p</u>				
Intercept	21.676						
Linear	0.584	2.13	<.05				
Quadratic	-0.050	-2.43	<.05				
Cubic	0.001	2.62	<.05				
Quartic	-0.000	-2.72	<.05				

TABLE 36
Regression of Task Attraction on Distance
for Rewarding Initiators

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	4	85.62	21.40	1.26	NSD	.04
Due To Error	134	2283.81	14.04			
Total	138	2369.43				

<u>Source</u>	<u>df</u>	<u>Sequential SS</u>	<u>F</u>	<u>p</u>	<u>Partial SS</u>	<u>F</u>	<u>p</u>
Linear	1	0.16	0.01	.92	33.92	1.99	NSD
Quadratic	1	2.81	0.16	.69	54.55	3.20	NSD
Cubic	1	0.45	0.55	.46	66.76	3.92	< .05
Quartic	1	73.19	4.29	.04	73.19	4.29	NSD

<u>Source</u>	<u>B</u>	<u>t</u>	<u>p</u>
Intercept	20.666		
Linear	0.495	1.41	NSD
Quadratic	-0.047	-1.49	NSD
Cubic	0.001	1.98	<.05
Quartic	-0.000	-2.07	NSD

TABLE 37
Regression of Physical Attraction on Distance
for Rewarding Initiators

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	4	42.66	10.66	0.50	NSD	.01
Due to Error	134	2865.06	21.38			
Total	138	2907.72				

<u>Source</u>	<u>df</u>	<u>Sequential SS</u>	<u>F</u>	<u>p</u>	<u>Partial SS</u>	<u>F</u>	<u>p</u>
Linear	1	0.90	0.04	.84	9.96	0.47	NSD
Quadratic	1	0.36	0.02	.90	18.05	0.84	NSD
Cubic	1	12.98	0.61	.44	24.08	1.13	NSD
Quartic	1	28.40	1.33	.25	28.40	1.33	NSD

<u>Source</u>	<u>B</u>	<u>t</u>	<u>p</u>
Intercept	20.202		
Linear	0.268	0.68	NSD
Quadratic	-0.027	-0.92	NSD
Cubic	0.001	1.06	NSD
Quartic	-0.000	-1.15	NSD

TABLE 38
Regression of Social Attraction on Distance
for Rewarding Initiators

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	4	32.46	8.11	0.56	NSD	.02
Due to Error	134	1951.32	14.56			
Total	138	1983.78				

<u>Source</u>	<u>df</u>	<u>Sequential SS</u>	<u>F</u>	<u>p</u>	<u>Partial SS</u>	<u>F</u>	<u>p</u>
Linear	1	6.00	0.41	.52	0.55	0.04	NSD
Quadratic	1	1.39	0.10	.76	2.98	0.21	NSD
Cubic	1	16.05	1.17	.28	5.58	0.38	NSD
Quartic	1	8.00	0.55	.46	8.00	0.55	NSD

<u>Source</u>	<u>B</u>	<u>t</u>	<u>p</u>
Intercept	23.260		
Linear	0.063	0.20	NSD
Quadratic	-0.011	-0.45	NSD
Cubic	0.000	0.62	NSD
Quartic	-0.000	-0.74	NSD

TABLE 39
Regression of KIS Distance
for Rewarding Initiators

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	4	17.92	4.48	0.64	NSD	.02
Due to Error	134	973.69	7.04			
Total	138	961.61				

<u>Source</u>	<u>df</u>	<u>Sequential SS</u>	<u>F</u>	<u>p</u>	<u>Partial SS</u>	<u>F</u>	<u>p</u>
Linear	1	2.53	0.36	.55	2.67	0.38	NSD
Quadratic	1	7.65	1.09	.30	5.18	0.74	NSD
Cubic	1	0.50	0.07	.79	6.73	0.96	NSD
Quartic	1	7.22	1.03	.31	7.22	1.03	NSD

<u>Source</u>	<u>B</u>	<u>t</u>	<u>p</u>
Intercept	3.728		
Linear	0.139	0.62	NSD
Quadratic	-0.015	-0.86	NSD
Cubic	0.000	0.98	NSD
Quartic	-0.000	-1.01	NSD

TABLE 40

Regression of Semantic Differential Attitude on
Distance for Rewarding Initiators

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	4	184.07	46.01	0.99	NSD	.03
Due to Error	134	6231.45	46.50			
Total	138	6415.52				

<u>Source</u>	<u>df</u>	<u>Sequential SS</u>	<u>F</u>	<u>p</u>	<u>Partial SS</u>	<u>F</u>	<u>p</u>
Linear	1	33.28	0.72	.40	37.32	0.80	NSD
Quadratic	1	14.39	0.31	.58	67.06	1.44	NSD
Cubic	1	32.48	0.70	.40	90.53	1.95	NSD
Quartic	1	103.91	2.23	.14	103.91	2.23	NSD

<u>Source</u>	<u>B</u>	<u>t</u>	<u>p</u>
Intercept	9.534		
Linear	0.519	0.90	NSD
Quadratic	-0.053	-1.20	NSD
Cubic	0.002	1.40	NSD
Quartic	-0.000	-1.49	NSD

TABLE 41
Regression of Competence on Distance
for Punishing Initiators

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	81.06	27.02	1.41	NSD	.03
Due to Error	144	2765.74	19.20			
Total	147	2846.80				

<u>Source</u>	<u>df</u>	<u>Sequential SS</u>	<u>F</u>	<u>p</u>	<u>Partial SS</u>	<u>F</u>	<u>p</u>
Linear	1	21.37	1.11	.29	42.88	2.23	NSD
Quadratic	1	0.00	0.00	.99	57.64	3.00	NSD
Cubic	1	59.68	3.11	.08	59.68	3.11	NSD

<u>Source</u>	<u>B</u>	<u>t</u>	<u>p</u>
Intercept	19.90		
Linear	0.29	1.49	NSD
Quadratic	-0.01	-1.73	NSD
Cubic	0.00	1.76	NSD

TABLE 42
Regression of Composure on Distance
for Punishing Initiators

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	80.36	27.78	0.81	NSD	.02
Due to Error	144	4785.27	33.23			
Total	147	4865.63				

<u>Source</u>	<u>df</u>	<u>Sequential SS</u>	<u>F</u>	<u>p</u>	<u>Partial SS</u>	<u>F</u>	<u>p</u>
Linear	1	33.66	1.01	.32	37.67	1.13	NSD
Quadratic	1	5.43	0.16	.69	45.40	1.37	NSD
Cubic	1	41.26	1.24	.27	41.26	1.24	NSD

<u>Source</u>	<u>B</u>	<u>t</u>	<u>p</u>
Intercept	14.56		
Linear	0.27	1.06	NSD
Quadratic	-0.01	-1.17	NSD
Cubic	0.00	1.11	NSD

TABLE 43
Regression of Character on Distance
for Punishing Initiators

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	25.41	8.47	0.55	NSD	.01
Due to Error	144	2198.44	15.26			
Total	147	2223.85				

<u>Source</u>	<u>df</u>	<u>Sequential SS</u>	<u>F</u>	<u>p</u>	<u>Partial SS</u>	<u>F</u>	<u>p</u>
Linear	1	23.15	1.52	.22	0.71	0.05	NSD
Quadratic	1	0.00	0.00	.99	2.19	0.14	NSD
Cubic	1	2.25	0.15	.70	2.25	0.15	NSD

<u>Source</u>	<u>B</u>	<u>t</u>	<u>P</u>
Intercept	21.16		
Linear	0.03	0.22	NSD
Quadratic	-0.00	-0.38	NSD
Cubic	0.00	0.38	NSD

TABLE 44
Regression of Sociability on Distance
for Punishing Initiators

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	40.16	13.39	0.83	NSD	.02
Due to Error	144	2311.90	16.05			
Total	147	2352.06				

<u>Source</u>	<u>df</u>	<u>Sequential SS</u>	<u>F</u>	<u>p</u>	<u>Partial SS</u>	<u>F</u>	<u>p</u>
Linear	1	12.79	0.80	.37	6.75	0.41	NSD
Quadratic	1	7.90	0.49	.48	14.70	0.92	NSD
Cubic	1	19.46	1.12	.27	19.46	1.21	NSD

<u>Source</u>	<u>B</u>	<u>t</u>	<u>p</u>
Intercept	22.68		
Linear	0.11	0.64	NSD
Quadratic	-0.00	-0.96	NSD
Cubic	0.00	1.10	NSD

TABLE 45
Regression of Extroversion on Distance
for Punishing Initiators

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	108.62	36.20	1.84	NSD	.04
Due to Error	144	2840.37	19.72			
Total	147	2948.99				

<u>Source</u>	<u>df</u>	<u>Sequential SS</u>	<u>F</u>	<u>p</u>	<u>Partial SS</u>	<u>F</u>	<u>p</u>
Linear	1	59.88	3.04	.08	7.42	0.38	NSD
Quadratic	1	16.93	0.86	.36	23.12	1.17	NSD
Cubic	1	31.80	1.61	.21	31.80	1.61	NSD

<u>Source</u>	<u>B</u>	<u>t</u>	<u>p</u>
Intercept	21.87		
Linear	0.12	0.61	NSD
Quadratic	-0.00	-1.08	NSD
Cubic	0.00	1.27	NSD

TABLE 46
Regression of Social Attraction on Distance
for Punishing Initiators

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>	
Due to Model	3	28.68	9.56	0.50	NSD	.01	
Due to Error	144	2734.07	18.98				
Total	147	2762.76					
<u>Source</u>	<u>df</u>	<u>Sequential SS</u>	<u>F</u>	<u>p</u>	<u>Partial SS</u>	<u>F</u>	<u>p</u>
Linear	1	25.67	1.35	.25	2.69	0.14	NSD
Quadratic	1	2.78	0.15	.70	0.59	0.03	NSD
Cubic	1	0.22	0.01	.91	0.22	0.01	NSD
<u>Source</u>		<u>B</u>	<u>t</u>	<u>p</u>			
Intercept		20.76					
Linear		0.07	0.38	NSD			
Quadratic		-0.00	-0.18	NSD			
Cubic		0.00	0.11	NSD			

TABLE 47
Regression of Physical Attraction on Distance
for Punishing Initiators

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	12.72	4.24	0.20	NSD	.004
Due to Error	144	3099.57	21.52			
Total	147	3112.29				

<u>Source</u>	<u>df</u>	<u>Sequential SS</u>	<u>F</u>	<u>p</u>	<u>Partial SS</u>	<u>F</u>	<u>p</u>
Linear	1	3.66	0.17	.68	7.71	0.36	NSD
Quadratic	1	1.16	0.05	.82	8.74	0.41	NSD
Cubic	1	7.89	0.37	.55	7.89	0.37	NSD

<u>Source</u>	<u>B</u>	<u>t</u>	<u>p</u>
Intercept	15.00		
Linear	0.12	0.60	NSD
Quadratic	-0.00	-0.64	NSD
Cubic	0.00	0.61	NSD

TABLE 48
Regression of Task Attraction on Distance
for Punishing Initiators

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	40.08	13.36	0.77	NSD	.02
Due to Error	144	2490.64	17.29			
Total	147	2530.72				

<u>Source</u>	<u>df</u>	<u>Sequential SS</u>	<u>F</u>	<u>p</u>	<u>Partial SS</u>	<u>F</u>	<u>p</u>
Linear	1	0.18	0.01	.92	35.53	2.05	NSD
Quadratic	1	0.42	0.02	.88	39.66	2.29	NSD
Cubic	1	39.47	2.28	.13	39.47	2.28	NSD

<u>Source</u>	<u>B</u>	<u>t</u>	<u>p</u>
Intercept	19.26		
Linear	0.26	1.43	NSD
Quadratic	-0.01	-1.51	NSD
Cubic	0.00	1.51	NSD

TABLE 49
Regression of KIS on Distance for
Punishing Initiators

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	3.05	1.01	0.13	NSD	.003
Due to Error	144	1122.66	7.79			
Total	147	1125.71				

<u>Source</u>	<u>df</u>	<u>Sequential SS</u>	<u>F</u>	<u>p</u>	<u>Partial SS</u>	<u>F</u>	<u>p</u>
Linear	1	0.41	0.05	.82	2.67	0.34	NSD
Quadratic	1	0.05	0.01	.93	2.63	0.34	NSD
Cubic	1	2.56	0.33	.57	2.57	0.33	NSD

<u>Source</u>	<u>B</u>	<u>t</u>	<u>p</u>
Intercept	4.22		
Linear	-0.07	-0.59	NSD
Quadratic	0.00	0.58	NSD
Cubic	-0.00	-0.58	NSD

TABLE 50
Regression of Semantic Differential Attitude
on Distance for Punishing Initiators

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	58.36	19.45	0.39	NSD	.008
Due to Error	144	7097.36	49.28			
Total	147	7155.72				

<u>Source</u>	<u>df</u>	<u>Sequential SS</u>	<u>F</u>	<u>p</u>	<u>Partial SS</u>	<u>F</u>	<u>p</u>
Linear	1	19.47	0.40	.53	43.61	0.88	NSD
Quadratic	1	2.06	0.04	.84	38.78	0.79	NSD
Cubic	1	36.83	0.75	.39	36.83	0.75	NSD

<u>Source</u>	<u>B</u>	<u>t</u>	<u>p</u>
Intercept	12.19		
Linear	-0.29	-0.94	NSD
Quadratic	0.01	0.89	NSD
Cubic	-0.00	-0.86	NSD

TABLE 51
Supplemental Analysis of Variance Summary Table
for Dependent Variable Competence

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	156.11	22.30	1.20	NSD	.03
Due to Error	279	5173.00	18.54			
Total	286	5329.11				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	22.26	7.42	0.40	NSD	
IvSex	1	68.63	68.63	3.70	NSD	
IvSex X Dist	3	65.21	21.73	1.17	NSD	

Table 52
Supplemental Analysis of Variance Summary Table
for Dependent Variable Composure

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	440.60	62.94	1.77	NSD	.04
Due to Error	279	9905.96	35.50			
Total	286	10346.56				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	33.21	11.07	0.31	NSD	
IvSex	1	182.49	182.49	5.14	<.05	
IvSex X Dist	3	224.89	74.96	2.11	NSD	

TABLE 53
Supplemental Analysis of Variance Summary Table for
Dependent Variable Character

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	87.19	12.45	0.77	NSD	.02
Due to Error	279	4489.14	16.09			
Total	286	4576.33				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	59.27	19.75	1.23	NSD	
IvSex	1	7.72	7.72	0.48	NSD	
IvSex X Dist	3	20.20	6.73	0.42	NSD	

TABLE 54
Supplemental Analyses of Variance Summary Table for
Dependent Variable Sociability

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	136.38	19.48	1.31	NSD	.03
Due to Error	279	4136.72	14.83			
Total	286	4273.10				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	70.66	23.55	1.59	NSD	
IvSex	1	39.09	39.09	2.64	NSD	
IvSex X Dist	3	26.62	8.87	0.60	NSD	

TABLE 55
Supplemental Analysis of Variance Summary Table for
Dependent Variable Extroversion

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	150.13	21.44	1.30	NSD	.03
Due to Error	279	4600.88	16.49			
Total	286	4751.01				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	58.32	19.44	1.18	NSD	
IvSex	1	45.32	45.32	2.75	NSD	
IvSex X Dist	3	46.49	15.49	0.94	NSD	

TABLE 56
Supplemental Analysis of Variance Summary Table for
Dependent Variable Physical Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	947.15	135.30	5.34	< .05	.12
Due to Error	279	7073.15	25.35			
Total	286	8020.30				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	22.16	7.38	0.29	NSD	
IvSex	1	812.99	812.99	32.07	< .05	
IvSex X Dist	3	111.99	37.33	1.47	NSD	

TABLE 57
Supplemental Analysis of Variance Summary Table for
Dependent Variable Task Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	148.67	21.23	1.21	NSD	.03
Due to Error	279	4878.96	17.48			
Total	286	5027.63				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	40.18	13.39	0.77	NSD	
IvSex	1	60.30	60.30	3.45	NSD	
IvSex X Dist	3	48.18	16.06	0.92	NSD	

TABLE 58
Supplemental Analysis of Variance Summary Table for
Dependent Variable Social Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	216.01	30.86	1.83	NSD	.04
Due to Error	279	4703.39	16.85			
Total	286	4919.40				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	51.64	17.21	1.02	NSD	
IvSex	1	112.37	112.37	6.67	< .05	
IvSex X Dist	3	51.98	17.32	1.03	NSD	

TABLE 59
Supplemental Analysis of Variance Summary Table for
Dependent Variable KIS

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	45.41	6.48	0.89	NSD	.02
Due to Error	279	2042.90	7.32			
Total	286	2088.31				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	5.97	1.99	0.27	NSD	
IvSex	1	16.33	16.33	2.23	NSD	
IvSex X Dist	3	23.10	7.70	1.05	NSD	

TABLE 60
Supplementary Analysis of Variance Summary Table for
Dependent Variable Semantic Differential Attitude

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	317.32	45.33	0.95	NSD	.02
Due to Error	279	13225.24	47.51			
Total	286	13572.56				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	45.67	15.22	0.32	NSD	
IvSex	1	172.69	172.69	3.63	NSD	
IvSex X Dist	3	98.96	32.98	0.69	NSD	

TABLE 61
Supplemental Analysis of Variance Summary Table for
Dependent Variable Competence

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	73.33	24.44	1.32	NSD	.01
Due to Error	283	5255.77	18.57			
Total	286	5329.10				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	6.27	6.27	0.34	NSD	
IvSex	1	66.45	66.45	3.58	NSD	
IvSex X Distc	1	0.60	0.60	0.03	NSD	

TABLE 62
Supplemental Analysis of Variance Summary Table for
Dependent Variable Competence

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	214.21	71.40	1.99	NSD	.02
Due to Error	283	10132.35	35.80			
Total	286	10346.56				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	16.78	16.78	0.47	NSD	
IvSex	1	181.90	181.90	5.08	<.05	
IvSex X Distc	1	15.52	15.52	0.43	NSD	

TABLE 63
Supplemental Analysis of Variance Summary Table for
Dependent Variable Character

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	28.60	9.53	0.59	NSD	.007
Due to Error	283	4547.73	16.07			
Total	286	4576.33				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	20.91	20.91	1.30	NSD	
IvSex	1	6.47	6.47	0.40	NSD	
IvSex X Distc	1	1.22	1.22	0.08	NSD	

TABLE 64
Supplemental Analysis of Variance Summary Table for
Dependent Variable Sociability

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	48.59	16.19	1.09	NSD	.01
Due to Error	283	4224.51	14.92			
Total	286	4273.10				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	0.00	0.00	0.00	NSD	
IvSex	1	37.03	37.03	2.48	NSD	
IvSex X Distc	1	11.55	11.55	0.77	NSD	

TABLE 65
Supplemental Analysis of Variance Summary Table for
Dependent Variable Extroversion

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	127.37	42.46	2.60	NSD	.03
Due to Error	283	4623.63	16.33			
Total	286	4751.00				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	4.54	4.54	0.28	NSD	
IvSex	1	42.78	42.78	2.62	NSD	
IvSex X Distc	1	80.05	80.05	4.90	< .05	

TABLE 66
Supplemental Analysis of Variance Summary Table for
Dependent Variable Physical Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	843.04	281.01	11.08	< .05	.11
Due to Error	283	7177.26	25.36			
Total	286	8020.30				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	23.57	23.57	0.93	NSD	
IvSex	1	797.27	797.27	31.44	< .05	
IvSex X Distc	1	22.19	22.19	0.88	NSD	

TABLE 67
Supplemental Analysis of Variance Summary Table for
Dependent Variable Task Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	61.68	20.56	1.17	NSD	.01
Due to Error	283	4965.96	17.54			
Total	286	5027.64				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	1.68	1.68	0.10	NSD	
IvSex	1	57.38	57.38	3.27	NSD	
IvSex X Distc	1	2.62	2.62	0.15	NSD	

TABLE 68
Supplemental Analysis of Variance Summary Table for
Dependent Variable Social Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	112.96	37.65	2.22	NSD	.02
Due to Error	283	4806.45	16.98			
Total	286	4919.41				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	1.27	1.27	0.07	NSD	
IvSex	1	110.13	110.13	6.48	<.05	
IvSex X Distc	1	1.55	1.55	0.09	NSD	

TABLE 69
Supplemental Analysis of Variance Summary Table for
Dependent Variable KIS

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	21.62	7.20	0.99	NSD	.01
Due to Error	283	2066.69	7.30			
Total	286	2088.31				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	0.32	0.32	0.04	NSD	
IvSex	1	16.51	16.51	2.26	NSD	
IvSex X Distc	1	4.78	4.78	0.66	NSD	

TABLE 70
Supplemental Analysis of Variance Summary Table for
Dependent Variable Semantic Differential

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	175.33	48.44	1.23	NSD	.01
Due to Error	283	13397.23	47.34			
Total	286	13572.66				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	0.53	0.53	0.01	NSD	
IvSex	1	174.77	174.77	3.69	NSD	
IvSex X Distc	1	0.02	0.02	0.00	NSD	

TABLE 71
Supplemental Analysis of Variance Summary Table for
Dependent Variable Competence

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	146.03	20.86	1.12	NSD	.03
Due to Error	279	5183.08	18.57			
Total	286	5329.11				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	22.26	7.42	0.40	NSD	
Comp	1	38.74	38.74	2.09	NSD	
Comp X Dist	3	85.02	28.34	1.53	NSD	

TABLE 72
Supplemental Analysis of Variance Summary Table for
Dependent Variable Composure

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	86.59	12.37	0.34	NSD	.008
Due to Error	279	10259.93	36.77			
Total	286	10346.57				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	33.21	11.07	0.30	NSD	
Comp	1	7.49	7.49	0.20	NSD	
Comp X Dist	3	45.88	15.29	0.42	NSD	

TABLE 73
Supplemental Analysis of Variance Summary Table for
Dependent Variable Character

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	148.02	21.14	1.33	NSD	.03
Due to Error	279	4428.32	15.87			
Total	286	4576.34				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	59.27	19.75	1.24	NSD	
Comp	1	11.61	11.61	0.73	NSD	
Comp X Dist	3	77.13	25.71	1.62	NSD	

TABLE 74
Supplemental Analysis of Variance Summary Table for
Dependent Variable Sociability

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	103.72	14.81	0.99	NSD	.02
Due to Error	279	4169.38	14.94			
Total	286	4273.10				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	70.66	23.55	1.58	NSD	
Comp	1	8.82	8.82	0.59	NSD	
Comp X Dist	3	24.22	8.07	0.54	NSD	

TABLE 75
Supplemental Analysis of Variance Summary Table for
Dependent Variable Extroversion

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	70.90	10.12	0.60	NSD	.01
Due to Error	279	4680.11	16.77			
Total	286	4751.01				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	58.32	19.44	1.16	NSD	
Comp	1	0.53	0.53	0.03	NSD	
Comp X Dist	3	12.04	4.01	0.24	NSD	

TABLE 76
Supplemental Analysis of Variance Summary Table for
Dependent Variable Task Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	101.97	14.56	0.83	NSD	.02
Due to Error	279	4925.67	17.65			
Total	286	5027.64				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	40.18	13.39	0.76	NSD	
Comp	1	11.60	11.60	0.66	NSD	
Comp X Dist	3	16.72	16.72	0.95	NSD	

TABLE 77
Supplemental Analysis of Variance Summary Table for
Dependent Variable Physical Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	338.31	48.31	1.76	NSD	.04
Due to Error	279	7681.99	27.53			
Total	286	8020.30				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	22.16	7.38	0.27	NSD	
Comp	1	250.29	250.29	9.09	< .05	
Comp X Dist	3	65.86	21.95	0.80	NSD	

TABLE 78
Supplemental Analysis of Variance Summary Table for
Dependent Variable Social Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	206.07	29.43	1.74	NSD	.04
Due to Error	279	4713.33	16.89			
Total	286	4919.40				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	51.64	17.21	1.02	NSD	
Comp	1	0.46	0.46	0.03	NSD	
Comp X Dist	3	153.96	51.32	3.04	< .05	

TABLE 79
Supplemental Analysis of Variance Summary Table for
Dependent Variable KIS

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	23.26	3.32	0.45	NSD	.01
Due to Error	279	2065.05	7.40			
Total	286	2088.31				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	5.97	1.99	0.27	NSD	
Comp	1	1.99	1.99	0.27	NSD	
Comp X Dist	3	15.29	5.09	0.69	NSD	

TABLE 80
Supplemental Analysis of Variance Summary Table for
Dependent Variable Semantic Differential

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	163.06	23.29	0.48	NSD	.01
Due to Error	279	13409.51	48.06			
Total	286	13573.57				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Dist	3	45.67	15.22	0.32	NSD	
Comp	1	0.76	0.76	0.02	NSD	
Comp X Dist	3	116.62	38.87	0.31	NSD	

TABLE 81
Supplemental Analysis of Variance Summary Table for
Dependent Variable Competence

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	44.14	14.71	0.79	NSD	.008
Due to Error	283	5284.94	18.67			
Total	286	5329.08				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	6.27	6.27	0.34	NSD	
Comp	1	37.84	37.84	2.03	NSD	
Comp X Distc	1	0.01	0.01	0.00	NSD	

TABLE 82
Supplemental Analysis of Variance Summary Table for
Dependent Variable Composure

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	31.96	10.65	0.29	NSD	.003
Due to Error	283	10314.60	36.44			
Total	286	10346.56				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	16.78	16.78	0.46	NSD	
Comp	1	7.99	7.99	0.22	NSD	
Comp X Distc	1	7.17	7.17	0.20	NSD	

TABLE 83
Supplemental Analysis of Variance Summary Table for
Dependent Variable Character

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	39.09	13.03	0.81	NSD	.009
Due to Error	283	4537.24	16.03			
Total	286	4576.33				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	20.91	20.91	1.30	NSD	
Comp	1	14.73	14.73	0.92	NSD	
Comp X Distc	1	3.44	3.44	0.21	NSD	

TABLE 84
Supplemental Analysis of Variance Summary Table for
Dependent Variable Sociability

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	5.34	1.78	0.12	NSD	.001
Due to Error	283	4267.76	15.08			
Total	286	4273.10				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	0.00	0.00	0.00	NSD	
Comp	1	5.08	5.08	0.34	NSD	
Comp X Distc	1	0.25	0.25	0.02	NSD	

TABLE 85
Supplemental Analysis of Variance Summary Table for
Dependent Variable Extroversion

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	12.16	4.05	0.24	NSD	.003
Due to Error	283	4738.85	16.74			
Total	286	4751.01				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	4.45	4.45	0.27	NSD	
Comp	1	0.61	0.61	0.04	NSD	
Comp X Distc	1	7.00	7.00	0.42	NSD	

TABLE 86
Supplemental Analysis of Variance Summary Table for
Dependent Variable Physical Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	250.63	83.54	3.04	< .05	.03
Due to Error	283	7769.67	27.45			
Total	286	8020.30				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	23.57	23.57	0.86	NSD	
Comp	1	219.74	219.74	8.00	< .05	
Comp X Distc	1	7.32	7.32	0.27	NSD	

TABLE 87
Supplemental Analysis of Variance Summary Table for
Dependent Variable Task Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	14.33	4.77	0.27	NSD	.003
Due to Error	283	5013.31	17.71			
Total	286	5027.64				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	1.68	1.68	0.09	NSD	
Comp	1	7.78	7.78	0.44	NSD	
Comp X Distc	1	4.87	4.87	0.27	NSD	

TABLE 88
Supplemental Analysis of Variance Summary Table for
Dependent Variable Social Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	47.66	15.88	0.92	NSD	.001
Due to Error	283	4871.74	17.21			
Total	286	4919.40				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	1.27	1.27	0.07	NSD	
Comp	1	1.77	1.77	0.10	NSD	
Comp X Dist	1	44.62	44.62	2.59	NSD	

TABLE 89
Supplemental Analysis of Variance Summary Table for
Dependent Variable KIS

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	7.18	2.39	0.33	NSD	.003
Due to Error	283	2081.13	7.35			
Total	286	2088.31				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	0.32	0.32	0.04	NSD	
Comp	1	2.86	2.86	0.39	NSD	
Comp X Dist	1	3.99	3.99	0.54	NSD	

TABLE 90
Supplemental Analysis of Variance Summary Table for
Dependent Variable Semantic Differential

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	27.51	9.17	0.19	NSD	.002
Due to Error	283	13545.06	47.86			
Total	286	13572.57				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Distc	1	0.53	0.53	0.01	NSD	
Comp	1	2.91	2.91	0.06	NSD	
Comp X Distc	1	24.05	24.05	0.50	NSD	

TABLE 91
Analysis of Variance Summary Table for
Dependent Variable Competence

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	445.70	63.67	3.64	< .05	.08
Due to Error	279	4883.40	17.50			
Total	286	5329.10				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop	1	86.55	86.55	4.95	< .05	
Reward	3	334.67	111.55	6.37	< .05	
Prop X Reward	3	24.47	8.15	0.47	NSD	

TABLE 92
Analysis of Variance Summary Table for
Dependent Variable Composure

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	2105.62	300.80	10.18	< .05	.20
Due to Error	279	8240.94	29.53			
Total	286	10346.56				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop	1	332.87	332.87	11.27	< .05	
Reward	3	1759.24	586.41	19.85	< .05	
Prop X Reward	3	13.50	4.50	0.15	NSD	

TABLE 93
Analysis of Variance Summary Table for
Dependent Variable Character

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	135.64	19.37	1.22	NSD	.03
Due to Error	279	4440.70	15.91			
Total	286	4576.34				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop	1	31.22	31.22	1.96	NSD	
Reward	3	98.35	32.78	2.06	NSD	
Prop X Reward	3	6.06	2.02	0.13	NSD	

TABLE 94
Analysis of Variance Summary Table for
Dependent Variable Sociability

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	664.04	94.86	7.33	<.05	.16
Due to Error	279	3609.06	12.93			
Total	286	4273.10				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop	1	23.10	23.10	1.79	NSD	
Reward	3	629.56	209.85	16.22	<.05	
Prop X Reward	3	11.37	3.79	0.29	NSD	

TABLE 95
Analysis of Variance Summary Table for
Dependent Variable Extroversion

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	688.46	98.35	6.75	< .05	.14
Due to Error	279	4062.55	14.56			
Total	286	4751.01				

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop	1	0.41	0.41	0.03	NSD	
Reward	3	681.16	227.05	15.59	< .05	
Prop X Reward	3	6.88	2.29	0.16	NSD	

TABLE 96
Analysis of Variance Summary Table for
Dependent Variable Physical Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	2881.49	411.64	22.35	< .05	.36
Due to Error	279	5138.81	18.41			
Total	286	8020.30				

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop	1	42.84	42.84	2.31	NSD	
Reward	3	2811.56	937.18	50.88	< .05	
Prop X Reward	3	27.45	9.15	0.50	NSD	

TABLE 97
Analysis of Variance Summary Table for
Dependent Variable Task Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	325.48	46.49	2.76	<.05	.06
Due to Error	279	4702.15	16.85			
Total	286	5027.63				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop	1	85.06	85.06	5.05	<.05	
Reward	3	216.98	72.32	4.29	<.05	
Prop X Reward	3	23.44	7.81	0.46	NSD	

TABLE 98
Analysis of Variance Summary Table for
Dependent Variable Social Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	373.15	53.30	3.27	<.05	.08
Due to Error	279	4546.41	16.29			
Total	286	4919.56				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop	1	17.17	17.17	1.05	NSD	
Reward	3	334.62	111.54	6.85	<.05	
Prop X Reward	3	21.35	7.11	0.44	NSD	

TABLE 99
Analysis of Variance Summary Table for
Dependent Variable KIS

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	73.39	10.47	1.45	NSD	.04
Due to Error	279	2014.98	7.22			
Total	286	2088.37				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop	1	6.67	6.67	0.92	NSD	
Reward	3	25.86	8.62	1.19	NSD	
Prop X Reward	3	40.80	13.60	1.88	NSD	

TABLE 100
Analysis of Variance Summary Table for
Dependent Variable Semantic Differential

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	371.64	53.09	1.12	NSD	.03
Due to Error	279	13200.93	47.31			
Total	286	13572.57				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop	1	11.94	11.94	0.25	NSD	
Reward	3	214.06	71.35	1.51	NSD	
Prop X Reward	3	145.63	48.54	1.03	NSD	

TABLE 101
Analysis of Variance Summary Table for
Dependent Variable Competence

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	289.25	96.41	5.41	<.05	.05
Due to Error	283	5039.85	17.80			
Total	286	5329.10				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop	1	86.55	86.55	4.81	<.05	
Reward	1	180.08	180.08	10.11	<.05	
Prop X Reward	1	22.61	22.61	1.27	NSD	

TABLE 102
Analysis of Variance Summary Table for
Dependent Variable Composure

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	1598.25	532.75	17.23	<.05	.05
Due to Error	283	8748.31	30.91			
Total	286	10346.56				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop	1	332.87	332.87	10.77	<.05	
Reward	1	1263.96	1263.96	40.89	<.05	
Prop X Reward	1	1.42	1.42	0.05	NSD	

TABLE 103
Analysis of Variance Summary Table for
Dependent Variable Character

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	75.24	25.08	1.58	NSD	.02
Due to Error	283	4501.09	15.90			
Total	286	4576.33				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop	1	31.22	31.22	1.96	NSD	
Reward	1	36.82	36.82	2.32	NSD	
Prop X Reward	1	7.19	7.19	0.45	NSD	

TABLE 104
Analysis of Variance Summary Table for
Dependent Variable Sociability

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	178.83	59.61	4.12	<.05	.04
Due to Error	283	4094.27	14.46			
Total	286	4273.10				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop	1	23.10	23.10	1.60	NSD	
Reward	1	142.47	142.47	9.85	<.05	
Prop X Reward	1	13.25	13.25	0.92	NSD	

TABLE 105
Analysis of Variance Summary Table for
Dependent Variable Extroversion

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	276.76	92.25	5.84	<.05	.06
Due to Error	283	4474.25	15.81			
Total	286	4751.01				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop	1	0.41	0.41	0.03	NSD	
Reward	1	276.32	276.32	17.48	<.05	
Prop X Reward	1	0.02	0.02	0.00	NSD	

TABLE 106
Analysis of Variance Summary Table for
Dependent Variable Physical Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	2061.89	687.29	32.64	<.05	.26
Due to Error	283	5958.31	21.05			
Total	286	8020.30				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop	1	42.48	42.48	2.02	NSD	
Reward	1	1985.29	1985.29	94.29	<.05	
Prop X Reward	1	34.11	34.11	1.62	NSD	

TABLE 107
Analysis of Variance Summary Table for
Dependent Variable Task Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	225.77	75.25	4.44	<.05	.04
Due to Error	283	4801.87	16.96			
Total	286	5027.64				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop	1	85.06	85.06	5.01	<.05	
Reward	1	121.70	121.70	7.17	<.05	
Prop X Reward	1	19.00	19.00	1.12	NSD	

TABLE 108
Analysis of Variance Summary Table for
Dependent Variable Social Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	188.26	62.75	3.75	<.05	.04
Due to Error	283	4731.15	16.71			
Total	286	4919.41				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop	1	17.17	17.17	1.03	NSD	
Reward	1	169.91	169.91	10.16	<.05	
Prop X Reward	1	1.17	1.17	0.07	NSD	

TABLE 109
Analysis of Variance Summary Table for
Dependent Variable KIS

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	44.69	14.89	2.06	NSD	.02
Due to Error	283	2043.62	7.22			
Total	286	2088.31				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop	1	6.67	6.67	0.92	NSD	
Reward	1	0.84	0.84	0.12	NSD	
Prop X Reward	1	37.17	37.17	5.15	< .05	

TABLE 110
Analysis of Variance Summary Table for
Dependent Variable Semantic Differential

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	3	159.72	53.24	1.12	NSD	.01
Due to Error	283	13412.84	47.39			
Total	286	13572.56				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop	1	11.94	11.94	0.25	NSD	
Reward	1	1.10	1.10	0.02	NSD	
Prop X Reward	1	146.68	146.68	3.09	NSD	

TABLE 111
Analysis of Variance Summary Table for
Dependent Variable Competence

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	15	450.29	30.68	1.71	< .05	.09
Due to Error	271	4868.82	17.99			
Total	286	5329.11				

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Prop (A)	1	86.55	86.55	4.82	< .05
Dist (B)	3	22.15	7.38	0.41	NSD
Reward (C)	1	180.38	180.38	10.04	< .05
A X B	3	33.25	11.08	0.62	NSD
A X C	1	22.32	22.32	1.24	NSD
B X C	3	87.75	27.91	1.55	NSD
A X B X C	3	31.90	10.63	0.59	NSD

TABLE 112
Analysis of Variance Summary Table for
Dependent Variable Composure

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	15	2164.93	144.32	4.78	< .05	.21
Due to Error	271	8181.63	30.19			
Total	286	10346.56				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop (A)	1	332.87	332.87	11.03	< .05	
Dist (B)	3	31.40	10.64	0.35	NSD	
Reward (C)	1	1259.91	1259.91	41.73	< .05	
A X B	3	36.83	12.27	0.41	NSD	
A X C	1	1.33	1.33	0.04	NSD	
B X C	3	74.47	24.82	0.82	NSD	
A X B X C	3	428.09	142.69	4.73	< .05	

TABLE 113
Analysis of Variance Summary Table for
Dependent Variable Character

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	15	224.07	14.93	0.93	NSD	.05
Due to Error	271	4352.27	16.06			
Total	286	4576.34				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop (A)	1	31.22	31.22	1.94	NSD	
Dist (B)	3	58.03	19.34	1.20	NSD	
Reward (C)	1	34.22	34.22	2.13	NSD	
A X B	3	13.31	4.43	0.28	NSD	
A X C	1	8.38	8.38	0.52	NSD	
B X C	3	5.02	1.64	0.10	NSD	
A X B X C	3	73.87	24.62	1.53	NSD	

TABLE 114
Analysis of Variance Summary Table for
Dependent Variable Sociability

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	15	457.25	30.48	2.16	<.05	.11
Due to Error	271	3815.85	14.08			
Total	286	4273.10				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop (A)	1	23.10	23.10	1.64	NSD	
Dist (B)	3	70.15	23.38	1.66	NSD	
Reward (C)	1	139.77	139.77	9.93	<.05	
A X B	3	17.65	5.88	0.42	NSD	
A X C	1	15.43	15.43	1.10	NSD	
B X C	3	74.11	24.70	1.75	NSD	
A X B X C	3	117.02	39.00	2.77	<.05	

TABLE 115
Analysis of Variance Summary Table for
Dependent Variable Extroversion

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	15	441.89	29.46	1.85	< .05	.09
Due to Error	271	4309.11	15.90			
Total	286	4751.00				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop (A)	1	0.41	0.41	0.03	NSD	
Dist (B)	3	58.34	19.44	1.22	NSD	
Reward (C)	1	275.88	275.88	17.35	< .05	
A X B	3	3.32	3.32	0.07	NSD	
A X C	1	0.01	0.01	0.00	NSD	
B X C	3	92.88	30.96	1.95	NSD	
A X B X C	3	11.02	3.67	0.23	NSD	

TABLE 116
Analysis of Variance Summary Table for
Dependent Variable Physical Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	15	2164.24	144.28	6.68	<.05	.27
Due to Error	271	5856.31	21.60			
Total	286	8020.55				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop (A)	1	42.48	42.48	1.97	NSD	
Dist (B)	3	22.20	7.40	0.34	NSD	
Reward (C)	1	1988.52	1988.52	92.02	<.05	
A X B	3	4.71	1.57	0.06	NSD	
A X C	1	37.44	37.44	1.73	NSD	
B X C	3	21.73	7.24	0.34	NSD	
A X B X C	3	47.68	15.89	0.74	NSD	

TABLE 117
Analysis of Variance Summary Table for
Dependent Variable Task Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	15	429.75	28.65	1.69	< .05	.09
Due to Error	271	4597.88	16.96			
Total	286	5027.63				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop (A)	1	85.06	85.06	5.01	< .05	
Dist (B)	3	39.94	13.31	0.78	NSD	
Reward (C)	1	121.19	121.19	7.14	< .05	
A X B	3	17.95	5.98	0.35	NSD	
A X C	1	20.79	20.79	1.23	NSD	
B X C	3	2.36	0.78	0.05	NSD	
A X C X B	3	142.44	47.48	2.80	< .05	

TABLE 118
Analysis of Variance Summary Table for
Dependent Variable Social Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	15	477.19	31.81	1.94	< .05	.10
Due to Error	271	4442.22	16.39			
Total	286	4919.41				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop (A)	1	17.17	17.17	1.05	NSD	
Dist (B)	3	51.95	17.31	1.06	NSD	
Reward (C)	1	171.72	171.72	10.48	< .05	
A X B	3	57.49	19.16	1.17	NSD	
A X C	1	1.19	1.19	0.07	NSD	
B X C	3	82.36	27.54	1.67	NSD	
A X B X C	3	95.28	31.76	1.94	NSD	

TABLE 119
Analysis of Variance Summary Table for
Dependent Variable KIS

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	15	138.09	9.20	1.28	NSD	.07
Due to Error	271	1950.22	7.19			
Total	286	2088.31				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop (A)	1	6.67	6.67	0.93	NSD	
Dist (B)	3	6.11	2.03	0.28	NSD	
Reward (C)	1	0.96	0.96	0.13	NSD	
A X B	3	36.69	12.23	1.70	NSD	
A X C	1	37.44	37.44	5.20	< .05	
B X C	3	9.41	3.04	0.44	NSD	
A X B X C	3	40.78	13.59	1.89	NSD	

TABLE 120
Analysis of Variance Summary Table for
Dependent Variable Semantic Differential

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	15	708.68	47.24	1.00	NSD	.05
Due to Error	271	12863.88	47.46			
Total	286	13572.56				

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Prop (A)	1	11.94	11.94	0.25	NSD
Dist (B)	3	46.17	15.39	0.32	NSD
Reward (C)	1	1.49	1.49	0.03	NSD
A X B	3	151.83	50.61	1.07	NSD
A X C	1	144.04	144.04	3.03	NSD
B X C	3	61.52	50.50	0.43	NSD
A X B X C	3	291.67	97.22	2.05	NSD

TABLE 121
Analysis of Variance Summary Table for
Dependent Variable Competence

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	362.22	51.74	2.91	< .05	.17
Due to Error	279	4966.89	17.80			
Total	286	5329.11				

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Prop (A)	1	86.55	86.55	4.86	< .05
Distc (B)	1	4.93	4.93	0.28	NSD
Reward (C)	1	177.08	177.08	9.95	< .05
A X B	1	23.05	23.05	1.29	NSD
A X C	1	24.47	24.47	1.37	NSD
B X C	1	23.52	23.52	1.32	NSD
A X B X C	1	22.59	22.59	1.27	NSD

TABLE 122
Analysis of Variance Summary Table for
Dependent Variable Composure

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	1934.70	276.38	9.17	< .05	.19
Due to Error	279	8411.86	30.15			
Total	286	10346.56				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop (A)	1	332.86	332.86	11.04	< .05	
Distc (B)	1	12.54	12.54	0.42	NSD	
Reward (C)	1	1253.19	1253.19	41.57	< .05	
A X B	1	2.57	2.57	0.09	NSD	
A X C	1	1.48	1.48	0.05	NSD	
B X C	1	33.92	33.92	1.13	NSD	
A X B X C	1	298.12	289.12	9.98	< .05	

TABLE 123
Analysis of Variance Summary Table for
Dependent Variable Character

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	176.21	25.17	1.60	NSD	.04
Due to Error	279	4400.12	15.77			
Total	286	4576.33				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop (A)	1	31.22	31.22	1.98	NSD	
Distc (B)	1	19.39	19.39	1.23	NSD	
Reward (C)	1	33.70	33.70	2.14	NSD	
A X B	1	20.80	20.80	1.32	NSD	
A X C	1	5.16	5.16	0.33	NSD	
B X C	1	3.78	3.78	0.24	NSD	
A X B X C	1	62.12	62.12	3.94	< .05	

TABLE 124
Analysis of Variance Summary Table for
Dependent Variable Sociability

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	314.51	44.93	3.17	< .05	.07
Due to Error	279	3958.59	14.18			
Total	286	4273.10				

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Prop (A)	1	23.10	23.10	1.63	NSD
Distc (B)	1	0.04	0.04	0.00	NSD
Reward (C)	1	143.35	143.35	10.10	< .05
A X B	1	7.56	7.56	0.53	NSD
A X C	1	12.62	12.62	0.89	NSD
B X C	1	30.94	30.94	2.18	NSD
A X B X C	1	96.87	96.87	6.83	< .05

TABLE 125
Analysis of Variance Summary Table for
Dependent Variable Extroversion

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	394.71	56.38	3.61	< .05	.08
Due to Error	279	4356.30	15.61			
Total	286	4751.01				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop (A)	1	0.41	0.41	0.03	NSD	
Distc (B)	1	4.63	4.63	0.30	NSD	
Reward (C)	1	272.94	272.94	17.48	< .05	
A X B	1	3.32	3.32	0.21	NSD	
A X C	1	0.09	0.09	0.01	NSD	
B X C	1	100.11	100.11	6.41	< .05	
A X B X C	1	13.19	13.19	0.85	NSD	

TABLE 126
Analysis of Variance Summary Table for
Dependent Variable Physical Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	2072.31	296.04	13.89	< .05	.26
Due to Error	279	5947.99	21.31			
Total	286	8020.30				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop (A)	1	42.48	1.99	1.99	NSD	
Distc (B)	1	21.69	1.02	1.02	NSD	
Reward (C)	1	1967.16	92.27	92.27	< .05	
A X B	1	3.36	0.16	0.16	NSD	
A X C	1	32.20	1.51	1.51	NSD	
B X C	1	0.01	0.00	0.00	NSD	
A X B X C	1	5.37	0.25	0.25	NSD	

TABLE 127
Analysis of Variance Summary Table for
Dependent Variable Task Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	320.68	45.81	2.72	< .05	.06
Due to Error	279	4706.96	16.87			
Total	286	5027.64				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop (A)	1	85.06	85.06	5.04	< .05	
Distc (B)	1	1.03	1.03	0.06	NSD	
Reward (C)	1	120.78	120.78	7.16	< .05	
A X B	1	2.44	2.44	0.14	NSD	
A X C	1	18.27	18.27	1.08	NSD	
B X C	1	0.38	0.38	0.02	NSD	
A X B X C	1	92.70	92.70	5.49	< .05	

TABLE 128
Analysis of Variance Summary Table for
Dependent Variable Social Attraction

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	292.15	41.73	2.52	< .05	.06
Due to Error	279	4627.25	16.58			
Total	286	4919.40				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop (A)	1	17.17	17.17	1.04	NSD	
Distc (B)	1	1.57	1.57	0.09	NSD	
Reward (C)	1	172.62	172.62	10.41	< .05	
A X B	1	18.71	18.71	1.13	NSD	
A X C	1	0.92	0.92	0.06	NSD	
B X C	1	34.04	34.04	2.05	NSD	
A X B X C	1	47.09	47.09	2.84	NSD	

TABLE 129
Analysis of Variance Summary Table for
Dependent Variable KIS

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	54.98	7.85	1.08	NSD	.03
Due to Error	279	2033.33	7.28			
Total	286	2088.31				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop (A)	1	6.67	6.67	0.92	NSD	
Distc (B)	1	0.42	0.42	0.06	NSD	
Reward (C)	1	0.91	0.91	0.13	NSD	
A X B	1	5.04	5.04	0.69	NSD	
A X C	1	39.16	39.16	5.37	<.05	
B X C	1	2.32	2.32	0.32	NSD	
A X B X C	1	0.42	0.42	0.06	NSD	

TABLE 130
Analysis of Variance Summary Table for
Dependent Variable Semantic Differential

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	<u>R²</u>
Due to Model	7	225.05	32.15	0.67	NSD	.02
Due to Error	279	13347.51	74.84			
Total	286	13572.56				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>	
Prop (A)	1	11.94	11.94	0.25	NSD	
Distc (B)	1	0.70	0.70	0.01	NSD	
Reward (C)	1	1.21	1.21	0.03	NSD	
A X B	1	2.40	2.40	0.05	NSD	
A X C	1	150.30	150.30	3.14	NSD	
B X C	1	48.24	48.24	1.01	NSD	
A X B X C	1	10.22	10.22	0.21	NSD	

ABBREVIATIONS TO ACCOMPANY SUMMARY TABLES

Dist	Categorical distance variable
Distc	continuous distance variable
Comp	sex composition of dyad
IvSex	confederate sex
Prop	Propensity to counterargue

REFERENCES

- Aiello, J. R., & Jones, S. E. Field study of the proxemic behavior of young school children in three subcultures. Journal of Personality and Social Psychology, 1971, 19, 351-356.
- Albert, S., & Dabbs, J.M. Physical distance and persuasion. Journal of Personality and Social Psychology, 1970, 15, 265-270.
- Allgeier, A.R., & Byrne, D. Attraction toward the opposite sex as a determinant of physical proximity. Journal of Social Psychology, 1973, 90, 213-219.
- Altman, I. Ecological aspects of interpersonal functioning. In A.H. Esser (Ed.), Behavior and environment. New York: Plenum Preys, 1971.
- Altman, I. An ecological approach to the functioning of social groups. In J.E. Rasmussen (Ed.), Individual and group behavior in isolation and confinement, Chicago: Aldine Press, 1973.
- Argyle, M., & Dean, J. Eye contact, distance and affiliation. Sociometry, 1965, 28, 289-304.
- Aschoff, J. Circadian rhythms in man. Science, 1965, 148, 1427-1432.
- Baron, R.S., Baron, P.H., & Miller, N. The relation between distraction and persuasion. Psychological Bulletin, 1973, 80, 310-323.
- Baur, E.A. Personal space: A study of blacks and whites. Sociometry, 1973, 36, 402-408.
- Baxter, J.C. Interpersonal spacing in natural settings. Sociometry, 1970, 33, 444-456.
- Becker, S.W., Bavelas, A., & Braden, M. An index to measure contingency of English sentences. Language and Speech, 1961, 4, 139-145.
- Brandt, D.R., Dinkelacker, J.W., & Stoyanoff, N.J. An experimental investigation of the effects of listener propensity to counter-argue and distraction on communication acceptance. Paper presented at the Speech Communication Association Convention, Washington, D.C., 1977.

- Brietrose, H.S. The effect of distraction in attenuating counter-arguments. Doctoral dissertation, Stanford University, 1966.
- Brock, T. C. Communication discrepancy and intent to persuade as determinants of counterargument production. Journal of Experimental Psychology, 1967, 3, 269-309.
- Burgoon, J. K. Further explication and an initial test of the theory of violations of personal space expectations. Human Communication Research, 1978, 4, 129-142.
- Burgoon, J. K., & Jones, S. B. Toward a theory of personal space expectations and their violations. Human Communication Research, 1976, 2, 131-146.
- Burgoon, J. K., Stacks, D. W., & Woodall, W. G. Personal space expectations and reward as predictors of recall, credibility and attraction. Paper presented at the Speech Communication Association Convention, Washington, D.C., 1977.
- Burgoon, M., & Miller, G. R. Prior attitude and language intensity as predictors of message style and attitude change following counterattitudinal advocacy. Journal of Personality and Social Psychology, 1971, 20, 240-253.
- Burgoon, M., Burgoon, J. K., & Vaughn, D. Unpublished manuscript. University of Florida, 1976.
- Burgoon, M., Cohen, M., Miller, M., & Montgomery, C. An empirical test of a Model of resistance to persuasion. Human Communication Research, 1978.
- Calhoun, J. Population density and social pathology. Scientific American, 1962, 206, 139-148.
- Christian, J. J., & Davis, D. E. Social and edocrine factors are integrated in the regulation of mamilian populations. Science, 1964, 146, 1150-11560.
- Coleman, A. Territoriality in man: A comparison of behavior in home and hospital. American Journal of Orthopsychiatry, 1968, 28, 464-468.
- Cook, M. Experiments in orientation and proxemics. Human Relations, 1970, 23, 61-76.

- Cook, T.D. Competence, counterarguing, and attitude change. Journal of Personality, 1969, 37, 342-358.
- Connolly, P.R. The perception of personal space among black and white Americans. Central States Speech Journal, 1975, 26, 21-28.
- Cronbach, L.J. Coefficient alpha and the internal structure of tests. Psychometrika, 1951, 16, 297-334.
- Dorris, J.W. Persuasion as a function of distraction and counterarguing. Unpublished manuscript, UCLA, 1967. Cited in Zimbardo, P.G., Snyder, M., Thomas, J., Gold, A., & Gurwitz, A., Modifying the impact of persuasive communications with external distraction. Journal of Personality and Social Psychology, 1970, 16, 669-680.
- Dosey, M.A., & Meisels, M. Personal space and self-protection. Journal of Personality and Social Psychology, 1969, 11, 93-97.
- Edney, J.J. Place and space: The effects of experience with a physical locale. Journal of Experimental and Social Psychology, 1972, 8, 124-135.
- Edney, J.J., & Jordan-Edney, N.L. Territorial spacing on a beach. Sociometry, 1974, 37, 92-104.
- Edwards, D.J.A. Approaching the unfamiliar: A study of human interactional distances. Journal of Behavioral Science, 1972, 1, 249-250.
- Edwards, D.J.A. Perception of crowding and personal space as a function of locus of control, arousal seeking, sex of experimenter and sex of subject. Journal of Psychology, 1977, 95, 223-229.
- Evans, G.W., & Howard, R.B. Personal Space, Psychological Bulletin, 1973, 80, 334-344.
- Exline, R. Explorations in the process of person perception: Visual interaction in relation to competition, sex, and need for affiliation. Journal of Personality, 1963, 31, 1-20.
- Felipe, N.J., & Sommer, R. Invasions of personal space. Social Problems, 1966, 14, 206-214.

- Festinger, L., & Maccoby, N. On resistance to persuasive communications. Journal of Abnormal and Social Psychology, 1964, 68, 359-366.
- Fisher, R. Social schema of normal and disturbed children. Journal of Education Psychology, 1976, 58, 88-92.
- Forston, R. F., & Larson, C. U. The dynamics of space: An experimental study in proxemic behavior among Latin Americans and North Americans. Journal of Communication, 1968, 18, 109-116.
- Freedman, J. L., & Sears, D. O. Warning, distraction, and resistance to influence. Journal of Personality and Social Psychology, 1965, 1, 262-266.
- Fried, M. L., & DeFazio, V. J. Territoriality and boundary conflicts in the subway. Psychiatry, 1974, 37, 47-58.
- Gardner, D. M. The effect of divided attention on attitude change influenced by a marketing communication. In R. M. Haus (Ed.), Science, technology and marketing. Chicago: American Marketing Association, 1966.
- Garner, P. H. The effects of invasions of personal space on interpersonal communication. Master's thesis, Illinois State University, 1972.
- Garfinkel, H. Studies in the routine grounds of everyday activities. Social Problems, 1964, 11, 225-250.
- Giessen, M. & McClaren, H. A. Discussion, distance and sex: Changes in impressions and attraction during small group interaction. Sociometry, 1976, 39, 60-70.
- Goldberg, G. N., Kiesler, C. A., & Collins, B. E. Visual behavior and face-to-face distance during interaction. Sociometry, 1974, 37, 43-53.
- Guilford, J. P. Psychometric methods. New York: McGraw-Hill, 1954.
- Gunning, R. The technique of clear writing. New York: McGraw-Hill, 1952.
- Hall, E. T. The silent language. Garden City, N.Y.: Doubleday, 1959.

- 1 - Hall, E. T. A system for the notation of proxemic behavior. American Anthropologist, 1963, 65, 1003-1026.
- 5 - Hall, E. T. The hidden dimension. Garden City, N.Y.: Doubleday, 1969.
- 2 - Hartnett, J. J., Bailey, K. G., & Gibson, R. W. Personal space as influenced by sex and type of movement. Journal of Psychology, 1970, 76, 139-144.
- Heston, J. K. Effects of anomia and personal space invasion on nonperson orientation, anxiety and source credibility. Central States Speech Journal, 1974, 25, 19-27.
- Heston, J. K., & Garner, P. A study of personal space and desk arrangement in a learning environment. Paper presented at the International Communication Association Convention, Atlanta, 1974.
- 1 Horowitz, M. J., Duff, D. F., & Stratton, L. O. Body buffer zones. Archives of General Psychiatry, 1964, 11, 651-656.
- Imada, A. S., & Hakel, M. D. Influence of nonverbal communication and rater proximity on impressions and decisions in simulated employment interviews. Journal of Applied Psychology, 1977, 62, 295-300.
- Jones, E. E., & Davis, K. From acts to dispositions: The attribution process in person perception. In L. Berkowitz (Ed.), Advances in experimental social psychology, (Vol. 2) New York: Academic Press, 1965.
- Jones, S. A comparative proxemic analysis of dyadic interaction in selected subcultures of New York City. Journal of Social Psychology, 1971, 84, 35-44.
- Jones, S. E., & Aiello, J. R. Proxemic behavior of black and white first-, third-, and fifth-grade children. Perceptual and Motor Skills, 1973, 25, 21-27.
- Keating, J. P. & Brock, T. C. Acceptance of persuasion and the inhibition of counterargumentation under various distraction tasks. Journal of Experimental Social Psychology, 1974, 10, 301-309.
- Kiesler, S. B., & Mathog, R. B. Distraction hypothesis in attitude change: Effects of effectiveness. Psychological Reports, 1968, 23, 1123, 1133.

- King, M.G. Interpersonal relations in preschool children and average approach distance. Journal of Genetic Psychology, 1966, 108, 109-116.
- Kleck, R., Buck, P.L., Goller, W.L., London, R.W., Pfieffer, J.R., & Vukcevic, D.P. Effect of stigmatization conditions on the use of personal space. Psychological Reports, 1968, 23, 111-118.
- Krail, K.A., & Leventhal, G. The sex variable in the intrusion of personal space. Sociometry, 1976, 39, 170-173.
- Lassen, C.L. Effect of proximity on anxiety and communication in the initial psychiatric interview. Journal of Abnormal Psychology, 1973, 81, 226-232.
- Lerner, R.M. The development of personal space schemata toward body build. Journal of Psychology, 1973, 84, 229-235.
- Little, K.B. Personal space. Journal of Experimental Social Psychology, 1965, 1, 237-247.
- Little, K.B. Cultural variations in social schemata. Journal of Personality and Social Psychology, 1968, 10, 1-7.
- Lomranz, J., Shapira, A., Choresa, N., & Yitzchak, G. Children's personal space as a function of age and sex. Developmental Psychology, 1975, 11, 541-545.
- Long, G.T., Calhoun, L.G., & Selby, J.W. Personality characteristics related to cross-situational consistency of interpersonal distance. Journal of Personality Assessment, 1977, 41, 274-278.
- Lorenz, J. Cultural variations in personal space. Journal of Social Psychology, 1976, 99, 21-27.
- Lott, D.F., & Sommer, R. Seating arrangement and status. Journal of Personality and Social Psychology, 1967, 7, 90-94.
- Lyman, L.M. & Scott, M.B. Territoriality: A neglected sociological dimension. Social Problems, 1967, 15, 236-249.
- Mazur, A. Interpersonal spacing on public benches in "contact" vs. "noncontact" cultures. Journal of Social Psychology, 1977, 101, 53-58.

- McBride, L.M., King, M.G., & James, J.W. Social Proximity effects on galvanic skin responses in adult humans. Journal of Psychology, 1965, 61, 153-157.
- McCroskey, J.C., Jensen, T., & Valencia, C. Measurement of the credibility of peers and spouses. Paper presented at the International Communication Association Convention, Montreal, 1973.
- McCroskey, J.C., & McClain, T.A. The measurement of interpersonal attraction. Speech Monographs, 1974, 41, 261-266.
- Mehrabian, A. Relationship of attitude to seated posture, orientation and distance. Journal of Personality and Social Psychology, 1968, 10, 26-30.
- Mehrabian, A., & Diamond, S. Effects of furniture arrangement, props and personality on social interaction. Journal of Personality and Social Psychology, 1971, 20, 18-30.
- Mehrabian, A., & Friar, J.T. Encoding of attitude by a seated communicator via posture and position cues. Journal of Consulting and Clinical Psychology, 1969, 33, 330-336.
- Mehrabian, A., & Ksionzky, D. Some determinants of social interaction. Sociometry, 1972, 35, 588-609.
- Mehrabian, A., & Williams, M. Nonverbal concomitants of perceived and intended persuasiveness. Journal of Personality and Social Psychology, 1969, 13, 37-58.
- Meisels, M., & Canter, F.M. Personal space and personality characteristics: A nonconfirmation. Psychological Reports, 1970, 27, 287-290.
- Middlemist, R.D., Knowles, E.S., & Mather, C.F. Personal space invasions in the lavatory: Suggestive evidence for arousal. Journal of Personality and Social Psychology, 1976, 33, 541-546.
- Miller, G.R., & Burgoon, M. Persuasion research: Review and commentary. In B.D. Rubin (Ed.), Communication Yearbook 2, New Brunswick, N.J.: Transaction Books (in press).
- Miller, N., & Baron, R.S. On measuring counterarguing. Journal of Theory of Social Behavior, 1973, 3, 101-118.

- Miller, N., & Levey, B. H. Defaming and agreeing with the communicator as a function of emotional arousal, communication extremity and evaluation set. Sociometry, 1967, 30, 158-175.
- Mills, J. Opinion change as a function of the communicator's desire to influence and liking for the audience. Journal of Experimental Social Psychology, 1966, 2, 152-159.
- Mills, J., & Aronson, E. Opinion change as a function of the communicator's attractiveness and decision to influence. Journal of Personality and Social Psychology, 1965, 1, 173-177.
- Norum, G. A., Russo, N. J., & Sommer, R. Seating patterns and group task. Psychology in the Schools, 1967, 4, 2-10.
- Osgood, E., Suci, G., & Tannenbaum, P. The measurement of meaning. Urbana, Ill: University of Illinois Press, 1957.
- Osterhouse, R. A., & Brock, T. C. Distracting increases yielding to propaganda by inhibiting counterarguing. Journal of Personality and Social Psychology, 1970, 15, 344-358.
- Patterson, M. L. Compensation in nonverbal immediacy behaviors: A review. Sociometry, 1973, 36, 237-252.
- Patterson, M. L. The role of space in social interaction. In A. W. Siegman and S. Feldstein (Eds.), Nonverbal Behavior and Communication. Hillsdale, N.J.: Lawrence Erlbaum Associates, Publishers, 1978, 264-290.
- Patterson, M. L., & Holmes, D. S. Social interaction correlates of the MPI extroversion-introversion scale. American Psychologist, 1966, 21, 724-745.
- Patterson, M. L., Mullens, S., & Romano, J. Compensatory reactions to spatial invasion. Sociometry, 1971, 34, 114-121.
- Patterson, M. L., & Sechrest, L. B. Impression formation and interpersonal distance. Unpublished manuscript, Northwestern University, 1967.
- Patterson, M. L., & Sechrest, L. B. Interpersonal distance and impression arrangement. Journal of Personality, 1970, 38, 161-166.

- 1.1
Stop
Bar
- Patterson, M. L., & Schaeffer, R. E. Effects of size and sex composition on interaction distance, participation and small groups. Unpublished manuscript, 1975. Cited in M. L. Patterson, The role of space in social interaction. In A. W. Siegman and S. Feldstein (Eds.), Nonverbal behavior and communication. Hillsdale, N.J.: Lawrence Erlbaum, Associates, Publishers, 1978.
- Pederson, D. M. Developmental trends in personal space. Journal of Psychology, 1973, 83, 3-9.
- Pederson, D. M., & Shears, L. M. A review of personal space research in the framework of general systems theory. Psychological Bulletin, 1973, 80, 367-388.
- Pellegrini, R. J., & Empey, J. Interpersonal spatial orientation in dyads. Journal of Psychology, 1970, 76, 67-70.
- Porter, E., Argyle, M., & Salter, V. What is signalled by proximity? Perceptual and Motor Skills, 1970, 30, 39-42.
- Powell, P. H., & Dabbs, J. M. Physical attractiveness and personal space. Journal of Social Psychology, 1976, 100, 59-64.
- Riess, M. Proxemic determinants of perceived communicator characteristics and attitude change. Doctoral dissertation, University of Florida, 1977.
- Roger, D. B., & Schalekamp, E. E. Body-buffer zone and violence: A cross-cultural study. Journal of Social Psychology, 1976, 98, 153-158.
- Rosegrant, T. J., & McCroskey, J. C. The effects of race and sex on proxemic behavior in an interview setting. Southern Speech Communication Journal, 1975, 40, 408-420.
- Rosenfeld, H. M. Effects of an approval-seeking induction on interpersonal proximity. Psychological Reports, 1965, 82, 120-122.
- Rosnow, R. L., & Robinson, E. J. Experiments in persuasion. New York: Academic Press, 1967.
- Russo, N. Connotation of seating arrangements. Cornell Journal of Social Relations, 1967, 2, 37-44.

- Scherer, S.R., & Schiff, M.R. Perceived intimacy, physical distance and eye contact. Perceptual and Motor Skills, 1973, 35, 835-841.
- Shuter, R. Proxemics and Tactility in Latin America. Journal of Communication, 1976, 26, 46-76.
- Shuter, R. A field study of nonverbal communication in Germany, Italy and the United States. Communication Monographs, 1977, 44, 298-305.
- Sommer, R. Studies in personal space. Sociometry, 1959, 22, 247-260.
- Sommer, R. The distance for comfortable conversation: A further study. Sociometry, 1962, 25, 11-16.
- Sommer, R. Further studies in small group ecology. Sociometry, 1965, 28, 247-260.
- Sommer, R. Personal space: The behavioral basis of design. Englewood Cliffs, NJ : Prentice-Hall, 1969.
- Stokols, D. The relation between micro and macro crowding phenomena: Some implications for environmental research and design. Man-Environment Systems, 1973, 3, 139-149.
- Stokols, D. The experience of crowding in primary and secondary environment. Environment and Behavior, 1976, 8, 49-85.
- Storms, M.D., & Thomas, G.C. Reactions to physical closeness. Journal of Personality and Social Psychology, 1977, 35, 412-418.
- Sundstrom, E., & Altman, I. Interpersonal relationships and personal space: Research review and theoretical model. Human Ecology, 1976, 4, 47-67.
- Tedeschi, J.T., Schlenker, B.R., & Bonoma, T.V. Conflict, power and games: The experimental study of interpersonal relations. Chicago: Aldine, 1973.
- Tipton, R.M., Bailey, K.G., & Obenchair, J.P. Invasions of male's personal space by feminists and nonfeminists. Psychological Reports, 1975, 37, 99-102.
- Vine, I. Territoriality and the spatial regulation of interaction. In A.Kendon, R.M. Harris, & M.R. Key (Eds.), Organization of behavior in face-to-face interaction. The Hague: Mouton Publishers, 1975.

- Watson, O.M. Proxemic Behavior: A cross-cultural study. The Hague: Mouton, 1970.
- Watson, O.M. Conflicts and directions in proxemic research. Journal of Communication, 1972, 22, 443-459.
- Watson, O.M. & Graves, T.D. Quantitative research in proxemic behavior. American Anthropologist, 1966, 68, 971-985.
- Weyer, R.A. Cognitive organization and change: An information Processing approach. Potomac, ML: LEA, 1974.
- White, M.J. Interpersonal distance as affected by room size, status and sex. Journal of Social Psychology, 1975, 95, 241-249.
- Williams, J.L. Personal space and its relation to extroversion-introversion. Master's thesis, University of Alberta, 1963.
- Williams, J.L. Personal space and its relation to extroversion-introversion. Canadian Journal of Behavioral Sciences, 1971, 3, 156-160.
- Willis, F.N. Initial speaking distance as a function of the speaker's relationship. Psychonomic Science, 1966, 5, 221-222.
- Winer, B.J. Statistical principles in experimental design, 2nd. Ed. New York: McGraw-Hill, 1973.
- Winnick, C., & Holt, H. Seating position as nonverbal communication in group analysis. Psychiatry, 1961, 24, 171-182.
- Zimbardo, P., Snyder, M., Thomas, J., Gold, A., & Gurwitz, S. Modifying the impact of persuasive communications with external distraction. Journal of Personality and Social Psychology, 1970, 16, 669-680.

BIOGRAPHICAL SKETCH

Don Winslow Stacks, son of Frederick W. and Margaret A. Stacks, was born on 8 November 1949 in Kalamazoo, Michigan. He graduated from Okemos High School, Okemos, Michigan, in 1967 and obtained his Bachelor of Arts degree in English from Northern Michigan University in 1971. From graduation to July 1974 he served in the U.S. Army, stationed in Washington, D.C., and its suburbs. In 1974 he married Merry Robin Hickson, daughter of Marcus L. and Edna C. Hickson, in Fort Valley, Georgia. He received his Master of Arts degree in Speech Communication from August, 1975. In 1978 he received his Ph.D. in Speech from the University of Florida and is currently an Assistant Professor of Speech Communication at the University of South Alabama, Mobile, Alabama.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Judee K. Burgoon, Ed.D., Chairman *
Assistant Professor of Communication
Michigan State University

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Michael Burgoon, Ph.D.**
Associate Professor of Communication
Michigan State University

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Norman N. Markel, Ph.D.
Professor of Speech

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Robert J. Scholtes, Ph.D.
Professor of Speech

*Formerly Assistant Professor, Speech, University of Florida

**Formerly Associate Professor, Speech, University of Florida

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

A handwritten signature in dark ink, appearing to read "Marvin E. Shaw", is written over a horizontal line.

Marvin E. Shaw, Ph.D.
Professor of Psychology

This dissertation was submitted to the Graduate Faculty of the Department of Speech in the College of Arts and Sciences and to the Graduate Council, and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

August 1978

Dean, Graduate School

UNIVERSITY OF FLORIDA

3 1262 08552 9898