



This is to certify that the

dissertation entitled

The Effects of Power and Message Factors Upon
Success in Gaining Compliance

presented by

Timothy Roland Levine

has been accepted towards fulfillment
of the requirements for

Doctoral degree in Communication

Franklin J. Boster
Major professor

Date 7/28/92

LIBRARY Michigan State University

PLACE IN RETURN BOX to remove this checkout from your record.
TO AVOID FINES return on or before date due.

DATE DUE	DATE DUE	DATE DUE
APR 1 1995	APR 26 1999	
NOV 18 1998	AUG 13 2003 042307	
DEC 8 2001		

MSU is An Affirmative Action/Equal Opportunity Institution

c:\circ\datedue.pm3-p.1

THE EFFECTS OF POWER AND MESSAGE FACTORS UPON
SUCCESS IN GAINING COMPLIANCE

By
Timothy Roland Levine

A DISSERTATION

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

DOCTOR OF PHILOSOPHY

Department of Communication

1992

698-0582

ABSTRACT

THE EFFECTS OF POWER AND MESSAGE FACTORS UPON SUCCESS IN GAINING COMPLIANCE

By

Timothy Roland Levine

This research investigated the empirical relationships among social power, message behavior, and compliance. A conceptualization of social power from power dependency theory was offered, and three models of the general relations among these constructs were advanced. They included a three variable mediational model, a five variable mediational model extending the first model, and a moderating model. Speculation concerning the specific relationships between elements of these constructs was also offered. Social and task attraction were considered as additional outcomes stemming from an influence attempt, and several individual difference factors that potentially moderate the relations among power, message behavior, and outcomes were discussed.

These issues were investigated by having 108 subjects participate in a bargaining experiment requiring subjects to buy and sell hypothetical used cars. Power was controlled by systematically varying each partner's alternatives. The experiment employed a fully crossed 2 x 2 x 2 x 2 mixed design with each partners' power as repeated factors and each partner's sex as an independent groups factor.

Participants' personality traits were measured, and their message behavior and outcomes were observed.

Although power and perceived power had non-trivial effects on message behavior, the data were generally inconsistent with the two mediational models. The data were consistent with the moderator model which predicted that message effectiveness varies as a function of social power. These findings, however, were qualified by higher order interactions involving individual differences. Agent and target sex, need for expressed power, need for wanted power, need for affiliation, and self-esteem interacted with agent's and target's power to determine message effectiveness. Implications and limitations of the results are discussed.

ACKNOWLEDGMENTS

It has been a privilege to work with my advisor, Franklin J. Boster. I had admired Professor Boster's work prior to attending Michigan State, and made my choice of doctoral programs largely because of his presence on the faculty. I have never regretted my choice of attending Michigan State, nor my decision to work with Professor Boster. I am confident these decisions will serve me well thought out my professional life. Simply put, I have learned a great deal from Frank, and am appreciative of his help, guidance, and support.

I also wish to thank my committee members, Gerald R. Miller, John E. Hunter, James B. Stiff, and Steven A. McCornack. Although I learned much about many things from each, I would especially like to note the conceptual and theoretical ability learned from G.R., the statistical knowledge gained from Jack Hunter, and the design and reasoning skills learned from Jim Stiff. A special acknowledgment goes to G.R., who managed to make my dissertation defense in spite of some serious health problems. His effort and dedication was and is greatly appreciated.

Special mention also goes to my close friend, co-author, and newest committee member, Steven McCornack. The quality of my personal and professional have been enhanced considerably through my association with Steve. I value our friendship and professional alliance immensely.

My "partners in crime," Alan Wright and Dean Kazoleas helped make my Michigan State experience what it was. We have shared and will continue to share many good times, and this is good.

Although not on the faculty at Michigan State, Buddy Wheelless, Jim McCroskey, Michael Beatty, Virginia Richmond, and Harold Larson have all played important roles in my professional development. Thanks to each.

Finally, thanks go to my family. My wife Monica, my brother Andy, and my parents Rolly and Nyla Levine have always been supportive.

TABLE OF CONTENTS

	Page
LIST OF TABLES	viii
INTRODUCTION	1
Social Power	2
Power, Communication, and Compliance	7
Influence tactics and strategies	8
Power and strategy use	9
Compliance gaining messages and outcomes	11
Research Issues	14
General effects of power	14
Specific effects of power	18
Other outcomes	19
Potential confounds due to individual differences	20
Summary	25
METHOD	27
Overview	27
Participants	27
Design	27
The Bargaining Game	28
Procedure	30
Stimulus Materials	31
Self-Report Measurement	32

Coding	36
RESULTS	41
Mediational Model	41
The Moderator Model	61
Individual Differences	64
Sex differences	64
Effects of trait-like variables	82
Alternative outcomes	106
DISCUSSION	109
Summary of Results	111
Tests of the global models	111
Predicted specific effects	114
Replicated effects	119
Other results	123
Qualifications on Results	126
Qualifications on Design	130
Summary	133
END NOTES	134
LIST OF REFERENCES	136
APPENDICES	142
A Summary of Basic Design	142
B Values used for Power Manipulations	143
C Instructions	144
D Information Provided on Car Cards	146

LIST OF TABLES

Table	Page
1. Types, Definitions, and Examples of Strategies	37
2. Frequencies of strategy usage	38
3. Number of strategies coded per message	39
4. Strategy usage by Power Condition	43
5. Correlations between Message Behavior and Success	45
6. Effects of Power Condition upon Agent's Perceived Power	48
7. Correlations between Agent's Perceived Relative Power and Message Behavior across Power Conditions	48
8. Correlations between Agent's Ratings of Own Alternatives and Message Behavior by Power Condition	50
9. Correlations between Agent's Ratings of Target's Alternatives and Message Behavior by Power Condition	51
10. Correlations between Agent's Ratings of Relative Power and Message Behavior by Power Condition	52
11. Correlations between Message Behavior and Target's Perceived Relative Power across power conditions	54
12. Correlations between Agent's Message Behavior and Target's Ratings of Own Alternatives by Power Condition	55
13. Correlations between Agent's Message Behavior and Target's Ratings of Agent's Alternatives by Power Condition	56

14.	Correlations between Agent's Message Behavior and Target's Ratings of Relative Power by Power Condition	57
15.	Correlations between Target's Perceived Power and Agent's Success by Power Condition	59
16.	Correlations between Message Behavior and Success by Power Condition	63
17.	Correlations between Message Behavior and Success by Agent's Sex and Target's Sex	68
18.	Correlations between Message Behavior and Success by Agent's Sex and Power Condition	71
19.	Correlations between Message Behavior and Success by Target's Sex and Power Condition	74
20.	Sex differences in Correlations between Message Behavior and Success by Gender Combination and Power Condition	76
21.	Power Condition Differences in Correlations between Message Behavior and Success by Sex Combination	79
22.	Correlations between Personality Variables and Message Behavior	84
23.	Correlations between Need for Affiliation and Message Behavior by Power Condition	85
24.	Correlations between Expressed Control and Message Behavior by Power Condition	86
25.	Correlations between Wanted Control and Message Behavior by Power Condition	87
26.	Correlations between Self Esteem and Message Behavior by Power Condition	88
27.	Correlations between Personality Variables and Success by Power Condition	90
28.	Correlations between Message Behavior and Success for High and Low Need for Affiliation Subjects across Power Condition	92
29.	Correlations between Message Behavior and Success for High and Low Need for Affiliation Subjects by Power Condition	93

30.	Correlations between Message Behavior and Success for High and Low Expressed Control Subjects across Power Condition	95
31.	Correlations between Message Behavior and Success for High and Low Expressed Control Subjects by Power Condition	96
32.	Correlations between Message Behavior and Success for High and Low Wanted Control Subjects across Power Condition	99
33.	Correlations between Message Behavior and Success for High and Low Wanted Control Subjects by Power Condition	100
34.	Correlations between Message Behavior and Success for High and Low Self-Esteem Subjects across Power Condition	103
35.	Correlations between Message Behavior and Success for High and Low Self-Esteem Subjects by Power Condition	104
36.	Correlations between Message Behavior and Target's Ratings of Social and Task Attraction	108

INTRODUCTION

The concept of power is thought by many to be of crucial importance to the understanding of how persons gain the compliance of others. Wheelless, Stewart, and Barraclough (1983), for example, argue that power is the potential to influence another's behavior, and compliance gaining is the implementation of that power. From their perspective compliance gaining is power dependent. Thus, the elucidation of power should be a primary concern of compliance gaining researchers.

Similar to other's (e.g., Bacharach & Lawler; 1981a; 1981b), Wheelless et al. (1983) argue that the primary way in which a person's power, as the potential for exerting influence, is realized is through communication. They discuss a wide variety of compliance gaining tactics that they argue arise from different power bases. Thus, according to Wheelless et al., in order to understand how people gain the compliance of others, one must understand both the concept of power, and the messages used to implement that power.

The current study seeks to extend research by Boster, Kazoleas, Levine, Rogan, and Kang (1989) that investigated this very issue, i.e., the effects power and message content

have on success in gaining compliance. Specifically, competing models of power and compliance-gaining will be explicated and tested. Specific effects of power on message behavior, power on outcomes, and message behavior on outcomes will also be investigated. Finally, several individual differences including participant's sex, affiliation needs, control needs, and self esteem that may moderate these effects will be assessed in order to account for potential treatment by subject interactions. This investigation begins with a discussion of theoretical approaches to the concept of power.

Social Power

There exists a great many approaches to conceptualizing power, and they span almost every social scientific discipline (Berger, 1985; Tedeschi & Bonoma, 1972). Conceptualizations of power, however, can be grouped into two broad-based approaches, power as an outcome and power as a potential.

The former perspective views power as equivalent to social influence (e.g., Dahl, 1957; Kelman, 1961). One is said to have power if one influences another. This approach, however, is tautological (Bacharach & Lawler, 1981). Power can be determined only in retrospect. We know someone has power because they influenced someone, they influenced them because they have power.

Alternatively, other students of social power have avoided the tautology by distinguishing power as a

potential, capacity, or ability from the implementation of power, and from outcomes such as success in bargaining or compliance gaining (e.g., Bacharach & Lawler, 1981a; 1981b; Huston, 1983; Michener & Suchner, 1972; Tedeschi & Bonoma, 1972; Wheelless et al., 1983). Therefore, it is useful to consider power, the tactics through which power is implemented, and influence as conceptually and empirically distinct constructs.

Thibaut and Kelly (1959) provide a definition of power consistent with this approach. Specifically, they contend that, "... the power of A over B increases with A's ability to affect the quality of outcomes attained by B (Thibaut & Kelly, 1959, p. 110). Outcomes are the relative magnitude of rewards and punishments, broadly defined, where the greater the rewards and the less the punishments, the more positive the outcomes.

Thibaut and Kelly's (1959) definition fits nicely within power-dependency theory (Bacharach & Lawler; 1981a; 1981b; Emerson, 1962). Power-dependency theory holds that person A's power over B is determined by B's dependence upon A. Likewise, B's power over A is a function of A's dependence upon B. A person's dependence upon another is, in turn, a function of the availability of alternative outcome sources and the person's commitment to the outcomes. To the extent that B can obtain similar or substitutable outcomes from an alternative source, B is less dependent upon A and hence A has less power over B. Similarly, the

less commitment B has to the outcomes obtainable from A, the less dependent B is upon A, and hence the less power A has over B. The amount of commitment refers to the extent to which an outcome is valued, or alternatively, perceived as being important.

Power-dependency theory (Bacharach & Lawler, 1981a) considers both individual and relational power by distinguishing between absolute power and relative power. Absolute power is the power of one party over another irrespective of the other party's power. That is, absolute power is one's dependence on another. Thus, absolute power may be thought of as an individual level power, although it is relationally based. Because power is a function of the other's dependence (i.e., alternatives and commitment), one party's absolute power is independent of the other party's absolute power. In other words, the extent that A is dependent upon B is not necessarily linked to B's dependence upon A.

Relative power, on the other hand, is the ratio of A's dependence on B to B's dependence on A. Both party's dependence in relation to one another are at issue. Relative power, therefore, applies solely on a relational level.

Given this distinction, it is important to appraise both when considering the role of power in compliance-gaining and bargaining. Intuitively, relative power should be important to success in gaining compliance. To the

extent that one party is more powerful than the other party, one would expect the more powerful party to have an advantage over the other in gaining compliance. For example, if B is dependent on A for a desired resource, but A is not dependent upon B, then A could make B's access to the resource contingent upon B complying with A's requests. Person B, however, would not have the same advantage in trying to gain A's compliance. Numerous investigations have found that relatively powerful individuals are more influential than their less powerful counterparts (e.g., Boster et al., 1989; Michener, Vaske, Schleifer, Plazewski, & Chapman, 1975).

When considering equal relative power situations, however, the importance of absolute power becomes more obvious. Specifically, situations in which both parties are highly dependent on one another (i.e., high/high power) are likely to be very different from situations in which neither party is dependent upon one another (i.e., low/low power) in terms of the types of tactics and strategies employed, and in terms of success in gaining the other's compliance. For example, compromise strategies might be used more in the former situation and withdrawal strategies might be used more in the latter situation. Because highly interdependent (i.e., high/high power) individuals have relatively unattractive alternatives, reaching an agreement should be relatively important to them. As neither partner has a distinct advantage in terms of power, striving for a

compromise would be a logical strategic choice for maximizing outcomes. Conversely, less mutually dependent partners (i.e., low/low power) have more attractive alternatives. If others are reluctant to comply with a request in these situations, a person is likely to pursue an alternative(s) rather than making potentially costly and unnecessary concessions to obtain a compromise.

A related implication of considering both absolute and relative power is their impact on total power. Total power may be thought of as the sum of both parties absolute power (Bacharach & Lawler, 1981a). Because A's absolute power is conceptually independent from B's absolute power, total power is not fixed (i.e., variable sum). This view of power is in sharp contrast to the research on power and bargaining that has adopted a zero-sum view of power. Zero-sum approaches assume that total power is a constant, and from a zero-sum conceptualization, increases in A's power, by definition, lead to decreases in B's power. Because such is not the case for variable sum power, such an approach offers the flexibility to consider absolute power and relative power independently.

Conceptually, one advantage of a variable sum approach is that it recognizes the possibility of alternative options. Negotiators and influence agents are not assumed to exist in social isolation. For example, consider a situation in which A requests a loan from B. A zero-sum approach assumes that if B denies A's request, A fails to

obtain the loan. In many loan request situations, however, this assumption may not be valid as A may well have alternative sources from which to secure a loan.

A second advantage of viewing absolute power and relative power as independent is that it allows a distinction to be drawn between situations of high mutual dependence (high-high power) and low mutual dependence (low-low power). It was argued above that mutually dependent persons should differ from mutually independent persons in terms of their message behavior. There is some data consistent with such a contention. Boster et al. (1989) found that individuals in high and low mutual dependence situations differed in terms of the total number of strategies employed, the number of distinct types of strategies employed, and in terms of the content of strategies employed. For example, when persons were in low mutual dependence situations, they used a greater number of threats than when in high mutual dependence situations. Thus, a variable sum approach allows the researcher to treat differences between high-high and low-low power situations as an empirical question rather than being forced to assume equivalence.

Power, Communication, and Compliance

Bacharach and Lawler's (1981a; 1981b) treatment of power-dependency theory emphasizes communicative tactics as a mediator of the relationship between power and outcomes. They assert that power tactics are the means through which

power is translated into influence. Both absolute and relative power are thought to produce particular tactics and strategies which, in turn, result in influencing or failing to influence another. Thus, according to Bacharach and Lawler, understanding the role of communication is essential to the process of implementing power.

Influence tactics and strategies

Over the past fifteen years many communication scholars have become interested in identifying the types of messages and strategies used to gain compliance. Interest in the types of messages used to gain others' compliance have lead many researchers to develop categorization schemes or typologies of compliance gaining strategies. Perhaps the most widely recognized strategy typology is Marwell and Schmitt's (1967) list of 16 compliance gaining strategies. Subsequently, numerous alternative typologies have been developed (e.g., Cody, McLaughlin & Jordan, 1980; Kearney, Plax, Richmond & McCroskey, 1984; 1985, Wiseman & Schenk-Hamlin, 1981). These lists represent attempts to categorize compliance gaining strategies by message content. Thus, scholars have identified strategies such as altercasting, which involves the agent creating a positive image of the compliant individual or a negative image of the non-compliant individual, or altruism, which involves asking a target to comply for the agent's or some other's benefit.

Other compliance-gaining researchers have examined quantitative dimensions along which compliance-gaining

strategies or behaviors may be arrayed. Constructivist researchers have coded strategies according to perspective taking (e.g., Clark, 1979; Clark & Delia, 1976; Delia, Kline, & Burleson, 1979; O'Keefe & Delia, 1979). Alternatively, Boster and Lofthouse (1986) and Instone, Major, and Bunker (1983) have examined agent's persistence in gaining compliance. Persistence refers to the total quantity of message behavior and is measured by the total number of compliance-gaining messages transmitted in a compliance gaining transaction. Additional research by Boster, Levine, and Kazoleas (1989) and Instone et al. have examined subjects' diversity in compliance gaining message behavior. Diversity refers to the variance in message behavior, and is measured by the number of discrete message strategies one employs in an influence situation. Examining quantitative aspects of message behavior in addition to message content has led to some useful advances in understanding how individuals gain the compliance of others.

Power and Strategy Use

Central to Bacharach and Lawler's version of power dependency theory is the idea that a person's level of relative and absolute power have a direct impact on the types of messages and strategies used to gain compliance. Relatively little research, however, has investigated this relationship.

Miller (1982) controlled relationship type and relative power. He found that power affects strategy selection,

although the effect was moderated by the type of relationship between the parties. In non-interpersonal relationships, as the relative power of the agent increased, the likelihood of use ratings of several compliance gaining strategies (i.e., debt, moral appeal, negative self-feeling, positive, and negative altercasting) decreased. In interpersonal situations, the opposite was the case; as the power of the agent increased, the ratings of strategies increased.

In another selection study, Howard, Blumstein, and Schwartz (1986) measured dependence and recalled frequency of a relational partner's use of influence strategies. They found that relational partners who were relatively more dependent were perceived to use weaker strategies such as manipulation (e.g., hinting and flattering) and supplication (e.g., pleading and acting helpless). Less dependent partners were perceived as more likely to bully (i.e., use threats).

Boster et al. (1989), in contrast, controlled absolute power and observed actual compliance gaining message behavior. They report that, under some conditions, the absolute and relative power of self and other interacted to affect message content, diversity, and persistence. Specifically, when subjects were in the low relative power condition, they used altruism more frequently than when in the high relative power. Subjects exhibited more diversity and persistence in the unequal relative power conditions

than in the equal power conditions. Inefficacy, expertise, that's-not-all, and threat strategies were employed more frequently in the high relative power condition than in either of the equal power conditions. Compromise, direct request, inefficacy, and threats were used more frequently in the low relative power condition than in either of the equal power conditions. Taken together, the results of Miller (1982), Howard et al. (1986), and Boster et al. suggest that relative and absolute power of participants affects the types of strategies person's use to gain the compliance of others, although the relationship between power and message selection/behavior is likely to be complex.

Compliance gaining messages and outcomes

Perhaps no issue is as often ignored in compliance-gaining research as the outcomes associated with compliance gaining behavior. With some notable exceptions (e.g., Boster et al. 1989; Spowl & Senk, 1986), compliance-gaining researchers have been content to identify and categorize the types of compliance gaining messages individuals employ or to isolate the antecedents of compliance-gaining message selection or generation. To date we know much more about the type of messages people use and when they use them than we know about when or if these messages are effective. Research on bargaining, however, sheds some light on strategy effectiveness.

Deutsch and Krauss (1960, 1962) found that simply

having the ability to affect another's outcomes (i.e., absolute power) and being able to communicate does not insure success in bargaining. Using a trucking game, they varied both power and opportunity to communicate and observed success in bargaining. They found that having absolute power (ability to threaten the other) actually reduced participants' outcomes in the trucking game (Deutsch & Krauss, 1960). Moreover, subjects having the opportunity to communicate, or being required to communicate, was generally not any more successful (and was often less successful) than subjects who were forbidden to communicate (Deutsch & Krauss, 1962), except when coached in effective communication (Krauss & Deutsch, 1966).

Subsequent research on bargaining may help explain the results of Deutsch and Krauss's program of research. Helm, Bonoma, and Tedeschi (1972) and Youngs (1986) report that under conditions of bilateral threat, the use of threats and punishments often trigger conflict spirals. By invoking a norm of reciprocity (Gouldner, 1960), subjects using threats and punishments invite retaliatory exchanges, leading to conflict spirals, and reduced effectiveness in bargaining (e.g., see Helm et al., 1972; Youngs, 1986).

Conversely, strategies that encourage cooperation by prescribing the use of reasonable proposals, such as the tit-for-tat strategy (Axelrod, 1980a) and the graduated and reciprocated initiative in tension-reduction (GRIT) program (Osgood, 1962), have been found to be successful in

encouraging cooperation and maximizing outcomes (e.g., Axelrod, 1980a; 1980b; Oskamp, 1971). By inviting the reciprocation of cooperative behavior, potentially detrimental spirals may be avoided and constructive spirals are encouraged. Thus, the capacity to retaliate may, if used, lead to conflict spirals and reduced outcomes.

Taken together, these bargaining studies suggest that under conditions of bilateral threat, positively valenced strategies lead to increased cooperation, which, in turn, allows for increased effectiveness. Alternatively, negatively valenced strategies often lead to conflict spirals that adversely affect participants' outcomes. These conclusions are also consistent with research by Spowl and Senk (1986) who found that car salesmen who reported using positive strategies earned greater commissions than those who reported using relatively more negative strategies.

Boster et al. (1989) provide direct evidence that the relationship between message behavior and success is moderated by relative and absolute power. Diversity and persistence were negatively related to success in the low mutual dependence and low relative power conditions, and diversity was positively associated with success in the high relative power condition. Liking was negatively related to success in the low mutual dependence situation, and the that's-not-all strategy was negatively correlated with success when mutual dependence was high. Compromises, direct requests, and threats were effective when subjects

were in the high relative power condition, and direct requests were counterproductive in the low relative power situation.

Research Issues

Broadly stated, the goal of the present research is to investigate the relationships among power, message factors, and success in compliance gaining. Recall that Bacharach and Lawler's (1981a) power dependency theory contends that message behavior mediates the relationship between power and success in gaining compliance. Recent research by Boster et al. (1989), however, suggest a rival model, one in which power moderates the relationship between message behavior and outcomes. The current study provides a test of these rival models. In addition, the specific effects of power upon message behavior, power upon success, and message behavior on success are investigated.

General effects of power

Bacharach and Lawler's (1981a) power dependency theory offers a mediational model of the role of power in social influence processes. From this perspective power is thought to affect message behavior which, in turn, impacts success at exerting influence. That is, Bacharach and Lawler argue for a causal string in which the relationship between power and outcomes is indirect. This model is consistent with conceptual work by Wheelless et al. (1983) on the role of power in compliance gaining.

One could argue, however, that the mediational model

presented above is overly simplistic. By considering other mediating variables, namely perceived power, the mediational model may offer a more accurate account of how power impacts compliance. Specifically, a source's perceptions of absolute and relative power may be antecedents of compliance gaining message behavior. Power influences communication to the extent that it influences a source's perception of power which, in turn, affects what he or she says in order to gain another compliance.

Applying a similar logic, it is not unreasonable to expect that the message behavior-success link may also be mediated by perceived power. A source's messages influence the target's perceptions of power which, in turn, impact the efficacy of the compliance attempt. Thus, Bacharach and Lawler's mediational model could be reasonably extended to predict a longer causal string. Power affects a source's perceptions of power which affect the source's message behavior. These messages affect a target's perceptions of power which impact the relative success of the influence attempt.

Despite the seemingly intuitive appeal of these models, careful consideration leads one to speculate on the validity of the mediational models. First, the direct link between power or perceived power and message behavior is tenuous. Although power has been shown to effect message selection and behavior (Boster et al., 1989; Howard et al., 1986; Miller, 1982; Kipnis, Schmidt & Wilkinson, 1980), why power

or perceived power would inherently necessitate or prohibit the use of specific strategies remains unclear. Surely having an ability or potential does not mandate the implementation of that ability. For example, it is unreasonable to assume that just because one has the ability to punish another, one would automatically attempt to do so. Moreover, it is also plausible that one might threaten another even though one does not have the ability to follow through with the threat. In their discussion of power tactics Bacharach and Lawler (1981a) grant this possibility in their discussion of bluffing. Bluffing is inconsistent with this mediational model.

Second, it is plausible that power might have a direct impact on outcomes under some circumstances. For example, given a grossly unequal power balance, the person with relatively more power might well gain the compliance of her less powerful counterpart regardless of what is said. Conversely, someone with relatively little power may find that all strategies are equally ineffective in gaining the compliance of the powerful other.

Thus, reasons exist to question the validity of mediational models of power and success. Given these arguments, consideration of other models is warranted.

Boster et al. (1989) provide such a rival model. They speculate that rather than messages mediating the effects of power on success, power might moderate the effectiveness of messages. Put differently, specific messages may be more or

less effective in securing compliance depending upon the relative and absolute power of the bargainers.

This moderator model is consistent with the research on power and success reviewed above. Recall that research on conflict spirals (e.g., Helm, Bonoma & Tedeschi, 1972; Youngs, 1986) found that under conditions of bilateral threat (i.e., high mutual dependence) the use of threats and punishment strategies are often counterproductive. Under unequal power conditions, however, the weaker party's inability to reciprocate with punishments should avoid potentially detrimental spirals, and threats by the stronger party might well be highly effective. Thus, partner's power may moderate the effectiveness of threat and punishment strategies.

Similarly, under conditions of bilateral threat compromise-based strategies have been found to be highly effective. The utility of compromise strategies, however, may not hold in unequal power situations. Intuitively, unnecessary concessions on the part of the relatively powerful party should lead to decreases in their effectiveness. Again, this reasoning suggests a moderator model of power and influence.

Boster et al. (1989) provided a direct test of these rival models. Boster et al. had 46 subjects engage in a bargaining game similar to one developed by Scudder (1986) in which power was controlled and message content and success were observed. Although their results were not

definitive, Boster et al.'s data were generally more consistent with the moderator model.

Specific effects of power

Relatively little research on the specific relationships between power, message behavior, and outcomes has been conducted. Still, some speculation is in order. First, one might expect direct effects for power on success, although such effects must always be qualified by interactions. In conditions of unequal power, the person with high relative power should be more successful regardless of message type. Similarly, the person with low relative power should be less effective regardless of message type. Boster et al.'s (1989) data are consistent with this speculation.

Second, the use of threats (and other negatively valenced strategies in general) by the more powerful person in unequal power situations should be relatively effective because of the less powerful other's inability to retaliate. Alternatively, threats and other negatively valenced strategies should be counterproductive in equal power conditions, or for less powerful persons in unequal power situations.

Third, compromises (and other positive strategies in general) should be most effective for those in equal power conditions, or for those who are relatively less powerful. To the extent that offering concessions invites reciprocal concessions and discourages threats, such strategies should

lead to increased effectiveness. Moreover, as argued above, compromises should be more effective when participants are in situations of high mutual dependence rather than in situations of low mutual dependence.

Finally, people with high absolute power should exhibit greater diversity in message behavior than their less powerful counterparts. Persons whose partners are highly dependent upon them should have relatively more options available to them for gaining the other's compliance. This potential for greater flexibility should lead to increased diversity. Also, because less powerful others are at a disadvantage when dealing with a more powerful partner, it seems reasonable to expect them to be more persistent than their more powerful counterparts if they are to be successful.

Other Outcomes

To this point, only a limited conception of compliance gaining outcomes has been offered. Success in obtaining outcomes has been tacitly confined to an agent gaining the compliance of a target. Although the gaining of compliance is certainly one element, and perhaps even the most central element in successful influence, other factors may also contribute to successful influence.

Recent theoretical work on compliance gaining and regulative situations suggests that people often have and pursue multiple goals in influence situations (e.g., Dillard, Segrin & Harden, 1989; Lim, 1990; O'Keefe, 1988;

Rule, Bisanz & Kohn, 1985). Dillard et al. (1989) labels gaining compliance as the influence or primary goal, and additional concerns as secondary goals. Examples of secondary goals include such issues as being polite and socially appropriate (Dillard et al., 1989; Lim, 1990; O'Keefe, 1988), sustaining own identity and self respect (Dillard et al., 1989; O'Keefe, 1988), maintaining the interaction (Dillard et al., 1989; O'Keefe, 1988), and preserving the relationship with the target (Dillard et al., 1989).

To the extent that individual attempt to achieve goals beyond mere compliance, it is reasonable expand the concept of "success" accordingly. The current investigation measures success in achieving secondary goals with McCroskey and McCain's (1974) constructs of social and task attraction. Here, social attraction refers to how much target liked the influence agent. Task attraction refers to the target's respect for the agent gained in completing the task.

Potential Confounds due to Individual Differences

One might also question if the relationship among power, message behavior, and success will hold across individuals, or if some persons might systematically differ from others in this regard. The literature on individual differences in persuasion and influence suggests that persons differ in how they view power and influence, how they attempt to influence others, and how they respond to

the influence attempts of others. If systematic differences among people exist, they need to be taken into account lest the data be contaminated by undetected treatment by subject interactions. Individual differences that seem especially likely to produce such confounds include subject and partner's sex, a need for power and control, a need for affiliation, and self-esteem.

Males and females are thought to differ in many aspects of social influence. Some have argued that males and females differ in their access to social power (e.g., Eagly, 1983; Johnson, 1976; Howard et al., 1986). Johnson reported that males and females are perceived to use different bases of power. Several other researchers have found that agent's (e.g., deTurck, 1985; Falbo & Peplau, 1980; Instone et al., 1983; White, Pearson & Flint, 1987) and target's (e.g., deTurck, 1985; White et al., 1987) sex has non-trivial effects on message selection and behavior. Finally, Eagly argues on the basis of several meta-analyses for small, but statistically significant sex difference in both persuasiveness and persuasibility.

Despite the large quantity of research on sex differences in persuasion, it remains unclear whether the differences reported in the literature would lead to differential relationships between power, message behavior, and influence. In one study pertaining directly to this issue, Howard et al. (1986) found that sex moderated the effects of dependence on the perceived use of manipulation

and bargaining (e.g. comprise and reason messages) strategies. Women were perceived by male partners to use more manipulation strategies when the women were more dependent than for other sex/dependence combinations. Men were perceived as bargaining more when they were less dependent. These results mandate that researchers control for sex when investigating the relationships between power, message use, and success.

Individuals who vary in certain personality characteristics might also differ systematically in their perception and implementation of social power (Rhodes & Wood, 1992; Sorrentino & Hancock, 1987). Indeed, personality factors have been long thought to play an important role in social influence. The Yale group was among the first to study the impact of personality on persuasion (e.g., see Hovland & Janis, 1959). This line of research primarily emphasized aspects of receivers' personalities that made them more or less difficult to persuade.

More recently, the compliance gaining literature has witnessed an attempt to document the effects of personality traits that influence the selection, generation, and use of compliance gaining messages. For example, such variables as dogmatism (e.g., Boster & Levine, 1988; Boster & Lofthouse, 1986; Boster & Stiff, 1984; Dillard & Burgoon, 1985; Roloff & Barnicott, 1979), negativism (e.g., Boster & Levine, 1988; Boster & Lofthouse, 1986; Boster & Stiff, 1984), verbal

aggressiveness (e.g., Boster & Levine, 1988; Boster, Levine & Kazoleas, 1989), and argumentativeness (e.g., Boster & Levine, 1988; Boster et al., 1989) have all been found to be associated with message selection and use.

Of importance to the current investigation is any personality factor that might moderate the relationship between power and message use, or lead to differential message effectiveness. Such factors would be ones that predispose individuals to differing views of power and differing reactions to power. Although several personality constructs are thought to contain power-related components (e.g., authoritarianism, dogmatism, machiavellianism), three seem particularly relevant, a need for power or control, need for affiliation, and self-esteem.

Schutz (1958) proposed that individuals vary in 3 primary interpersonal needs, inclusion, control, and affection. Knapp (1984) succinctly describes these needs as:

... needs to include others in our activities and to be included in their's; to exert control over others and to have them control us; and to give affection to others and receive it from them (p. 62).

Each of these needs is argued to vary along two independent dimensions, how we behave toward others, and how we want others to behave toward us.

Schutz's (1958) control needs are most obviously related to the issues at hand. If Schutz is correct,

individuals vary both in their want to exert power and control over others (i.e., expressed control), and in their desire to be controlled by others (i.e., wanted control). It seems entirely plausible that people who differ along these two dimensions will respond differently to different power distributions. Although tangential, there is at least some evidence that one's orientation toward power and control affects social influence. Linton and Graham (1959), for example, found that those scoring highly on the power dimension of the F-scale were less resistant to attitude change. Therefore, it would seem that person's need for control requires control.

Schutz's (1958) inclusion and affection needs may also be relevant. These two needs can be reasonably grouped, albeit loosely, under the general label of need for affiliation. A need for affiliation may be considered a general "willingness to become involved in social situations" (Marshall, 1990, p. 2). A need for affiliation should be relevant to the extent that it shapes the relative importance individuals attach to achieving the influence goal in relation to secondary goals (Sorrentino & Hancock, 1987). To the extent that high need for achievement persons pursue secondary goals (such as impression management) at the cost of effective influence, need for affiliation may also moderate the relations among power, messages, and compliance.

A final likely candidate for control is self-esteem.

Self-esteem has long been considered an important individual difference in the area of social influence (e.g., Cohen, 1959; Janis & Field, 1959; Rhodes & Wood, 1992). As Cohen (1959) observed:

First of all, we may expect that, since persons of high self-esteem appear to be less susceptible to events in mass-communication and power situations, they may, in general, be less susceptible to interpersonal influence in social interaction.

We may also expect persons with high self-esteem to be less susceptible to interpersonal influence from those of low self-esteem than vice versa. In addition, it may be inferred that persons of high self-esteem may exert more influence attempts than persons of low self-esteem when they interact (p. 104).

Consistent with Cohen, some research suggests that self-esteem effects both one's resistance to the influence attempts of others (e.g., Janis & Field, 1959; Rhodes & Wood, 1992) and how a person attempts to influence others (e.g., Cohen, 1956). This being the case, self-esteem is another potential moderator worthy of statistical control.

Summary

The aim of this research is to investigate the empirical relationships among social power, message behavior, and compliance. A conceptualization of social power from power dependency theory was offered. Three models of the general relations among these construct were

advanced. These included a three variable mediational model, a five variable mediational model extending the first model, and a moderating model. Speculation concerning the specific relationships between elements of these constructs was also offered. In addition, social and task attraction were considered as additional outcomes stemming from an influence attempt, and several individual difference factors that might potentially moderate the relations among power, message behavior, and outcomes were discussed.

METHOD

Overview

This investigation sought to replicate and extend upon the work of Boster et al. (1989). Similar to this study, a negotiation simulation involving a used car game was employed, but the design detailed below offers a number of improvements. In Boster et al.'s design the power conditions were not fully crossed, a design flaw remedied in the current study. Second, this study controlled sex and measured selected personality traits. Third, this study assessed message valence in addition to message content, persistence, and diversity.

Participants

The participant were 108 undergraduate students enrolled in a variety of communication classes at a large midwestern university. Fifty males and 56 females participated in the experiment.

Design

This experiment used a 2 x 2 x 2 x 2 mixed design with the absolute power (low, high) of each of the two experimental participants as repeated factors and actor's and partner's sex as independent groups factors. That is, each dyad participated in all four power conditions. The

order of the power conditions were counterbalanced and order effects were assessed.¹

Consistent with power dependency theory, power was controlled by varying an alternative offer in a bargaining game. Each participant was furnished with an alternative offer that could be accepted at any time. The acceptance of an alternative offer by one participant forced the other participant to accept the alternative offer and ended a given trial. When participants were in a high power conditions, their partners had relatively unattractive alternative offers (thus being more dependent). Participants in low power conditions had partners with attractive alternatives. Alternative offers were assigned so that taking them yielded a less profit than could have been obtained through bargaining, except in the low/low power (i.e., low mutual dependence) condition.

The sex of each participant, and the person with whom they were bargaining were independent groups factors. Sex of each participant was crossed with other's sex to produce four gender conditions (i.e., male-male, male-female, female-male, and female-female). The overall design is summarized in Appendix A, and the specific alternative offers by power condition are presented in Appendix B.

The Bargaining Game

The bargaining game used was similar to the ones used by Scudder (1986) and Boster et al. (1989). Each participant was randomly assigned to play the role of either

a car buyer or a car seller. Each participant bought or sold a total of five hypothetical used cars. For each car, each participant was furnished with a retail (list or sticker) price, the value of the car plus seller profit, a wholesale (invoice) price, the value of the car, and an alternative offer. The difference between the retail and wholesale prices was held constant across conditions. The retail prices and wholesale prices, in addition to the alternative offers, are presented by condition in Appendix B.

Seller's profit was calculated by subtracting the wholesale price from the agreed upon price and the buyer's profit was calculated by subtracting the agreed upon price from the retail value. Profits were used as a measure of bargaining success.

To motivate the subjects they were informed that the amount of extra-credit they gained for their participation would vary according to their success in the game. That is, they were be told that they could gain extra points to the extent that they did well in the game. All participants actually received the same amount of extra credited. Extra credit was awarded after all data were collected to help maintain the belief in the incentive.

Participants were allowed to send up to five messages each per trial (i.e., per car). If they had not reached an agreement after all the messages had been sent, the trial was ended and both were forced to accept their alternative

offers. Each participant bought or sold five hypothetical cars, one practice car and one car corresponding to each power combination, although the participants were led to believe that there would be six cars bought and sold to guard against end effects.

Procedure

Participants were scheduled to arrive at the laboratory in groups of four. When all had arrived, subjects were randomly assigned to bargaining pairs with the constraint of maintaining a relatively equal distribution across sex conditions. Once assigned to pairs, subjects were seated across a table from their partner, and randomly assigned to the role of either buyer or seller.

Once seated, each participant was asked to complete a brief survey about their beliefs. This questionnaire contained items measuring need for affiliation, need for power, and self-esteem.

Following completion of the first questionnaire, subject were provided with detailed rules for the bargaining game (see Appendix C). All were allowed as much time as needed to read the instructions. When it was obvious that all had finished, the experimenter verbally reinforced the instructions and asked for questions. Once all participants indicated their understanding, a practice trial was completed. After asking a second time for questions the four experimental trials were completed.

At the beginning of each trial each subject was

furnished with a "car card" detailing all the relevant information concerning the car to be bought and sold, and a packet of five messages sheets. Subjects were instructed to write a message on the first message sheet and slide it across the table to their partner. Subjects alternated messages in this fashion until the given car was bought and sold. After each car was bought and sold subjects were asked to fill out a brief questionnaire concerning their perceptions of their own and their partner's alternatives in the immediately preceding trial. After all four experimental trials were completed subjects completed attraction scales about their partners, were debriefed, and finally dismissed.

Stimulus Materials

Before each trial each participant was presented with a "car card." The car cards were made from 3 x 5 index cards, and buyers' and sellers' car cards were color coded to avoid confusion. Different cards, and hence different cars, were distributed for each practice and experimental condition. Each car card was blank on one side, and had pertinent information printed on the other side. It provided the year, make, model, and relevant options (e.g., air conditioning, sun roof, etc.) of a particular automobile. Each card also presented the retail price, the wholesale price, and the participant's alternative offer for the vehicle in question. The prices for each experimental car corresponded to the actual bluebook value of the car at the

time of the study to increase experimental and mundane realism. Complete descriptions of each car are presented in Appendix D.

Prior to each trial, subjects were also given a packet of five "messages sheets." Each message sheet was an 8.5 by 3.7 inch piece of paper. Buyer's and seller's message sheets were color coded to correspond with the car cards. Each message sheet had the type of car printed in the upper right hand corner, and subject number and message order information in the upper left corner.

Self-Report Measurement

Prior to the instructions participants were asked to complete a brief questionnaire containing measures of need for affiliation, need for power, and self-esteem scales. This questionnaire contained Marshall's (1990) 4-item general social dimension and 3-item affiliative tendency subscales of need for affiliation. Need for power was measured with 10 items taken from Schutz's (1958) FIRO-B scale. These 10 questions were converted to Likert-type items for use in the present study. Five items each were selected from the expressed control and wanted control dimensions of the FIRO-B. The self acceptance aspect of self-esteem was measured with Rosenberg's (1965) 10-item self-esteem scale. Each of these scales consisted of Likert-type items, and each used a 5-point response format ranging from strongly agree to strongly disagree.

Subjects also completed an 8-item perceived power scale

following the completion of each experimental trial. The participants were instructed to estimate the quality of their alternatives in the immediately preceding negotiation with four semantic differential-type adjective pairs. Subjects were then told to estimate the quality of their partner's alternatives on the same four adjective pairs. The sum of the other ratings was subtracted from the sum of the self ratings as a measure of perceived relative power. The four adjective pairs included: attractive-unattractive, strong-weak, good-bad, exceptional-inferior. All ratings were made on a 7-point response format with two of the four pairs reflected to reduce the possibility of a response set developing.

After all experimental trials and the final measure of perceived power were completed, subjects were asked to rate their partners on items selected from McCroskey and McCain's (1974) measures of social and task attraction. Five items were used to measure the social dimension and four items were used to tap the task dimension. A 5-point response format ranging from strongly agree to strongly disagree was used for each of these Likert-type items.

Confirmatory factor analyses were used to test the proposed measurement model and assess item quality of each scale. The specific item retention criteria included items contributing positively to scale reliability, and item consistency with the model (i.e., internal consistency and parallelism).

Although Marshall (1990) argued for two dimensions of need for affiliation (a general social dimension and an affiliative tendency dimension), the current data suggested that the need for affiliation items were best treated as measures of the same construct. The affiliative tendency items exhibited low inter-item correlations (mean $r = .11$) and reliability, $\alpha = .27$. Moreover, two of the three items had higher cross-loadings than primary loadings, and the two dimensions were correlated ($r = .88$) highly enough to suggest unidimensionality. Because one of the three affiliative tendencies items loaded highly on the general social dimension, and made a positive contribution to that scale's reliability, it was subsequently added to that dimension. The other two affiliative tendency items were discarded. The data were consistent with the five retained items forming a single factor. The distribution of the sum of these items approximated normality, $M = 19.99$, $SD = 2.68$, $\alpha = .69$.

Confirmatory factor analysis was used to test if the two dimensions of the FIRO-B scale represent distinct constructs as suggested by Schutz, or if the wanted control items could be treated as reflected items assessing expressed control. The data were inconsistent with the single factor model, and consistent with the two-factor model. Moreover, the two factors were nearly orthogonal (inter-cluster $r = -.04$). All 5 items from each scale were retained. The distribution of the expressed control ($M =$

14.59, SD = 3.43, alpha = .76), and wanted control (M = 11.20, SD = 2.74, alpha = .70) scales approximated normality.

Two items from Rosenberg's (1965) self-esteem scale were discarded, one because its inclusion lowered scale reliability and the second because of significant deviations in the internal consistency test. The distribution of the sum of the 8 retained items approximated normality, M = 33.76, SD = 3.76, alpha = .80.

McCroskey and McCain's (1974) measures of social and task attraction were also evaluated. One item from the social attraction measure was eliminated due to a negative contribution to scale reliability. All the task attraction items were retained. The distribution of the sum of the social attraction items was moderately leptokurtic (Kurtosis = 1.47), but not substantially skewed; M = 15.22, SD = 2.45, alpha = .82. The task attraction items were distributed normally, M = 15.48, SD = 2.07, alpha = .65.

All perceived power items were retained. The reliabilities of the 4 items measuring the attractiveness of the subject's own alternatives were alpha = .92, .95, .92, and .94 respectively. The rating of partner's alternatives in the same conditions were also highly reliable, alpha = .95, .95, .94, and .95. Item means as a function of power conditions are presented in Table 6.

Coding

All messages were sent in writing and collected at the end of each trial. The classification for strategy types were adapted from Boster et al. (1989). The 10 strategy types included: altruism, compromise/negotiation, direct request/offer, discounting, expertise, inefficacy, liking, qualities of the object, that's-not-all, and threat. An "other" category was used for messages that were irrelevant to the negotiation or did not fit within the established categories. Strategy types, definitions, and examples are provided in Table 1.

The subjects produced and sent a total of 1067 messages. Each message was independently coded for strategy type by two coders who were unaware of the experimental condition or hypotheses. The coding procedure allowed for more than one strategy per message. The coders initially agree on 97% of the strategies, $Kappa = .95$. The coders attempted to resolve disagreement through discussion, with the author serving as final arbitrator of unresolved disagreements. This procedure produced 1633 instantiations of message strategies and 35 messages coded as "other." The number of strategies used per message ranged from 1 to 5; $M = 1.56$, $SD = 0.64$. Frequency distributions for each strategy are presented in Table 2 and the frequency of multiple strategy usage is reported in Table 3.

Table 1

Types, Definitions, and Examples of Strategies.

-
1. **Altruism** - I (the source) need your compliance, or help, so accept my offer, i.e., "Do it for me."
 2. **Compromise/Negotiation** - The bargainer makes a concession in price in order to reach an agreement. The norm of reciprocity may be invoked, e.g., "I'll give a little, if you will."
 3. **Direct request/offer** - Make an offer, or ask for a particular price, e.g., "I'll give you \$6,000 dollars for that car."
 4. **Discounting** - The price is lowered to make the offer more attractive, e.g., "Ok, I can drop to \$5,500 on this on."
 5. **Expertise** - An appeal based upon the speaker's credibility, e.g., "I work on cars a lot, and I know this is a good buy."
 6. **Inefficacy** - Statements indicating that the speaker has limited bargaining power, e.g., "I can't afford to go any higher."
 7. **Liking** - Statements expressing positive sentiment for the other, e.g., "You seem like a nice person, couldn't you lower the price a bit."
 8. **Qualities of the Object** - positive or negative features of the car are offered to justify the offer, e.g., "the car has really low millage."
 9. **That's-Not-All** - A bonus is included to make the offer more attractive, e.g., "I'll throw in a new set of tires."
 10. **Threat** - A statement expressing an intent to end the trial; thus forcing the other to accept the alternative offer, e.g., "this is my final offer."
-

Table 2

Frequencies of strategy usage.

Strategy	<u>f</u>	Message %	Strategy %
Altruism	31	2.9	1.9
Compromise/Negotiation	485	45.5	29.1
Direct request	450	42.2	27.0
Discounting	14	1.3	0.8
Expertise	6	0.6	0.3
Inefficacy	59	5.5	3.5
Liking	18	1.7	1.1
Qualities of the object	335	31.4	20.0
That's-not-all	86	8.1	5.2
Threat	149	14.0	8.9
Other	35	3.3	2.1

Note: Message percent refers to the percentage of messages containing a given strategy, and strategy percent refers to the percentage of coded responses falling into a particular category.

Table 3

Number of strategies coded per message.

<u>N</u>	<u>f</u>	<u>%</u>
1	543	50.9
2	455	42.6
3	63	5.9
4	4	0.4
5	2	0.2

Each coder also rated each of the 1067 messages for valence on a 5-point scale. The coders agree on 92.7% of the valence ratings, interclass r (1065) = .78, $p < .0001$. The mean coder rating was used as the measure of message valence.

Persistence was calculated in two ways. The first measure of persistence, strategy persistence, was calculated by summing the total number of strategies, regardless of type, used on a various trial (i.e., in a given power condition). The second measure of persistence, message persistence, consisted of the total number of message sheets sent by a given subject during a particular trial. Total strategy persistence and total message persistence were calculated by summing the relevant persistence scores across all four power conditions.

Diversity scores equaled the total number of unique

strategy types used on a given trial (i.e., the total number of different strategy types used). Total diversity scores were the number of unique strategies used across all four trials. Thus, unlike persistence, total diversity was not an across-trial sum. Both persistence and diversity scores were calculated on the basis of the post-resolution coding.

RESULTS

The data were first tested for consistency with the two versions of the mediational model and the moderating model. The initial mediational model (Bacharach and Lawler, 1981a) predicted that power affects message use which affects success. The second version of the mediation model predicted that the links between power and message use and message use and success would be further mediated by the perceived power of the agent and target respectively. The moderating model predicted that power would interact with message use to determine success. Tests of the "micro issues" are imbedded within these analyses.

Following these analyses, the effects of several individual difference variables are assessed. The included agent's sex, target's sex, agent's need for affiliation, need of expressed power, need for wanted power, and self-esteem. Finally, tests were conducted for the effects of message factors on social and task attraction.

Mediational Models

Recall that Bacharach and Lawler's (1981a) power dependency theory offers a mediational model of the role of power in social influence processes. Power is thought to affect message behavior which, in turn, impacts success at

exerting influence. To test this model, the effects of power condition on message use, and the effects of message use on success were investigated.

The power-message link was investigated with a 2 (source power, high/low) by 2 (target power, high/low) repeated-measures ANOVAs for each of the ten strategies. Significant interactions between agent's power and target's power were found for compromise/negotiation, $F(1,105) = 8.78$, $p < .0001$, $\eta^2 = .17$, $r = .41$, direct requests/offers, $F(1,105) = 6.45$, $p < .01$, $\eta^2 = .06$, $r = .24$, and inefficacy, $F(1,105) = 6.67$, $p < .01$, $\eta^2 = .06$, $r = .24$, strategies. Main effects for target's power were found for threat, $F(1,105) = 40.02$, $p < .0001$, $\eta^2 = .28$, $r = .53$, in addition to a significant interaction, $F(1,105) = 8.60$, $p < .004$, $\eta^2 = .08$, $r = .28$. No differences in the use of altruism, discounting, expertise, liking, qualities of object, and that's not all were attributable to power condition. Strategy means by power condition are presented in Table 4.

Examination of Table 4 suggests that compromise/negotiation strategies are more likely to be used in the low relative power condition (i.e., low agent, high target power) and direct requests/offers are used most in cases of high relative power (i.e., high agent, low target power). Inefficacy messages were used less in situations characterized by high interdependence (i.e., high, high power) than in the other power conditions. As expected,

Table 4

Strategy usage by Power Condition.

Strategy	Power Condition			
	LL	LH	HL	HH
Altruism	.047	.094	.094	.057
Compromise/Negotiation _c	1.019	1.387	1.198	.991
Direct request _c	1.019	1.057	1.170	1.009
Discounting	.019	.047	.019	.047
Expertise	.019	.038	.000	.009
Inefficacy _c	.132	.179	.189	.057
Liking	.057	.047	.028	.038
Qualities of the object	.726	.887	.802	.774
That's-not-all	.255	.208	.208	.142
Threat _{bc}	.481	.274	.623	.094
Strategy Persistence _{bc}	3.726	4.245	4.377	3.236
Message Persistence _c	2.406	2.783	2.774	2.236
Diversity _c	2.858	3.113	3.142	2.509
Message Valence _{abc}	2.983	2.284	2.985	3.004

Note: An "a" denotes a significant main effect for Ss' power, a "b" indicates a significant main effect for other's power, and a "c" signals a significant interaction.

threats were more likely to be used when target's power low, this being particularly true for the unequal power condition. Although threats were always less likely to be used when the target had high power, this was especially true in the high interdependence condition.

Similar analyses were conducted with strategy persistence, message persistence, diversity, and message valence as the dependent measures. For strategy persistence, there was a statistically significant main effect for target's power, $F(1,105) = 4.55$, $p < .035$, $\eta^2 = .01$, $r = .09$, and a significant 2-way interaction, $F(1,105) = 33.14$, $p < .0001$, $\eta^2 = .04$, $r = .19$. Examination of cell means suggests that individuals were more persistent in unequal power conditions than in equal power conditions. Within equal power conditions, individuals were less persistent in the interdependent condition (i.e., high, high power) than in the independent condition (i.e., low, low power). Agent's and target's power interacted to affect message persistence, $F(1,105) = 33.99$, $p < .0001$, $\eta^2 = .04$, $r = .19$, with the same pattern in means evident. Agent's and target's power also interacted to affect message diversity, $F(1,105) = 20.84$, $p < .0001$, $\eta^2 = .03$, $r = .17$. Again, the same pattern of means that was observed for the measures of persistence was evident in diversity scores. For message valence, all three components of explained variance were statistically significant; main effect of source power, $F(1,105) =$

608.93, $p < .0001$, $\eta^2 = .29$, $r = .54$, main effects for target power, $F(1,105) = 403.03$, $p < .0001$, $\eta^2 = .25$, $r = .50$, and the two-way interaction, $F(1,105) = 552.87$, $p < .0001$, $\eta^2 = .28$, $r = .53$. Counter to what might be expected, individuals were more negative in the low, high power condition, than in the other power conditions. Cell means for strategy persistence, message persistence, diversity, and message valence are also presented in Table 4.

Next, the link between strategy use and success was explored. The frequency of use for each strategy across conditions, total strategy persistence, total message persistence, total diversity, and total message valence were correlated with total success. No statistically significant correlations resulted (see Table 5).

Table 5

Correlations between Message Behavior and Success.

Strategy	r	Strategy	r
Altruism	.12	Qualities of object	.12
Compromise/Neg.	-.01	That's-not-all	-.08
Direct request	-.03	Threat	.07
Discounting	.05	Strategy Persistence	.06
Expertise	.04	Message Persistence	-.02
Inefficacy	.12	Diversity	.10
Liking	-.04	Message Valence	-.02

Note: For all correlations, $df = 104$, $p = ns$.

The data presented thus far are inconsistent with Bacharach and Lawler's (1981a) mediational model. Although the data were consistent with the first link in the model (i.e., power had substantial effects on message behavior), no evidence was found for the second link in the model. The next set of analyses assesses whether or not the second version of the mediational model can account for the failures in the original mediational model. Analyses of the effects of power condition upon agent's perceived power, agent's perceived power upon message behavior, agent's message behavior upon target's perceived power, and target's perceived power upon agent's success are reported.

The effects of power upon perceived power were analyzed with three 2 x 2 (agent power x target power) repeated-measures ANOVAs, with ratings of own alternative, target's alternative, and relative power (own alternatives minus target's alternatives) as the dependent measures. The results for ratings of own alternatives indicated a small main effect for own power, $F(1,105) = 5.61$, $p < .02$, $\eta^2 = .00$, $r = .06$, and a substantial main effect for target's power, $F(1,105) = 86.94$, $p < .0001$, $\eta^2 = .31$, $r = .56$. As expected, subjects rated their own alternatives as more attractive when their partners were in a low power condition. There was also a small, but statistically significant, trend toward rating own alternatives higher when the subjects were in a high power condition. A statistically significant main effect for own power was

found for ratings of target's alternatives, $F(1,105) = 16.62$, $p < .0001$, $\eta^2 = .05$, $r = .23$. Target's alternatives were rated as stronger when agent's power was low. There were significant main effects for both agent power, $F(1,105) = 22.85$, $p < .0001$, $\eta^2 = .03$, $r = .18$, and for target's power, $F(1,105) = 59.99$, $p < .0001$, $\eta^2 = .19$, $r = .43$, on ratings of relative power. Subjects rated their own alternatives as relatively higher than their partner's alternatives when they were in high agent power conditions and when their partner's were in low power conditions (see Table 6).

The second link in the model (between agent's perceived power and messages behavior) was investigated by correlating subject's across-trial ratings of relative power with their across-trial message behavior. Subjects who generally rated their own alternatives as superior to their partner's alternatives were more likely to use altruism, $r(104) = .19$, $p < .03$, compromise/negotiation, $r(104) = .18$, $p < .03$, direct request, $r(104) = .16$, $p < .05$, liking, $r(104) = .21$, $p < .02$, and qualities of object strategies, $r(104) = .20$, $p < .02$. Across trial ratings of relative power were also positively associated with strategy persistence, $r(104) = .28$, $p < .002$, message persistence, $r(104) = .21$, $p < .02$, diversity, $r(104) = .26$, $p < .003$, and message valence, $r(104) = .17$, $p < .04$. Complete results are presented in Table 7.

Table 6

Effects of Power Condition upon Agent's Perceived Power.

Perceived Power	Power Condition			
	LL	LH	HL	HH
Ratings of Own Alternatives _{ab}	23.59	18.27	23.73	19.26
Ratings of Other's Alternatives _a	20.59	21.71	19.23	19.51
Ratings of Relative Power _{ab}	3.01	-3.43	4.50	-0.25

Note: An "a" denotes a significant main effect for Ss' power, and a "b" indicates a significant main effect for other's power.

Table 7

Correlations between Agent's Perceived Relative Power and Message Behavior across power conditions.

Strategy	r	Strategy	r
Altruism	.19*	Qualities of object	.20*
Compromise/Neg.	.18*	That's-not-all	-.02
Direct request	.16*	Threat	.13
Discounting	-.07	Strategy Persistence	.28*
Expertise	.07	Message Persistence	.21*
Inefficacy	.12	Diversity	.26*
Liking	.21*	Message Valence	.17*

Note: For all correlations, df = 104, "*" indicated a statistically significant correlation at $p < .05$.

Further analyses were conducted to determine if the association between perceived power and message behavior remained constant across power conditions. Ratings of own alternatives, target's alternatives, and relative power were correlated with message behavior in each power condition. Fisher's r to z transformations were used to test for differences in association between power conditions. The results suggest that the effects of perceived power upon message behavior are moderated by actual power (i.e., power condition). The correlations between ratings of own alternatives and the use of direct requests, expertise, liking, qualities of objects, and that's-not-all, as well as strategy persistence, message persistence, diversity, and valence varied across some power conditions (see Table 8). Similarly, the correlations between ratings of target's alternatives and compromise/negotiation, qualities of object, strategy persistence, message persistence, and diversity differed significantly between some power conditions (see Table 9). Finally, interactions between power condition and ratings of relative power were found for direct requests, inefficacy strategies, liking strategies, qualities of objects strategies, strategy persistence, diversity, and message valence (see Table 10).

The third link in the alternative mediational model predicted effects of agent's message behavior on target's perceived power. Subjects' across-trial message behavior was correlated with their partners' across-trial ratings of

Table 8

Correlations between Agent's Ratings of Own Alternatives and Message Behavior by Power Condition.

Strategy	Power Condition			
	LL	LH	HL	HH
Altruism	.09	.03	-.08	.13
Compromise/Neg.	-.09	-.08	-.04	.08
Direct request	-.14 _a	.01	-.09 _b	.16 _{ab}
Discounting	.10	-.08	.01	.12
Expertise	-.19 _{cd} *	.18 _c *	--	.09 _d
Inefficacy	.02	-.03	.16*	.18*
Liking	.19 _e *	-.05 _e	.01	.02
Qualities of object	-.03 _f	.15 _g	-.10 _{gh}	.22 _{fh} *
That's-not-all	-.12	.10 _i	-.14 _{ij}	.15 _j
Threat	.01	.01	-.02	.16*
Strategy Persist	-.11 _k	.07 _l	-.09 _m	.31 _{klm} *
Message Persist	-.11 _n	-.06	-.03	.12 _n
Diversity	-.11 _o	.01 _p	-.01 _q	.35 _{opq} *
Message Valence	.06	-.11 _r	.13 _r	-.03

Note: For all correlations, df = 104. A "*" indicates a statistically significant correlation at $p < .05$. Correlations with the same subscript are significantly different at $p < .05$ with a Fisher's r to z transformation. The z values for the significant differences by subscript are: a 2.17, b 1.81, c 2.69, d 2.03, e 1.74, f 1.82, g 1.80, h 2.33, i 1.73, j 2.10, k, 3.09, l 1.80, m 2.95, n 1.66, o 3.42, p 2.55, q 2.70, r 1.73.

Table 9

Correlations between Agent's Ratings of Target's
Alternatives and Message Behavior by Power Condition.

Strategy	Power Condition			
	LL	LH	HL	HH
Altruism	.06	-.01	-.06	-.13
Compromise/Neg.	-.23 _{ab} *	-.07 _c	.03 _a	.18 _{bc} *
Direct request	-.15	-.08	.04	-.04
Discounting	-.03	-.03	.10	.03
Expertise	-.16*	.03	--	-.01
Inefficacy	.08	.09	.07	-.10
Liking	-.10	.01	-.15	.06
Qualities of object	-.22 _{de} *	-.14 _{fg}	.20 _{df} *	.12 _{eg}
That's-not-all	.05	.02	.13	.11
Threat	-.19	-.11	-.04	-.09
Strategy Persist	-.24 _{hi} *	-.12 _{jk}	.11 _{hj}	.12 _{ik}
Message Persist	-.28 _l *	-.13 _m	-.07	.13 _{lm}
Diversity	-.26 _{np} *	-.05	.09 _n	.03 _p
Message Valence	-.07	.08	-.04	.02

Note: For all correlations, $df = 104$, "*" indicated a statistically significant correlation at $p < .05$. Correlations with the same subscript are significantly different at $p < .05$ with a Fisher's r to z transformation. The z values for the significant differences by subscript are: a 1.90, b 2.99, c 1.81, d 3.07, e 2.48, f 2.47, g 1.88, h 2.55, i 2.62, j 1.66, k 1.74, l 3.01, m 1.88, n 2.56, p, 2.13.

Table 10

Correlations between Agent's Ratings of Relative Power and Message Behavior by Power Condition.

Strategy	Power Condition			
	LL	LH	HL	HH
Altruism	.01	.02	-.00	.20*
Compromise/Neg.	.13	.00	-.04	-.08
Direct request	.03	.06	-.09 _a	.15 _a
Discounting	.08	-.03	-.06	.07
Expertise	.01	.09	--	.08
Inefficacy	-.05	-.08 _b	.14	.22 _b *
Liking	.19 _c *	-.04 _c	.11	-.03
Qualities of object	.15 _d	.19 _e *	-.20 _{def} *	.07 _f
That's-not-all	-.11	.05	-.17*	.03
Threat	.15	.08	.02	.19*
Strategy Persist	.13 _g	.12 _h	-.13 _{ghi}	.14 _i
Message Persist	.15	.05	.03	-.00
Diversity	.14	.03	-.07 _j	.24 _j *
Message Valence	.09	-.12 _k	.11 _k	-.04

Note: For all correlations, df = 104, "*" indicated a statistically significant correlation at p < .05. Correlations with the same subscript are significantly different at p < .05 with a Fisher's r to z transformation. The z values for the significant differences by subscript are: a 1.74, b 2.18, c 1.67, d 2.55, e 2.84, f 1.96, g 1.88, h 1.81, i 1.95, j 2.26, k 1.67.

relative power. Four significant correlations were found. The use of the qualities of object strategy was positively associated with partner's ratings of relative power, $r(104) = .29, p < .001$. Strategy persistence, $r(104) = .25, p < .005$, and diversity, $r(104) = .32, p < .0001$, were also positively related to partner's rating of perceived power, which was negatively associated with message valence, $r(104) = -.19, p < .03$. That is, participants were more likely to rate their bargaining position as superior to the partner's when their partner's used more strategies, more types of strategies, more negative strategies, and the qualities of objects strategy. See Table 11 for complete results.

Further analyses were conducted to determine if power condition moderated the effects of agent's message behavior upon target's perceived power. Ratings of own alternatives, target's alternatives, and relative power were correlated with message behavior in each power condition. Fisher's r to z transformations were used to test for differences in association between power conditions. The results suggest that the effects of message behavior on target's perceptions of power are moderated by actual power (i.e., power condition). The correlations between target's perceptions of own alternatives and agent's use of altruism, expertise, inefficacy, liking, qualities of objects, and threat strategies varied across at least some power conditions (see Table 12). Similarly, the correlations between target's

Table 11

Correlations between Message Behavior and Target's Perceived Relative Power across power conditions.

Strategy	r	Strategy	r
Altruism	.06	Qualities of object	.29*
Compromise/Neg.	.13	That's-not-all	-.04
Direct request	.11	Threat	.02
Discounting	.10	Strategy Persistence	.25*
Expertise	.11	Message Persistence	.08
Inefficacy	.03	Diversity	.32*
Liking	.07	Message Valence	-.19*

Note: For all correlations, $df = 104$, "*" indicated a statistically significant correlation at $p < .05$.

ratings of agent's alternatives and altruism, compromise/negotiation, direct request, inefficacy, threat strategies, as well as strategy persistence, message persistence, and diversity, and message valence differed significantly between some power conditions (see Table 13). Finally, interactions between power condition and ratings of relative power were found for altruism, direct request, expertise, inefficacy, qualities of objects, and threat strategies, and for strategy persistence, diversity, and message valence (see Table 14).

The final link in the alternative mediational model predicted effects for target's perceived power on agent's

Table 12

Correlations between Agent's Message Behavior and Target's Ratings of Own Alternatives by Power Condition.

Strategy	Power Condition			
	LL	LH	HL	HH
Altruism	-.07 _a	.16 _{ab}	.02	-.08 _b
Compromise/Neg.	-.00	.04	-.07	.10
Direct request	.01	.06	.11	-.03
Discounting	.02	-.04	.02	.18*
Expertise	-.17 _c *	-.02	--	.09 _c
Inefficacy	-.17 _d *	-.09	.11 _d	.03
Liking	.21 _e *	.05	-.10 _{ef}	.14 _f
Qualities of object	-.00 _g	-.04 _h	.16	.24 _{gh} *
That's-not-all	-.13	-.11	.07	-.01
Threat	.05 _i	-.06	.16 _j *	-.21 _{ij} *
Strategy Persist	-.05	-.03	.15	.16
Message Persist	-.02	.01	-.02	.04
Diversity	-.05	-.03	.17*	.13
Message Valence	-.01	-.08	.06	-.03

Note: For all correlations, df = 104. A "*" indicates a statistically significant correlation at p < .05. Correlations with the same subscript are significantly different at p < .05 with a Fisher's r to z transformation. The z values for the significant differences by subscript are: a 1.66, b 1.74, c 1.88, d 2.03, e 2.25, f 1.73, g 1.76, h 2.04, i 1.98, j 2.69.

Table 13

Correlations between Agent's Message Behavior and Target's Ratings of Agent's Alternatives by Power Condition.

Strategy	Power Condition			
	LL	LH	HL	HH
Altruism	-.05	-.15 _a	-.02	.12 _a
Compromise/Neg.	-.24 _{bc} *	.02 _b	-.07	.03 _c
Direct request	.01 _e	-.09 _f	-.36 _{efg} *	.04 _g
Discounting	.04	.00	.04	.01
Expertise	.10	.05	--	.04
Inefficacy	-.02	.07 _h	-.17 _h *	-.05
Liking	.04	-.02	-.05	-.04
Qualities of object	-.19*	.03	-.11	-.05
That's-not-all	-.01	-.05	-.09	.02
Threat	-.16 _i	.09 _{ij}	-.16 _j	.03
Strategy Persist	-.22 _{kl} *	.02 _{km}	-.26 _{mn} *	.02 _{ln}
Message Persist	-.19 _p *	-.01	-.15 _q	.08 _{pq}
Diversity	-.30 _{rs} *	.08 _{rt}	-.21 _t *	.01 _s
Message Valence	.16 _u *	.05	-.15 _u	-.00

Note: For all correlations, df = 104. A "*" indicates a statistically significant correlation at $p < .05$. Correlations with the same subscript are significantly different at $p < .05$ with a Fisher's r to z transformation. The z values for the significant differences by subscript are: a 1.96, b 1.91, c 1.98 e 2.78, f 2.05, g 3.00, h 1.74, i j 1.81, k l 1.75, m n 2.06, p 1.96, q 1.66, r 2.80, s 2.30, t 2.11, u 2.25.

Table 14

Correlations between Agent's Message Behavior and Target's Ratings of Relative Power by Power Condition.

Strategy	Power Condition			
	LL	LH	HL	HH
Altruism	-.00	.19 _a *	.03	-.15 _b
Compromise/Neg.	.19*	.01	-.00	.04
Direct request	-.00 _b	.09	.30 _{bc} *	-.05 _c
Discounting	-.03	-.02	-.01	.13
Expertise	-.19 _d *	-.05	--	.04 _d
Inefficacy	-.09 _e	-.10 _f	.18 _{ef} *	.06
Liking	.10	.04	-.03	.14
Qualities of object	.15	-.05 _g	.17*	.22 _g *
That's-not-all	-.01	-.03	.11	-.02
Threat	.16 _{hi}	-.09 _{hj}	.20 _{jk} *	-.18 _{ik} *
Strategy Persist	.14	-.03 _l	.26 _l *	.10
Message Persist	.14	.01	.09	-.03
Diversity	.21 _m *	-.07 _{mn}	.24 _n *	.09
Message Valence	-.13 _p	.05	.13 _p	-.02

Note: For all correlations, df = 104. A "*" indicates a statistically significant correlation at p < .05. Correlations with the same subscript are significantly different at p < .05 with a Fisher's r to z transformation. The z values for the significant differences by subscript are: a 2.47, b 2.23, c 2.58, d 1.67, e 1.96, f 2.03, g 1.97, h 1.81, i 2.47, j 2.11, k 2.77, l 2.13, m 2.04, n 2.26, p 1.88.

success. The correlation between target's across-trial ratings of relative power and agent's success was neither statistically significant nor substantial, $r(104) = -.04$. When the association between ratings of target's perceived power and success were broken down by condition, three significant correlations emerged. When subjects were in an inferior and unequal power situation (i.e., low, high power), other's estimation of own power was negatively associated with subject's success, $r(104) = -.19$, $p < .03$. In conditions of high mutual dependence (i.e., high, high power), other's appraisal of the subject's alternatives was positively related to success, $r(104) = .21$, $p < .02$, and other's perceptions of relative power was negatively related to subject's success, $r(104) = -.23$, $p < .008$. That is, (in the high, high power condition) as partners' rated a subject's alternatives as increasingly positive, subjects were increasingly successful, and as partners' rated their own alternatives as increasingly superior to that of the subject's, subject's were less successful. The correlations between the various ratings of perceived power and success, however, did not vary significantly across power conditions. Complete results are presented in Table 15.

The results presented so far suggest that the reasoning behind the alternative mediational model offers improvement over Bacharach and Lawler's (1981a) three variable model, but this model may still be overly simplistic. Because power was found to affect perceived power, and perceived

Table 15

Correlations between Target's Perceived Power and Agent's Success by Power Condition.

Perceived Power	Power Condition			
	LL	LH	HL	HH
Ratings of Own Alternatives	-.02	-.19*	-.15	-.10
Ratings of Other's Alternatives	.13	.01	.08	.21*
Ratings of Relative Power	-.12	-.12	-.15	-.23*

Note: an * indicates a statistically significant correlation at $p < .05$. For all correlations, $df = 104$. None for the correlations differ significantly across power conditions.

power was associated with message behavior, the extended mediational model may help explain the relationship between power and message use. Moreover, because message behavior was associated with other's perceived power, and other's perceived power had (albeit small) effects upon success, the alternative model offers an explanation of how message behavior affects success, and why no direct effects for message behavior on success were found.

Nevertheless, the findings that the link between subjects' perceived power and message behavior, and the link between message behavior and others' perceived power, were moderated by power condition is inconsistent with the five variable mediational model. In order to determine if the

model could be salvaged by minor alterations allowing power by perceived power interactions, additional analyses were required. Because the final link in the model was not moderated by power and was small in effect size, the model would predict negligible effects for power on success. If the data were consistent with this prediction, then such modification might be warranted. If, however, the data were inconsistent with this prediction, such modification would prove futile because the data would remain inconsistent with the revised version.

The effects of power on success were analyzed with a 2 x 2 (agent by target power) repeated measures ANOVA. The results indicated that all three components of explained variation were statistically significant and substantial. The main effect for own power, $F(1, 105) = 72.21$, $p < .0001$, $\eta^2 = .06$, $r = .25$, was significant with subject's success being greater in high power conditions ($M = 623.7$) than low power conditions ($M = 540.6$). When subjects' partners were in a low power condition ($M = 461.1$), subjects obtained much greater success than when their partners were in a high power condition ($M = 703.2$); $F(1, 105) = 618.03$, $p < .0001$, $\eta^2 = .51$, $r = .72$. The interaction between agent and target power was also statistically significant, $F(1, 105) = 142.86$, $p < .0001$, $\eta^2 = .09$, $r = .30$. Success was greatest in conditions of low/low power ($M = 711.79$, $SD = 71.80$) followed by high/low power ($M = 694.63$, $SD = 100.75$), high/high power ($M = 552.76$, $SD = 116.97$), and

low/high power ($M = 369.43$, $SD = 99.65$).

These results are clearly inconsistent with either version of the mediational model. Moreover, minor alterations that might account for previous inconsistencies, could not reconcile the strong effects for power upon success. Therefore, the various versions of the mediational model, although they provide some insights, can be rejected. Attention is now turned to the moderator model.

The Moderator Model

The moderator model predicts that strategies will be differentially effective in different power conditions. To test this model, the various types and dimensions of message behavior were correlated with success in each of the four power conditions. Fisher's r to z transformations were used to test for differences in association across power conditions.

Only one significant correlation was found in the low mutual dependence (i.e., low-low power) condition. The use of altruism strategies were negatively associated, $r(104) = -.19$, $p < .03$, with success. This correlation did not differ significantly across power conditions.

In the low agent, high target condition the use of compromise/negotiation strategies were found to be ineffective, $r(104) = -.28$, $p < .002$. This correlation differed significantly from the correlations observed in the other three power conditions (with low/low, $r = .04$, $z = 2.36$, $p < .01$; with high/low, $r = .21$, $z = 3.60$, $p < .0001$;

with high/high, $r = .07$, $z = 2.58$, $p < .005$). Both strategy persistence, $r(104) = -.19$, $p < .03$, and message persistence, $r(104) = -.25$, $p < .005$, were also counterproductive. The correlation for strategy persistence differed significantly from the correlations obtained in the high agent/low target ($r = .11$, $z = 2.40$, $p < .01$) and the high/high conditions ($z = 1.67$, $p < .05$), and the correlation for message persistence differed from the correlations in the low/low condition ($r = .10$, $z = 2.56$, $p < .006$) and the high/low condition ($r = .11$, $z = 2.63$, $p < .005$). The use of positive messages, however, was strongly related to success. The correlation between message valence and success was $r = .52$, $p < .0001$. This correlation differed significantly from the correlations observed in the other three power conditions (with low/low, $r = -.02$, $z = 4.29$, $p < .0001$; with high/low, $r = .04$, $z = 3.86$, $p < .0001$; with high/high, $r = .10$, $z = 3.43$, $p < .0001$).

In the high self/low target power condition, only compromise/negotiation strategies were associated with success, $r(104) = .21$. As noted above, this correlation differed from the correlation obtained in the low/high condition. Although not statistically significant, the correlation for diversity, $r(104) = .15$, $p < .07$, differed from the correlations obtained in the low/low ($r = -.10$, $z = 1.81$, $p < .04$) and the low/high ($r = -.14$, $z = 2.10$, $p < .02$) power conditions.

Table 16

Correlations between Message Behavior and Success by Power Condition.

Strategy	Power Condition			
	LL	LH	HL	HH
Altruism	-.19*	-.07	-.01	-.03
Compromise/Negotiation	.04 _a	-.28 _{abc} *	.21 _b *	.07 _c
Direct request	.01	-.09	-.07	-.07
Discounting	.03	-.05	.04	.00
Expertise	.10	-.09	--	.02
Inefficacy	-.05	-.03	.03	.04
Liking	.04	-.06	-.04	-.06
Qualities of the object	-.02	-.04	.07	.11
That's-not-all	-.12	.05	.01	-.07
Threat	.13	.04	.02	-.04
Strategy Persistence	-.01	-.19 _{de} *	.14 _d	.04 _e
Message Persistence	.10 _f	-.25 _{fg} *	.11 _g	-.03
Diversity	-.10 _h	-.14 _i	.15 _{hi}	.01
Message Valence	-.02 _j	.52 _{jkl} *	.04 _k	.10 _l

Note: For all correlations, df = 104. A "*" indicates a statistically significant correlation at p < .05. Correlations with the same subscript are significantly different at p < .05 with a Fisher's r to z transformation. The z values for the significant differences by subscript are: a 2.36, b 3.60, c 2.58, d 2.40, e 1.67, f 2.56, g 2.63, h 1.81, i 2.10, j 4.29, k 3.86, l 3.43.

No significant correlations were found in the high agent/low target condition, nor did any those correlation vary across power condition except as noted above. See Table 16 for complete results.

These results, although modest, are generally consistent with the moderator model. Coupled with the previous finding of no direct effects of message behavior upon success, these results suggest that those affects that are attributable to message behavior vary as a function of power. Examination of table 16 indicates that most differences occurred between the two unequal power conditions.

Individual Differences

Now that the general models of power and compliance gaining have been tested, attention is turned to individual difference in power implementation. Differences attributable to agent's and partner's sex, need for affiliation, need for power, and self esteem will be reported. The effects of each individual difference variable on message behavior and success will be analyzed. Potential interactions between individual differences, power, and message behavior on success are also reported. The effects for sex are reported first.

Sex Differences

Sex differences in message behavior were tested with 2 x 2 x 2 x 2 mixed ANOVAs with agent power (high/low) and target's power (high/low) as repeated factors, agent's and

target's sex as independent groups factors and message behavior as the dependent measure. Separate ANOVAs were run for each strategy type and dimension of message behavior. Because effects attributable to power are reported above, only main effects for sex, and interactions involving sex are reported here.

Although some effects for sex upon message behavior were found, they were relatively few in number and small in size. There was a significant main effect for agent's sex on compromise/negotiation strategies, $F(1, 102) = 4.52$, $p < .04$, $\eta^2 = .03$, $r = .16$. Females ($M = 1.30$) used this strategy more frequently than males ($M = 0.97$). Two significant main effects of partner's sex were also obtained. Subjects used altruism more often when their partner was female ($M = 0.10$) than when their partner was male ($M = 0.03$), $F(1, 102) = 6.71$, $p < .02$, $\eta^2 = .02$, $r = .14$. Subjects also used more inefficacy strategies in attempting to gain the compliance of females ($M = 0.18$) than males ($M = 0.08$); $F(1, 102) = 8.73$, $p < .004$, $\eta^2 = .02$, $r = .15$.

Sex differences in differences in success were tested with a $2 \times 2 \times 2 \times 2$ mixed ANOVA with agent power (high/low) and target's power (high/low) as repeated factors and agent's and target's sex as independent groups factors. No significant effects for sex or interactions involving sex were found.

Sex differences in message effectiveness were

investigated by computing separate message behavior-success correlations for male and female subjects, and for subjects with male and female partners. Differences in association were tested with Fisher's χ^2 to z transformations.

For male subjects, the use of inefficacy strategies, $r(48) = .25$, $p < .04$, qualities of object strategies, $r(48) = .25$, $p < .04$, strategy persistence, $r(48) = .31$, $p < .02$, and diversity, $r(48) = .35$, $p < .01$, were associated with increased effectiveness. The use of the that's-not-all strategy by female subjects was negatively related to success in the bargaining game, $r(54) = -.38$, $p < .002$. Three significant sex differences in message effectiveness were found. The that's-not-all strategy was less effective when used by women than by men ($z = 2.50$, $p < .006$), and both strategy persistence ($z = 2.46$, $p < .007$) and diversity ($z = 2.33$, $p < .01$) were effective for men but not women.

Target's sex was also found to affect message effectiveness. The that's-not-all strategy, $r(48) = -.23$, $p < .05$, and strategy persistence, $r(48) = -.23$, $p < .05$, were counterproductive with male targets. Inefficacy, $r(54) = .28$, $p < .02$, qualities of object, $r(54) = .28$, $p < .02$, that's-not-all, $r(54) = .26$, $p < .03$, strategy persistence, $r(54) = .32$, $p < .01$, and diversity, $r(54) = .29$, $p < .02$, all proved effective in gaining the compliance of females. The inefficacy ($z = 2.40$, $p < .008$) and qualities of object ($z = 2.05$, $p < .02$) strategies and diversity ($z = 2.04$, $p < .03$) were effective on females but

not males. That's-not-all ($z = 2.50, p < .006$) and strategy persistence ($z = 2.83, p < .003$) were effective on females but were counterproductive with male targets (see Table 17 for complete results).

Potential agent's power by target's power by agent's sex by message interactions were investigated in a similar manner. Separate message effectiveness correlations were calculated for male and female subjects in each power condition. Several significant and substantial interactions were found.

The use of altruism was effective for males in the high/high power condition, $r(48) = .42, p < .001$, but counterproductive for males in the low/low condition, $r(48) = -.33, p < .01$, and females in the high/high condition, $r(54) = -.32, p < .008$. The difference in the utility of altruism for males and females in high/high power was significant, $z = 3.90, p < .0002$. Compromise/negotiation strategies were positively related to success for men in the high/low power trial, $r(48) = .35, p < .006$, but negatively related to male's success in the low/high power condition, $r(48) = -.36, p < .005$. Direct requests proved counterproductive for females in the high/low, $r(54) = -.29, p < .02$, and high/high, $r(54) = -.29, p < .02$, conditions. Each of these correlations differed from those of males in the same power condition ($z = 2.40, p < .009$, and $z = 2.45, p < .008$ respectively). Inefficacy strategies were effective for females $r(54) = .26, p < .03$, but not

Table 17

Correlations between Message Behavior and Success by Agent's Sex and Target's Sex.

Strategy	Agent's Sex		Target's Sex	
	Men	Women	Men	Women
Altruism	.23	-.03	.07	.10
Compromise/Neg.	.15	-.07	-.14	.07
Direct request	.14	-.17	-.15	.07
Discounting	.03	.05	-.17	.19
Expertise	.06	.03	-.03	.06
Inefficacy	.25*	.05	-.19 _d	.28 _d *
Liking	.14	-.07	.01	-.08
Qualities of object	.25*	-.02	-.12 _e	.28 _e *
That's-not-all	.10 _a	-.38 _a *	-.23 _f *	.26 _f *
Threat	.07	.08	.05	.05
Strategy Persist	.31 _b *	-.17 _b	-.23 _g *	.32 _g *
Message Persist	.08	-.08	-.08	.00
Diversity	.35 _c *	-.10 _c	-.11 _h	.29 _h *
Message Valence	-.01	-.04	.00	-.04

Note: For men, df = 48, for women, df = 54. A "*" indicates a statistically significant correlation at $p < .05$. Correlations with the same subscript are significantly different at $p < .05$ with a Fisher's r to z transformation. The z values for the significant differences by subscript are: a 2.50, b 2.46, c 2.33, d 2.40, e 2.05, f 2.50, g 2.83, h 2.04.

males (difference, $z = 1.98$, $p < .03$) in the low/high power trial, and qualities of objects strategies were effective for males, $r(48) = .38$, $p < .009$, but not females (difference, $z = 2.47$, $p < .007$) in the high/low power trial. The that's-not-all strategy was counterproductive for females in the low/low condition, $r(54) = -.22$, $p < .05$, and more effective for males than females in the high/low cell, $z = 1.72$, $p < .05$.

Strategy persistent males were found to be effective in the high/low, $r(48) = .38$, $p < .004$, and the high/high, $r(48) = .23$, $p < .05$, trials, but counterproductive in the low/high trial, $r(48) = -.26$, $p < .04$. Strategy persistence was more effective for males than for females in high/low power, $z = 2.40$, $p < .009$. Sending more messages (i.e., message persistence) was associated with less success for males in a low/high power condition, $r(48)$, $p < .006$, but was more effective for males than females in high/high power, $z = 1.87$, $p < .04$. For males, diversity was negatively associated with success in the low/high condition, $r(48) = -.27$, $p < .001$ and positively associated with success in the high/low condition, $r(48) = .45$, $p < .03$. Using a larger variety of strategies (i.e., diversity) was more effect for females than males in the low/high power condition, $z = 2.29$, $p < .02$, but more effective for males than females in the high/low, $z = 3.08$, $p < .001$, and high/high, $z = 1.77$, $p < .04$, conditions. Finally, using positively valenced messages was strongly associated with

success, $r(48) = .69$, $p < .0001$, for males in the low/high power condition. This correlation was substantially larger than the correlation for female subjects ($z = 3.43$, $p < .001$). Complete results are presented in Table 18.

Similar analyses were run in order to test for potential agent's power by target's power by target's sex by message interactions on success. The use of altruism strategies on females under conditions of low/low power was counterproductive, $r(54) = -.41$, $p < .001$. This correlation differed significantly ($z = 2.38$, $p < .009$) from the correlation obtain for male targets in the same condition. Compromise/negotiation [$r(48) = -.37$, $p < .005$] and qualities of objects strategies [$r(48) = -.28$, $p < .03$, sex difference, $z = 2.14$, $p < .02$] in the low/high condition, inefficacy [$r(48) = -.33$, $p < .01$, sex difference, $z = 2.37$, $p < .009$] and that's-not-all [$r(48) = -.24$, $p < .05$] in the low/low condition, and discounting [$r(48) = -.24$, $p < .05$, sex difference, $z = 1.93$, $p < .03$] in the high/high condition were all negatively related to success when the target was male. Liking was more effective on females than males ($z = 1.77$, $p < .04$) in high/high power. The that's-not all strategy [$r(54) = .44$, $p < .0001$, sex difference, $z = 3.27$, $p < .001$] was very effective with females in the low/high power trial.

Strategy persistence was ineffective in bargaining with males in the low/high condition [$r(48) = -.38$, $p < .003$, sex difference, $z = 2.00$, $p < .03$], effective with females

Table 18

Correlations between Message Behavior and Success by Agent's Sex and Power Condition.

Strategy	Sex	Power Condition			
		LL	LH	HL	HH
Altruism	Male	-.33*	-.12	.06	.42 _g *
	Female	.03	-.05	-.05	-.32 _g *
Compromise/ Negotiation	Male	.05	-.36*	.35*	.18
	Female	.03	-.07	.13	.03
Direct request	Male	.00	-.09	.18 _b	.19 _c
	Female	.01	-.07	-.29 _b *	-.29 _c *
Discounting	Male	.03	-.09	.04	.08
	Female	.03	-.01	.04	-.04
Expertise	Male	.14	-.08	--	--
	Female	--	-.09		.03
Inefficacy	Male	.13	-.13 _d	.08	.20
	Female	-.19	.26 _d *	.00	-.08
Liking	Male	.03	-.08	-.12	--
	Female	.05	.01	.04	-.06
Qualities of the object	Male	.04	.02	.33 _e *	.05
	Female	-.06	-.15	-.15 _e	.15
That's-not- all	Male	-.03	-.02	.14 _f	.02
	Female	-.22*	.10	-.20 _f	-.12
Threat	Male	.12	-.03	-.07	-.05
	Female	.13	.13	.11	-.03

Table 18 (Cont'd)

Strategy	Sex	Power Condition			
		LL	LH	HL	HH
Strategy Persistence	Male	.04	-.26*	.38 _g *	.23*
	Female	-.06	-.03	-.08 _g	-.08
Message Persistence	Male	.12	-.35*	.17	.21 _h
	Female	.09	-.09	.06	-.16 _h
Diversity	Male	-.00	-.27 _i *	.45 _j *	.23 _k
	Female	-.22	.18 _i	-.13 _j	-.12 _k
Message Valence	Male	-.02	.69 _l *	-.06	-.10
	Female	-.02	.16 _l	.17	.20

Note: For males, $df = 48$, for females, $df = 54$. A "*" indicates a statistically significant correlation at $p < .05$. Correlations with the same subscript are significantly different at $p < .05$ with a Fisher's r to z transformation. The z values for the significant differences by subscript are: a 3.90, b 2.40, c 2.45, d 1.98, e 2.47, f 1.72, g 2.40, h 1.87, i 2.29, j 3.08, k 1.77, l 3.43. Only differences between sex within power condition are reported.

in the high low condition [$r(48) = .30, p < .02$], and more effective on females than males in conditions of high/high power, $z = 2.08, p < .02$. Message persistence and diversity were also associated with lower outcomes with male targets in the low/high trial, $r(48) = -.30, p < .02$, and $r = -.42, p < .001$. The latter correlation differed from that obtained for female targets in the same condition, $z = 3.10, p < .001$. The use of positively valenced messages was positively related to success for both males, $r(48) = .47, p < .0001$, and females $r = .56, p < .0001$. Complete results are presented in Table 19.

Finally, tests were made for subject's power by partner's power by subject's sex by partner's sex by message interactions. These analyses suggest that message effectiveness is moderated by both power combination and sex combination. That is, success appears to be a function of a five-way interaction.

Due to difficulties inherent in describing such effects in text, the reader is referred to Table 20 and Table 21 for detailed results. Table 20 shows differences in message effectiveness attributable to sex combination and broken down by power condition. Power condition differences in message effectiveness broken down by sex combination are presented in Table 21. Although most of the finding in Table 20 and Table 21 will not be reported in text, three general trends merit mention.

Table 19

Correlations between Message Behavior and Success by Target's Sex and Power Condition.

Strategy	Sex	Power Condition			
		LL	LH	HL	HH
Altruism	Male	.04 _a	.00	.06	.08
	Female	-.41 _a *	-.12	.07	-.09
Compromise/ Negotiation	Male	.08	-.37*	.21	-.09
	Female	.00	-.19	.19	.14
Direct request	Male	.00	-.16	.09	-.11
	Female	.01	-.03	-.01	-.06
Discounting	Male	.04	.01	--	-.24 _b *
	Female	--	-.08	.12	.14 _b
Expertise	Male	--	-.06	--	.04
	Female	.14	-.11	--	--
Inefficacy	Male	-.33 _c *	-.10	-.02	-.16
	Female	.13 _c	.01	.10	.12
Liking	Male	.04	-.11	-.15	-.20 _d
	Female	.04	-.00	-.01	.15 _d
Qualities of the object	Male	-.09	-.28 _e *	.05	-.08
	Female	.05	.14 _e	.26*	.22
That's-not- all	Male	-.24*	-.18 _f	.04	-.15
	Female	.06	.44 _f *	.14	-.02
Threat	Male	.12	.10	-.05	-.09
	Female	.13	-.04	.07	-.01

Table 19 (Cont'd)

Strategy	Sex	Power Condition			
		LL	LH	HL	HH
Strategy Persistence	Male	-.10	-.38 _g *	.15	-.21 _h
	Female	.08	-.00 _g	.30*	.20 _h
Message Persistence	Male	.15	-.30*	.13	-.22
	Female	.06	-.20	.16	.05
Diversity	Male	-.20	-.42 _i *	.17	-.14
	Female	.02	.17 _i	.16	.12
Message Valence	Male	.00	.47*	-.05	.19
	Female	-.04	.56*	.12	.01

Note: For males, df = 48, for females, df = 54. A "*" indicates a statistically significant correlation at $p < .05$. Correlations with the same subscript are significantly different at $p < .05$ with a Fisher's r to z transformation. The z values for the significant differences by subscript are: a 2.38, b 1.93, c 2.37, d 1.77, e 2.14, f 3.27, g 2.00, h 2.08, i 3.10. Only differences between sex within power condition are reported.

Table 20

Sex differences in Correlations between Message Behavior and Success by Gender Combination and Power Condition.

Strategy	Sex	Power Condition			
		LL	LH	HL	HH
Altruism	M/M	.04 _a	--	--	.59 _{cd} *
	M/F	-.55 _{ab} *	-.16	.05	.31 _{ef}
	F/M	.04 _b	.13	.08	-.28 _{ce}
	F/F	--	-.15	-.19	-.34 _{df} *
Compromise/ Negotiation	M/M	.19	-.57 _{abc} *	.45 _d *	.03
	M/F	-.04	-.12 _a	.25	.28 _e
	F/M	.03	-.02 _b	-.02 _d	-.21 _e
	F/F	.03	-.16 _c	.26	.11
Direct request	M/M	-.02	-.18	.25 _a	-.15 _d
	M/F	.02	.02	.04 _b	.42 _{def} *
	F/M	.02	-.08	-.09 _c	-.10 _e
	F/F	.01	-.06	-.56 _{abc} *	-.36 _f *
Discounting	M/M	.04	-.04	--	--
	M/F	--	-.12	.03	.08
	F/M	.04	--	--	-.30 _a
	F/F	--	-.04	.05	.19 _a
Expertise	M/M	--	--	--	--
	M/F	.19	-.11	--	--
	F/M	--	-.06	--	.05
	F/F	--	-.12	--	--
Inefficacy	M/M	.04 _a	-.12 _d	.08	.01
	M/F	.17 _b	-.14 _e	-.06	.27 _f
	F/M	-.52 _{abc} *	-.01	-.07	-.28 _f
	F/F	.10 _c	.38 _{de} *	.01	.01
Liking	M/M	.04	-.12	-.21	--
	M/F	--	--	.05	--
	F/M	.04	-.09	--	-.25
	F/F	.06	.09	.04	.19
Qualities of the object	M/M	-.11	-.32 _a	.33 _c	-.13
	M/F	.16	.27 _{ab}	.29 _d	.15
	F/M	-.08	-.21 _b	-.22 _{cd}	-.03
	F/F	-.04	-.12	-.13	.26

Table 20 (Cont'd)

Strategy	Sex	Power Condition			
		LL	LH	HL	HH
That's-not-all	M/M	-.16	-.27 _{ab}	.23	.06
	M/F	.08	.35 _{ac} *	.10	-.00
	F/M	-.29	-.11 _d	-.21	-.33*
	F/F	.04	.81 _{bcd} *	--	-.02
Threat	M/M	.14	.15	-.20	.01
	M/F	.10	-.25 _a	.06	-.12
	F/M	.11	-.15 _b	.13	-.28
	F/F	.15	.36 _{ab} *	.05	.05
Strategy Persistence	M/M	.01	-.48 _a *	.43 _{bc} *	-.01
	M/F	.07	.01 _a	.27	.36 _d *
	F/M	-.18	-.21	-.17 _b	-.35 _d *
	F/F	.09	.06	-.07 _c	.10
Message Persistence	M/M	.30	-.49*	.22	.03
	M/F	.02	-.21	.28	.33 _a *
	F/M	.07	-.09	.03	-.43 _a *
	F/F	.11	-.13	.03	-.05
Diversity	M/M	-.06	-.53 _{ab} *	.53 _{de} *	.06
	M/F	.04	.04 _a	.20	.31 _f
	F/M	-.34*	-.20 _c	-.27 _d	-.25 _f
	F/F	-.03	.45 _{ac} *	-.06 _e	-.01
Message Valence	M/M	.00	.49 _{ab} *	-.09 _f	-.01
	M/F	-.04	.86 _{acd} *	-.01	-.27 _g
	F/M	.00	.56 _{ce} *	.02	.29 _g
	F/F	-.04	-.22 _{bde}	.40 _f *	.16

Note: For males with male targets (M/M), $df = 22$, for males with female targets (M/F) and females with male targets (F/M), $df = 24$, and for females with female targets (F/F), $df = 28$. A "*" indicates a statistically significant correlation at $p < .05$. Correlations with the same subscript are significantly different at $p < .05$ with a Fisher's r to z transformation. Only differences between sex combination within power condition were tested.

Table 20 (Cont'd)

The z values for the significant differences by strategy and subscript are: altruism, a 2.18, b 2.23, c 3.20, d 3.55, e 2.09, f 2.38; compromise/negotiation, a 1.75, b 2.08, c 1.67, d 1.67, e 1.70; direct request, a 3.05, b 2.37, c 1.91, d 1.98, e 1.86, 2.91; discounting, a 1.81; inefficacy, a 2.04, b 2.54, c 2.38, d 1.79, e 1.91, f 1.92; qualities of object, a 2.01, b 1.66, c 2.38, d 1.77; that's-not-all, a 2.13, b 4.82, c 2.68, d 4.36; threat, a 2.23, b 1.86; strategy persistence, a 1.70, b 2.09, c 1.82, d 2.52; message persistence a 2.72; diversity, a 2.09, b 3.69, c 2.42, d 2.87, e 2.23, f 1.95; message valence, a 2.51, b 2.61, c 2.24, d 5.35, e 3.02, f 1.77, g 1.95.

Table 21

Power Condition Differences in Correlations between Message Behavior and Success by Sex Combination.

Strategy	Sex	Power Condition			
		LL	LH	HL	HH
Altruism	M/M	.04 _a	--	--	.59 _a *
	M/F	-.55 _{bc} *	-.16	.05 _b	.31 _c
	F/M	.04	.13	.08	-.28
	F/F	--	-.15	-.19	-.34*
Compromise/ Negotiation	M/M	.19 _a	-.57 _{abc} *	.45 _b *	.03 _c
	M/F	-.04	-.12	.25	.28
	F/M	.03	-.02	-.02	-.21
	F/F	.03	-.16	.26	.11
Direct request	M/M	-.02	-.18	.25	-.15
	M/F	.02	.02	.04	.42*
	F/M	.02	-.08	-.09	-.10
	F/F	.01 _a	-.06 _b	-.56 _{ab} *	-.36*
Discounting	M/M	.04	-.04	--	--
	M/F	--	-.12	.03	.08
	F/M	.04	--	--	-.30
	F/F	--	-.04	.05	.19
Expertise	M/M	--	--	--	--
	M/F	.19	-.11	--	--
	F/M	--	-.06	--	.05
	F/F	--	-.12	--	--
Inefficacy	M/M	.04	-.12	.08	.01
	M/F	.17	-.14	-.06	.27
	F/M	-.52 _{ab} *	-.01 _a	-.07 _b	-.28
	F/F	.10	.38*	.01	.01
Liking	M/M	.04	-.12	-.21	--
	M/F	--	--	.05	--
	F/M	.04	-.09	--	-.25
	F/F	.06	.09	.04	.19
Qualities of the object	M/M	-.11	-.32 _a	.33 _a	-.13
	M/F	.16	.27	.29	.15
	F/M	-.08	-.21	-.22	-.03
	F/F	-.04	-.12	-.13	.26

Table 21 (Cont'd)

Strategy	Sex	Power Condition			
		LL	LH	HL	HH
That's-not-all	M/M	-.16	-.27 _a	.23 _a	.06
	M/F	.08	.35*	.10	-.00
	F/M	-.29	-.11	-.21	-.33*
	F/F	.04 _b	.81 _{bc}	--	-.02 _c
Threat	M/M	.14	.15	-.20	.01
	M/F	.10	-.25	.06	-.12
	F/M	.11	-.15	.13	-.28
	F/F	.15	.36*	.05	.05
Strategy Persistence	M/M	.01 _a	-.48 _{abc} *	.43 _b *	-.01 _c
	M/F	.07 _a	.01	.27	.36*
	F/M	-.18	-.21	-.17	-.35*
	F/F	.09	.06	-.07 _c	.10
Message Persistence	M/M	.30 _a	-.49 _{ab} *	.22 _a	.03
	M/F	.02	-.21 _{cd}	.28 _c	.33 _d *
	F/M	.07 _e	-.09	.03 _f	-.43 _{ef} *
	F/F	.11	-.13	.03	-.05
Diversity	M/M	-.06 _a	-.53 _{bc} *	.53 _{ab} *	.06 _c
	M/F	.04	.04	.20	.31
	F/M	-.34*	-.20	-.27	-.25
	F/F	-.03 _d	.45 _{def} *	-.06 _e	-.01 _f
Message Valence	M/M	.00 _a	.49 _{abc} *	-.09 _b	-.01 _c
	M/F	-.04 _d	.86 _{def} *	-.01 _e	-.27 _f
	F/M	.00 _g	.56 _{gh} *	.02 _h	.29
	F/F	-.04	-.22 _i	.40 _i *	.16

Note: For males with male targets (M/M), df = 22, for males with female targets (M/F) and females with male targets (F/M), df = 24, and for females with female targets (F/F), df = 28. A "*" indicates a statistically significant correlation at $p < .05$. Correlations with the same subscript are significantly different at $p < .05$ with a Fisher's r to z transformation. Only differences between power conditions within sex combination were tested.

Table 21 (Continued)

The z values for the significant differences by strategy and subscript are: altruism, a 2.07, b 2.27, c 3.18; compromise/negotiation, a 2.72, b 3.67, c 2.0; direct request, a 2.36, b 2.10; inefficacy, a 1.92, b 1.72; qualities of object, a 2.19; that's-not-all, a 1.66, b 3.99, c 4.21; strategy persistence, a 1.73, b 3.19, c 1.66; message persistence, a 2.74, b 2.46, c 1.70, d 1.88, e 1.80, f 1.66; diversity, a 2.11, b 3.82, c 2.11, d 1.89, e 2.00, f 1.82; message valence, a 1.73, b 2.03, c 1.77, d 4.52, e 4.42, f 5.32, g 2.15, h 2.08, i 2.38.

First, for male/male dyads, several strategies and dimensions of message behavior differed radically in effectiveness between the two unequal power conditions. In the low relative power (i.e., low/high) condition, compromise/negotiation, qualities of object, and that's-not-all strategies as well as strategy persistence, message persistence and diversity, tended to be counterproductive (correlations with success ranged from $-.27$ to $-.57$). Each of these aspects of message behavior were found to be significantly more effective in the high relative power (i.e., high/low) condition, with r s ranging from $+.22$ to $+.53$.

Second, males with female targets tended to differ in message effectiveness from females with male targets in conditions of high mutual dependence (i.e., high, high power). Such effects were found for altruism, compromise/negotiation, direct requests, inefficacy, strategy persistence, message persistence, diversity, and valence. With one exception, these strategies or dimensions were more effective for males than females. The trend was reversed for message valence.

Third, with the exception of female/female dyads, using positively valence messages was the only effective technique in conditions low relative power. Message valence was positively associated with success, and all other strategies and dimensions were either ineffective or counterproductive for male and mixed-sex dyads in this condition. This finding, however, was not the case for female dyads. Message valence was not significantly related to success and was negative in sign. Moreover, the use of inefficacy, that's-not-all, treats, and diversity were all effective for female/female dyads.

To summarize, agent's and target's sex had some effects upon message behavior. These effects, however, were few in number and small in size. There were no direct effects for sex upon success. Males and females did not differ in effectiveness nor were males or females different in the extent to which they were influenced. Where sex played a substantial role, however, was in message effectiveness; particularly in combination with agent's and target's power. Simply put, the extent that subject's messages were effective was dependent upon the subject's sex, their power, their partner's power, and their partner's sex.

Effects of trait-like variables

In addition to assessing sex effects, the effects of four personality variables were investigated. The four personality variables included need for affiliation, expressed control, wanted control, and self esteem. The impact of each on

message behavior, success, and message effectiveness was assessed. Tests were also made for power by personality interactions. The impact of personality on message behavior is reported first.

The effects of personality on message behavior were investigated by correlating each personality variable with the frequency of use for each strategy and the four dimensions of message behavior. The resulting matrix is presented in Table 22. Only three of the correlations were statistically significant. Need for affiliation was positively associated with diversity, $r(104) = .18, p < .03$, scores on expressed control correlated with the use of threats, $r(104) = .22, p < .02$, and wanted control was significantly correlated with expertise strategies, $r(104) = .19, p < .03$.

Potential interactions between personality and power on message use were tested by running separate personality-message behavior correlations for each power condition and testing for differences in association between power conditions. The effects of need for affiliation on altruism, discounting, and liking were found to vary significantly across power conditions (see Table 23). Power also moderated the expressed control-message behavior correlations for altruism, discounting, liking, qualities of objects, and threat strategies as well as for all four dimensions of message behavior (see Table 24). Wanted control by power interactions were found for liking, diversity, and valence (see Table 25), and self esteem interacted with power to

Table 22

Correlations between Personality Variables and Message Behavior.

Strategy	Personality Variable			
	Need for Affil.	Expressed Control	Wanted Control	Self Esteem
Altruism	.03	-.09	.08	-.08
Compromise/Negotiation	.10	.15	-.05	-.04
Direct request	-.05	-.03	.05	.04
Discounting	.13	-.10	-.11	.09
Expertise	.10	-.06	.19*	.05
Inefficacy	.06	.08	-.02	.04
Liking	.04	.14	-.02	.01
Qualities of the object	.12	-.03	.04	.14
That's-not-all	.13	.05	.10	-.07
Threat	-.07	.22*	.05	-.01
Strategy Persistence	.13	.11	.07	.03
Message Persistence	.07	.12	-.01	-.04
Diversity	.18*	.04	.05	.05
Message Valence	.10	-.04	.14	-.08

Note: For all correlations, df = 104. A "*" indicates a statistically significant correlation at $p < .05$.

Table 23

Correlations between Need for Affiliation and Message Behavior by Power Condition.

Strategy	Power Condition			
	LL	LH	HL	HH
Altruism	.15 _a	.07 _b	-.17 _{abc} *	.12 _c
Compromise/Neg.	.10	.04	.10	.08
Direct request	.02	-.08	.01	-.08
Discounting	.08	.05	-.13 _d	.20 _d *
Expertise	.13	.00	--	.07
Inefficacy	-.03	.04	-.02	.16
Liking	-.10 _e	.18 _e *	-.03	.12
Qualities of object	.11	.11	.05	.11
That's-not-all	.10	.17*	.10	.00
Threat	-.05	.01	-.06	-.13
Strategy Persist	.11	.14	.04	.13
Message Persist	.09	.07	.12	.03
Diversity	.13	.16	.04	.13
Message Valence	-.03	.00	.12	.07

Note: For all correlations, df = 104. A "*" indicates a statistically significant correlation at $p < .05$. Correlations with the same subscript are significantly different at $p < .05$ with a Fisher's r to z transformation. The z values for the significant differences by subscript are: a 2.32, b 1.74, c 2.10, d 2.40, e 2.03.

Table 24

Correlations between Expressed Control and Message Behavior by Power Condition.

Strategy	Power Condition			
	LL	LH	HL	HH
Altruism	.15 _a	-.05	-.13 _b	.09
Compromise/Neg.	.11	.17*	.05	.25*
Direct request	.02	-.02	-.09	.06
Discounting	.08	-.12 _b	-.02	.11 _b
Expertise	.13	-.02	--	-.02
Inefficacy	-.03	.03	-.04	.14
Liking	-.01 _c	.22 _{cd} *	-.08 _d	.14
Qualities of object	-.12 _e	-.07	-.05	.13 _e
That's-not-all	.01	.13	.05	-.06
Threat	.05 _f	.31 _{fg} *	.19 _h *	-.06 _{gh}
Strategy Persist	-.02 _i	.18*	.03	.22 _i *
Message Persist	-.03 _{jk}	.23 _j *	.09	.26 _k *
Diversity	-.02	.20 _l *	-.03 _l	.16*
Message Valence	.05	.14 _m	-.15 _m	-.08

Note: For all correlations, df = 104. A "*" indicates a statistically significant correlation at p < .05. Correlations with the same subscript are significantly different at p < .05 with a Fisher's r to z transformation. The z values for the significant differences by subscript are: a 2.03, b 1.66, c 1.68, d 2.89, e 1.81, f 1.95, g 2.74, h 1.82, i 1.75, j 1.90, k 2.13, l 1.68, m 2.10.

Table 25

Correlations between Wanted Control and Message Behavior by Power Condition.

Strategy	Power Condition			
	LL	LH	HL	HH
Altruism	.02	.13	.06	-.05
Compromise/Neg.	.04	-.07	-.04	-.02
Direct request	.04	.09	.06	-.06
Discounting	-.04	-.13	.08	.02
Expertise	.17*	.11	--	.02
Inefficacy	-.01	.03	-.05	-.00
Liking	-.11 _a	-.03	-.08 _b	.17 _{ab} *
Qualities of object	.12	.06	-.01	.00
That's-not-all	.01	.07	.12	.16
Threat	.02	.18*	-.04	-.04
Strategy Persist	.09	.10	-.02	.03
Message Persist	.06	.06	-.02	-.07
Diversity	.05	.19 _c *	-.12 _c	.10
Message Valence	-.03	-.05	-.18 _d *	.11 _d

Note: For all correlations, df = 104. A "*" indicates a statistically significant correlation at p < .05. Correlations with the same subscript are significantly different at p < .05 with a Fisher's r to z transformation. The z values for the significant differences by subscript are: a 2.03, b 1.81, c 2.25, d 2.10.

Table 26

Correlations between Self Esteem and Message Behavior by Power Condition.

Strategy	Power Condition			
	LL	LH	HL	HH
Altruism	.03	-.18 _a *	.06	-.09 _a
Compromise/Negotiation	-.12	-.00	-.04	.04
Direct request	-.05	.13	.06	-.04
Discounting	.10	.01	.08	.03
Expertise	-.08	.11	--	.03
Inefficacy	.14 _b	-.11 _b	.04	.04
Liking	.01	.10	-.00	-.08
Qualities of the object	-.03 _c	.22 _c *	.12	.13
That's-not-all	-.08	-.10	-.05	.02
Threat	-.12	-.00	.09	.01
Strategy Persistence	-.11	.05	.08	.06
Message Persistence	-.10	-.05	.04	.04
Diversity	-.00	.05	.12	.03
Message Valence	.07	.05	.06	-.11

Note: For all correlations, df = 104. A "*" indicates a statistically significant correlation at $p < .05$. Correlations with the same subscript are significantly different at $p < .05$ with a Fisher's r to z transformation. The z values for the significant differences by subscript are: a 1.96, b 1.81, c 1.83.

affect altruism, inefficacy, and qualities of object strategies (see Table 26).

Next the relationships among the four personality variables and success were analyzed. Each personality factor was correlated with total success and success in each of the four power conditions (see Table 27). No significant main effects were detected, however, some evidence was found for a power condition by self-esteem interaction. Self-esteem was positively correlated [$r(104) = .18, p < .04$] with success in the high/high power condition. This correlation differed significantly from the correlation in the low/low condition, $r = -.15, z = 2.40, p < .008$.²

Personality difference in message effectiveness were investigated by running separate message-success correlations for subjects scoring high and low (as defined by median splits) on each personality variable. Fisher's r to z transformations were used to test for differences in message effectiveness attributable to each personality variable. Power by personality interactions were investigated in a similar fashion. Message type-success correlations for subjects scoring high and low on each personality variable were further broken down by power condition and tested for significant differences.

The effectiveness of the that's-not-all strategy varied significantly as a function of an agent's need for affiliation; $z = 2.28, p < .02$. The use of that's-not-all was counterproductive for those high in need for affiliation

Table 27

Correlations between Personality Variables and Success by Power Condition.

	Power Condition				Across Strategy Conditions
	LL	LH	HL	HH	
Need for Affiliation	-.07	-.06	.08	.10	-.00
Expressed Control	-.01	.09	.09	.07	.15
Wanted Control	.09	-.08	.05	-.11	-.03
Self Esteem	-.15 _a	-.01	-.08	.18 _a *	.04

Note: For all correlations, df = 104. A "*" indicates a statistically significant correlation at $p < .05$. The subscript denotes a significant difference, $z = 2.40$.

[$r(47) = -.26, p < .04$], but not for subjects scoring low [$r(55) = .19, p = \text{ns}$]. All correlations are presented in Table 28. When the correlations were further broken down power, several additional differences were observed (see Table 29). In the low-high and high-high power conditions, threats were more effective for lows [in both conditions, $r(55) = .17, p = \text{ns}$] than highs [in low-high, $r(47) = -.16, p = \text{ns}$; $z = 1.66, p < .05$, in high-high $r(47) = -.23, p = \text{ns}$; $z = 2.02, p < .03$]. In the high-low power condition, compromise/negotiation and inefficacy strategies were more effective for lows [$r(55) = .36, p < .003$ and $r(55) = .20, p = \text{ns}$, respectively] than for highs [$r(47) = .03, p = \text{ns}$, $z = 1.73, p < .05$; $r(47) = -.18, p = \text{ns}$; $z = 1.92, p < .03$, respectively], but direct requests were more effective for highs [$r(47) = .12, p = \text{ns}$] than for lows [$r(55) = -.26, p = .03$; $z = 1.93, p < .03$].

There were no observed differences in message effectiveness attributable to expressed control (see Table 30). Several differences emerged, however, when power condition was taken into account (see table 31). The use of altruism was less effective for highs [$r(51) = -.31, p = .01$] than for lows [$r(51) = .02, p = \text{ns}$; $z = 1.76, p < .04$], but the use of inefficacy and that's-not-all were less effective for lows [$r(51) = -.31, p < .02$, and $r(51) = -.51, p = .0001$, respectively] than for highs [$r(51) = .12, p = \text{ns}$, $z = 2.21, p < .02$; $r(51) = .00, p = \text{ns}$; $z = 2.81, p < .003$, respectively]. Using positive messages was more

Table 28

Correlations between Message Behavior and Success for High and Low Need for Affiliation Subjects across Power Condition.

Strategy	Need for Affiliation	
	Low	High
Altruism	.06	.16
Compromise/Negotiation	-.01	-.01
Direct request	-.09	.02
Discounting	.06	.04
Expertise	.04	.05
Inefficacy	-.00	.23
Liking	.07	-.11
Qualities of the object	.10	.15
That's-not-all	.19 _a	-.26 _a *
Threat	-.04	.22
Strategy Persistence	.07	.07
Message Persistence	-.03	-.02
Diversity	.09	.13
Message Valence	-.07	.02

Note: For low, df = 55, for high, df = 47. A "*" indicates a statistically significant correlation at $p < .05$.

Correlations with the same subscript are significantly different at $p < .05$ with a Fisher's r to z transformation.

a: The z value for the significant difference is 2.28.

Table 29

Correlations between Message Behavior and Success for High and Low Need for Affiliation Subjects by Power Condition.

Strategy	Need for Affiliation	Power Condition			
		LL	LH	HL	HH
Altruism	Low	.02	-.10	-.06	.01
	High	-.23	-.04	.06	-.07
Compromise /Negotiation	Low	.00	-.29*	.36 _a *	.03
	High	.06	-.28*	.03 _a	.19
Direct request	Low	.00	-.17	-.26 _b *	.12
	High	.01	-.01	.12 _b	-.18
Discounting	Low	.02	-.05	.05	--
	High	.04	-.06	--	-.11
Expertise	Low	--	-.09	--	--
	High	.13	-.08	--	.01
Inefficacy	Low	.05	.06	.20 _c	-.18
	High	-.13	-.10	-.18 _c	-.04
Liking	Low	.02	.00	-.06	--
	High	.06	-.09	--	-.18
Qualities of the object	Low	-.05	-.05	.12	.01
	High	.01	-.02	.01	.20
That's-not- all	Low	.04	.23*	.11	-.13
	High	-.18	-.07	-.13	-.08
Threat	Low	.09	.17 _d	-.08	.17 _e
	High	.15	-.16 _d	.17	-.23 _e

Table 29 (Cont'd)

Strategy	Need for Affiliation	Power Condition			
		LL	LH	HL	HH
Strategy Persistence	Low	.04	-.13	.22*	.03
	High	-.04	-.26*	.03	.07
Message Persistence	Low	.05	-.21	.10	.13
	High	.14	-.31*	.13	.06
Diversity	Low	-.02	-.08	.22	.06
	High	-.15	-.20	.06	-.05
Message Valence	Low	-.02	.49*	.05	.02
	High	-.02	.55*	.02	.04

Note: For low, df = 55, for high, df = 47. A "*" indicates a statistically significant correlation at $p < .05$. Correlations with the same subscript are significantly different at $p < .05$ with a Fisher's r to z transformation. The z values for the significant differences by subscript are: a 1.73, b 1.93, c 1.92, d 1.66, e 2.02.

Table 30

Correlations between Message Behavior and Success for High and Low Expressed Control Subjects across Power Condition.

Strategy	Expressed Control	
	Low	High
Altruism	.02	.20
Compromise/Negotiation	.03	-.08
Direct request	-.06	-.01
Discounting	.09	.04
Expertise	.19	-.12
Inefficacy	.09	.13
Liking	-.11	.01
Qualities of the object	.09	.19
That's-not-all	-.15	-.09
Threat	.10	.02
Strategy Persistence	.06	.05
Message Persistence	.05	-.11
Diversity	.12	.11
Message Valence	-.02	-.00

Note: For all correlations, df = 51. A "*" indicates a statistically significant correlation at $p < .05$. Correlations with the same subscript are significantly different at $p < .05$ with a Fisher's r to z transformation. None of the z values indicated significant differences.

Table 31

Correlations between Message Behavior and Success for High and Low Expressed Control Subjects by Power Condition.

Strategy	Expressed Control	Power Condition			
		LL	LH	HL	HH
Altruism	Low	.02 _a	-.10	.11	-.30 _b *
	High	-.32 _a *	-.02	-.13	.16 _b
Compromise /Negotiation	Low	-.03	-.30*	.30*	-.01
	High	.09	-.35*	.14	.12
Direct request	Low	.01	-.04	.18 _c	-.22
	High	.00	-.12	-.27 _c *	.02
Discounting	Low	.02	-.04	.04	.01
	High	--	-.02	.04	-.01
Expertise	Low	.15	-.09	--	.04
	High	--	-.08	--	--
Inefficacy	Low	-.31 _d *	-.14	.02	-.17
	High	.12 _d	.02	.05	.12
Liking	Low	.03	.05	.07	.01
	High	.05	-.13	-.18	-.11
Qualities of the object	Low	-.04	-.05	.06	.00
	High	-.04	.02	.08	.19
That's-not-all	Low	-.51 _e *	.08	.17	-.13
	High	.00 _e	-.01	-.05	.08
Threat	Low	.07	-.11	.16	-.09
	High	.17	.04	-.05	.08

Table 31 (Cont'd)

Strategy	Expressed Control	Power Condition			
		LL	LH	HL	HH
Strategy Persistence	Low	-.15	-.23*	.31*	-.15 _f
	High	.07	-.22	.02	.21 _f
Message Persistence	Low	.02	-.27*	.35 _g *	-.11
	High	.16	-.31	-.05 _g	.01
Diversity	Low	-.22	-.24*	.30*	-.16 _h
	High	-.03	-.13	.02	.19 _h
Message Valence	Low	-.02	.28 _i *	-.02	.16
	High	-.02	.61 _i *	.11	.02

Note: For all correlations, df = 51. A "*" indicates a statistically significant correlation at $p < .05$. Correlations with the same subscript are significantly different at $p < .05$ with a Fisher's r to z transformation. The z values for the significant differences by subscript are: a 1.76, b 2.36, c 2.30, d 2.21, e 2.81, f 1.82, g 2.08, h 1.77, i 1.77.

effect for high expressed control individuals [$r(51) = .61$, $p = .0001$] than low expressed control individuals [$r(51) = .28$, $p < .02$, $z = 1.77$, $p < .04$] in the low-high power condition. In the high-low condition, using direct request and being persistent were more effective for lows [$r(51) = .18$, $p = \text{ns}$, and $r(51) = .35$, $p = .02$, respectively] than for highs [$r(51) = -.27$, $p < .03$, $z = 2.30$, $p < .02$; $r(51) = -.05$, $p = \text{ns}$; $z = 2.08$, $p < .02$, respectively]. In the high-high condition, highs were more effective when using altruism [$r(51) = .16$, $p = \text{ns}$], more strategy persistence [$r(51) = .21$, $p = \text{ns}$], and more diversity [$r(51) = .19$, $p = \text{ns}$] than lows [for altruism, $r(51) = -.30$, $p < .02$, $z = 2.36$, $p < .01$; for strategy persistence, $r(51) = -.15$, $p = \text{ns}$, $z = 1.82$, $p < .04$; for diversity, $r(51) = -.16$, $p = \text{ns}$, $z = 1.77$, $p < .04$].

There were two significant differences in message effectiveness identified between subjects who scored high and low on wanted control (see Table 32). Altruism was more effective for highs [$r(47) = .26$, $p < .04$] than lows [$r(55) = -.10$, $p = \text{ns}$; $z = 1.83$, $p < .04$], and that's-not-all was more effective for lows [$r(55) = .15$, $p = \text{ns}$] than highs [$r(47) = -.22$, $p = \text{ns}$; $z = 1.87$, $p < .04$]. Additional differences were observed between power conditions (see Table 33). In the low-low condition, inefficacy was less effective for lows [$r(55) = -.18$, $p = \text{ns}$] than highs [$r(47) = .16$, $p = \text{ns}$, $z = 1.71$, $p < .04$]. In the low-high condition, threats were more effective for

Table 32

Correlations between Message Behavior and Success for High and Low Wanted Control Subjects across Power Condition.

Strategy	Wanted Control	
	Low	High
Altruism	-.10 _a	.26 _a *
Compromise/Negotiation	.01	-.03
Direct request	-.03	-.03
Discounting	.06	.03
Expertise	-.11	.10
Inefficacy	-.04	.28*
Liking	.01	-.08
Qualities of the object	.20	.04
That's-not-all	.15 _b	-.22 _b
Threat	-.05	.23
Strategy Persistence	.08	.04
Message Persistence	.05	-.10
Diversity	-.02	.23
Message Valence	-.02	-.03

Note: df = 55 for lows, for highs df = 47. A "*" indicates a statistically significant correlation at $p < .05$. Correlations with the same subscript are significantly different at $p < .05$ with a Fisher's r to z transformation. The z values for the significant differences by subscript are: a 1.83, b 1.87.

Table 33

Correlations between Message Behavior and Success for High and Low Wanted Control Subjects by Power Condition.

Strategy	Wanted Control	Power Condition			
		LL	LH	HL	HH
Altruism	Low	-.29*	-.09	.08	-.06
	High	.02	-.06	-.09	.01
Compromise /Negotiation	Low	-.00	-.29*	.34*	-.05
	High	.11	-.28*	.09	.24*
Direct request	Low	.00	-.15	.17 _a	-.00
	High	.01	-.06	-.31 _a *	-.19
Discounting	Low	.03	-.08	.05	.10
	High	.02	--	.04	-.08
Expertise	Low	--	-.07	--	--
	High	.17	-.10	--	.04
Inefficacy	Low	-.18 _b	-.06	.02	-.01
	High	.16 _b	.00	.05	.09
Liking	Low	.07	-.04	-.11	--
	High	--	-.08	.05	-.07
Qualities of the object	Low	-.01	-.17	.26 _c *	.23*
	High	-.07	.13	-.11 _c	-.07
That's-not-all	Low	-.16	.11	.01	-.27*
	High	-.08	.01	-.00	-.02
Threat	Low	.15	.22 _d *	.00	-.13
	High	.09	-.13 _d	.06	.09

Table 33 (Cont'd)

		Power Condition			
Strategy	Wanted Control	LL	LH	HL	HH
Strategy Persistence	Low	-.06	-.22*	.35 _e *	.04
	High	.06	-.16	-.04 _e	.05
Message Persistence	Low	.11	-.26*	.18	-.14
	High	.13	-.24*	.05	.11
Diversity	Low	-.18	-.22	.34 _f *	-.01
	High	.03	-.03	-.04 _f	.05
Message Valence	Low	-.01	.29 _g *	-.04	.11
	High	-.03	.73 _g *	.13	.09

Note: df = 55 for lows, for highs df = 47. A "*" indicates a statistically significant correlation at $p < .05$. Correlations with the same subscript are significantly different at $p < .05$ with a Fisher's r to z transformation. The z values for the significant differences by subscript are: a 2.54, b 1.71, c 1.88, d 1.77, e 2.02, f 1.96, g 3.13.

lows [$r(55) = .22, p < .05$] than highs [$r(47) = -.13, p = ns, z = 1.77, p < .04$], but using positive messages was more effective for highs [$r(47) = .29, p = .02$,] than lows [$r(55) = .73, p < .0001, z = 3.31, p < .001$]. In the high-low condition, highs used direct requests [$r(47) = .17, p = ns$], qualities of object [$r(47) = .26, p < .03$], strategy persistence [$r(47) = .35, p < .004$], and diversity [$r(47) < .34, p = .004$] more effectively than lows [for direct requests, $r(55) = -.31, p < .02, z = 2.54, p < .006$; for qualities of object, $r(55) = -.11, p = ns, z = 1.88, p < .03$; for strategy persistence, $r(55) = -.04, p = ns, z = 2.02, p < .03$; and for diversity, $r(55) = -.04, p = ns, z = 1.96, p < .03$]. No significant differences between highs and lows were found for the high-high condition.

One difference in message effectiveness was found for self-esteem (see Table 34). The use of the liking strategy was more effective for subjects who scored high in self-esteem [$r(46) = .21, p = ns$] than those scoring low on self-esteem [$r(56) = .21, p = ns, z = 2.12, p < .02$]. Again, further breaking the message effectiveness correlations down by power condition revealed additional differences (see Table 35). In the low-low condition, the use of altruism was counterproductive for lows [$r(56) = -.57, p < .0001$] but not highs [$r(46) = .05, p = ns, z = 3.47, p < .0002$], but, in the same condition, the use of that's-not-all was counterproductive for highs [$r(46) = -.51, p < .0001$] but not lows [$r(56) = .04, p = ns, z =$

Table 34

Correlations between Message Behavior and Success for High and Low Self-Esteem Subjects across Power Condition.

Strategy	Self-Esteem	
	Low	High
Altruism	-.04	.26*
Compromise/Negotiation	.02	-.05
Direct request	.03	-.13
Discounting	-.00	.09
Expertise	.10	.00
Inefficacy	.18	.05
Liking	-.21 _a	.21 _a
Qualities of the object	.24*	-.03
That's-not-all	-.00	-.26*
Threat	.01	.14
Strategy Persistence	.13	-.03
Message Persistence	.01	-.07
Diversity	.07	.14
Message Valence	-.14	.04

Note: df = 56 for lows, for Highs, df = 46. A "*" indicates a statistically significant correlation at $p < .05$. Correlations with the same subscript are significantly different at $p < .05$ with a Fisher's r to z transformation. The z values for the significant difference is 2.12.

Table 35

Correlations between Message Behavior and Success for High and Low Self-Esteem Subjects by Power Condition.

Strategy	Self-Esteem	Power Condition			
		LL	LH	HL	HH
Altruism	Low	-.57 _a *	-.12	.07	-.10 _b
	High	.05 _a	.01	-.03	.25 _b *
Compromise /Negotiation	Low	.02	-.28*	.22*	.07
	High	.05	-.28*	.22	.04
Direct request	Low	.00	-.07	.22 _c *	.10 _d
	High	.01	-.10	-.27 _c *	-.38 _d *
Discounting	Low	.02	-.06	.04	-.04
	High	.04	-.03	.05	.07
Expertise	Low	.02	--	--	--
	High	.16	-.12	--	-.01
Inefficacy	Low	.07	-.10	.09	.03
	High	-.11	.05	-.00	.10
Liking	Low	.03	-.06	.07	-.12
	High	.05	-.06	-.08	.15
Qualities of the object	Low	.10	.20 _e	.14	.06
	High	-.08	-.27 _e *	.05	.05
That's-not- all	Low	.04 _f	.03	-.03	-.10
	High	-.51 _f *	.06	.05	-.02
Threat	Low	.09	.06	.09	.03
	High	.16	.00	.00	-.15

Table 35 (Cont'd)

Strategy	Self-Esteem	Power Condition			
		LL	LH	HL	HH
Strategy Persistence	Low	.05	-.12	.25*	.04
	High	-.06	-.26*	.07	-.00
Message Persistence	Low	.06	-.18	.28*	.01
	High	.14	-.33	-.01	-.09
Diversity	Low	-.02	-.11	.32*	.04
	High	-.15	-.15	.04	-.09
Message Valence	Low	-.02	.60*	-.05	.10
	High	-.02	.43*	.19	.16

Note: $df = 56$ for lows, for Highs, $df = 46$. A "*" indicates a statistically significant correlation at $p < .05$. Correlations with the same subscript are significantly different at $p < .05$ with a Fisher's r to z transformation. The z values for the significant differences by subscript are: a 3.47, b 1.77, c 2.49, d 2.49, e 2.39, f 3.00.

3.00, $p < .001$]. The use of the qualities of object strategy was counterproductive for highs [$r(46) = -.27$, $p < .03$] but not lows [$r(56) = .20$, $p = \text{ns}$, $z = 2.39$, $p < .01$] in the low-high condition. In the high-low condition, the use of direct requests was counterproductive for highs [$r(46) = -.27$, $p < .03$] but effective for lows [$r(56) = .22$, $p = .05$, $z = 2.49$, $p < .006$]. Finally, in the high-high condition, highs [$r(46) = .25$, $p < .05$] were more effective than lows [$r(56) = -.10$, $p = \text{ns}$] with altruism ($z = 2.39$, $p < .001$), but direct requests were more effective for lows [$r(56) = .10$, $p = \text{ns}$] than for highs [$r(46) = -.38$, $p < .004$; $z = 2.39$, $p < .001$].

Alternative outcomes

The final issue investigated was the relationship between agent's message behavior and target's perceptions of the agent. Partner's perceptions were measured along a social attraction dimension and a task attraction dimension. For each dimension, each subject's message behavior was correlated with the partner's ratings of the subject.

The use of direct requests, $r(104) = .17$, $p < .05$, and threats, $r(104) = .25$, $p < .005$, were positively associated with ratings of social attraction. Diversity was also positively related to social attraction; $r(104) = .21$, $p < .02$. Only one strategy, discounting, was positively associated with ratings of task attraction; $r(104) = .27$, $p < .003$. The use of compromise/negotiation, $r(104) = -.17$, $p < .05$, and message persistence, $r(104) = -.23$, $p < .02$,

were associated with lower ratings of task attraction. The entire correlation matrix is presented in Table 36. A related finding of interest is that partner's ratings of social [$r(104) = -.03$] and task attraction [$r(104) = -.03$] were not related to agent's success.

Table 36

Correlations between Message Behavior and Target's Ratings of Social and Task Attraction.

Strategy	Social Attraction	Task Attraction
Altruism	.08	-.11
Compromise/Negotiation	-.02	-.17*
Direct request	.17*	-.06
Discounting	.15	.27*
Expertise	.01	.08
Inefficacy	.01	.08
Liking	-.01	-.12
Qualities of the object	.04	.10
That's-not-all	-.00	-.07
Threat	.25*	-.09
Strategy Persistence	.12	-.08
Message Persistence	.02	-.21*
Diversity	.21*	-.11
Message Valence	-.02	.00
Agent's Success	-.03	.03

Note: For all correlations, df = 104. A "*" indicates a statistically significant correlation at $p < .05$.

DISCUSSION

This research investigated the relationships among power, compliance gaining message behavior, and the actual gaining of compliance. Three models of the global relations among these variables were specified and tested within a negotiation game. Potential treatment by subject interactions involving several individual difference variables, including sex, need for affiliation, need for power, and self esteem were also investigated.

Power was conceptualized in a manner consistent with power-dependency theory (Bacharach & Lawler; 1981a; 1981b; Emerson, 1962). A person was considered to have power over another to the extent that the other person is outcome dependent. Dependency, in turn, is a function of the other's alternative options for obtaining desired outcomes, and the subjective value placed upon those outcomes. The advantages of such an approach include a view of power that is relationally determined, and the flexibility to deal with power at both individual and relational levels.

The work of Bacharach and Lawler (1981a), Boster et al. (1989), and Wheelless et al. (1986) led to the development of three models of power and compliance gaining. The first of these was based upon Bacharach and Lawler and Wheelless et

al., and proposed a three-variable causal string (i.e., a mediational model). This model held that power gives rise to specific message strategies which, in turn, produce compliance or noncompliance. The second model, a variant of first, proposed a more elaborate chain. Power was argued to impact an agent's perceptions of power, and these perceptions lead to message behavior. The agent's messages then influence the target's perceptions of power, and the target's perceptions are, in turn, responsible for compliance or noncompliance. The third model was derived from Boster et al. and research on bargaining games and simulations. Counter to the two versions of the mediational model, the third model posited that power moderates message effectiveness. That is, power and message behavior were predicted to interact to affect compliance.

Speculation concerning potential individual differences in the relationships among power, message behavior, and outcomes was also offered. Specifically, the effects of agent's and target's sex, need for affiliation, need for power, and self esteem were advanced as potential mitigating factors. These factors were measured in order to assess possible treatment by subject interactions.

These issues were investigated by having 108 subjects participate in a bargaining experiment. The bargaining game required subjects to buy and sell hypothetical used cars. Power was controlled by systematically varying each partner's alternatives. The experiment employed a fully

crossed 2 x 2 x 2 x 2 mixed design with each partners' power as repeated factors and each partners' sex as independent groups factors. Participants' personality traits were measured, and their message behavior and outcomes were observed.

Summary of Results

The results are summarized below. First, the results concerning the three global models of power, message behavior, and success are commented upon. Second, the consistency of the data with specific predictions are reviewed. Third, the current results are compared with those of previous investigations. Specific findings from prior research which were replicated, or failed to replicate are noted. Finally, post hoc speculation concerning noteworthy trends in the results, and substantial, but unexpected individual effects are offered.

Tests of the global models

The data were first analyzed for consistency with the three proposed models. The data were inconsistent with the three variable mediational model, although the data were consistent with the first link in model. The use of several strategies, and all four dimensions of message behavior, varied significantly between power conditions. No evidence, however, was found for the second link in the model. None of the strategies or dimensions of message behavior were associated with bargaining success.

The five variable mediational model was also rejected,

although qualified evidence was found for 3 out of the 4 proposed links. As predicted, power had substantial effects on agent's perceptions of power. Also as predicted, agent's perceived power was related to the use of several strategies and dimensions of message behavior. These findings, however, were qualified by power by perceived power interactions on message behavior. Similarly, although evidence was obtained for the link between agent's message behavior and target's perceptions of power, these effects were also moderated by power condition. As was the case with the three variable model, the data provided little support for the final link in the model. Targets' perceptions of power were only marginally related to success.

Two reasons justify rejecting both versions of the mediational model. First, because the data provide little evidence for the last link in each of the models, both fail to account for success. That is, neither model can provide a viable description of how power is translated into influence. This failure severely limits the utility of these models.

Second, subsequent analyses revealed large effects for power on success. This finding is clearly inconsistent with the causal chain hypothesis because power and success are the first and last variables, respectively, in each of the proposed chains, and the effects of power on success were larger than the effects obtained for the proposed links.

Thus, these models not only lack adequate explanatory power, but also generate predictions that can not be reconciled with the data.

Although the mediational models must be viewed as failures in their global representation of the influence process, they still provide some important insights concerning social power and message production. The findings consistent with some of the specified paths suggest that power and perceived power are important antecedents of message use. Self and other's power and agent's perceptions of self and other's power were found to affect the types of strategies individuals used, and quantitative dimensions of message behavior. These effects, however, need to be qualified by both individual differences and some statistical limitations (see below).

Contrary to the tests of the mediating models, the data were consistent with the moderating model. Although no evidence was found for main effects of message behavior on compliance, certain aspects of message behavior were found to be effective or counterproductive in certain power conditions. Specifically, the efficacy of the compromise/negotiation strategy and all four dimensions of message behavior varied significantly across some power conditions. Simply put, these findings suggest that some of the messages were effective (or counter-productive) some of the time, but none of the messages were effective all of the time. Again, however, the evidence for the moderator model

must be qualified by individual differences and statistical limitations. These qualifications are discussed in detail below.

Predicted specific effects

First, direct effects for power on success were predicted, although such effects were also anticipated to be qualified by interactions. Specifically, in conditions of unequal power, the person with high relative power was predicted to be more successful regardless of message type. Similarly, the person with low relative power was expected to be less effective regardless of message type.

As in the Boster et al. (1989) study, the current results indicated that power had a profound impact upon success. As predicted, the more powerful partner generally did better regardless of message behavior. By the same token, the less powerful partner was at a clear disadvantage.

In one sense, this finding can be considered an artifact of the design. Because of the way in which power was varied, when subjects were in high power situations they were all but guaranteed higher outcomes than when in a low power situation. Yet this artifact likely reflects an actual bias in favor of the powerful. More powerful people are usually more influential because of the nature of social power and all that comes with it, not because of the specific rules of a particular bargaining game. Thus, although the power produces influence finding is

attributable to the way in which power was varied, it is likely to be more indicative of actual constraints than of idiosyncracies in the experimental design.

Perhaps more interesting is the amount of variance in compliance within power conditions. Although the design guaranteed that individuals could obtain a certain level of success in each power condition, in practice it did not always work out that way. Nowhere was this fact more evident than in the low-low power condition.

In this condition each participant had attractive alternatives, and hence neither partner was dependent on the other. This condition differed from the others in that it was the only condition in which participants could do better by taking their alternatives (i.e., by not reaching an agreement). Thus, one might reasonably expect no variance in outcomes. Such, however, was not the case. For some reason(s) some subjects settled for lower outcomes than they could have obviously and easily obtained.

Cues to explain this finding can be obtained from examining the results concerning individual differences in message effectiveness. Inspecting various message-success correlations in the low-low condition suggests that three strategies were highly counterproductive for certain subjects. Altruism was counterproductive ($r = -.55$) for males attempting to influence females, inefficacy strategies were detrimental ($r = -.52$) for females influencing males, and self-esteem was also associated with differential message

effectiveness in this condition. Specifically, altruism was counterproductive ($r = -.57$) for those low in self-esteem, and the that's-not-all strategy was associated with lower outcomes ($r = -.51$) for those scoring high in self-esteem.

It is interesting to note that all large message effects in the low-low condition were negative. This result suggests that in conditions of mutual independence, there is little that can be done to improve one's situation. Rather, the issue seems to be one of behaving in such a manner as to not lower one's outcomes.

Second, it was expected that the use of threats (and other negatively valenced strategies in general) by the more powerful person in unequal power situations should be relatively effective because of the less powerful other's inability to retaliate. Alternatively, threats and other negatively valenced strategies were predicted to be counterproductive in equal power conditions, or for less powerful persons in unequal power situations.

The data regarding threats were inconsistent with these predictions. Threats did not interact with power to affect success. Threats, however, were used most often in the high relative power situation and least frequently under conditions of low relative power and high mutual dependence.

Third, compromises (and other positive strategies in general) were anticipated to be most effective for those in equal power conditions, or for those who are relatively less powerful. Moreover, compromises were predicted to be more

effective when participants were in situations of high mutual dependence rather than in situations of low mutual dependence.

The data were partially consistent with this prediction. The general positivity of messages (i.e., message valance) was strongly associated with success in the low relative power condition ($r = +.52$), although this effect must be qualified by an interaction involving agents' and targets' sex. Somewhat ironically, although using positively valenced messages was significantly more effective (across individuals) in the low-high power condition than in any of the other power conditions, individual's messages were rated as less positive in this condition than any of the other conditions. No effects for message valance on success were found in the equal power conditions.

These predictions, however, did not hold for compromise strategies in particular. Although compromises were used most often in the low relative power condition, this was apparently counterproductive ($r = -.28$). Moreover, compromises were positively associated with success in the high relative power condition ($r = +.21$), although subsequent analyses revealed that these two effects held only for male/male dyads ($r = -.57$, and $+.45$ respectively).

Maybe this perplexing finding is explainable in terms of male competitiveness with other males. Perhaps the willingness to compromise in highly competitive and unequal

power situations functions to magnify power differences. Compromising may prevent the weaker party from minimizing their losses, resulting in increased gain for the more powerful party at the cost of their less powerful counterparts.

Finally, it was expected that people with high absolute power would exhibit greater diversity in message behavior than their less powerful counterparts. It was reasoned that persons whose partners are highly dependent upon them should have relatively more options available to them for gaining the other's compliance. This potential for greater flexibility was thought to lead to increased diversity. Also, because less powerful others are at a disadvantage when dealing with a more powerful partner, they were expected to be more persistent than their more powerful counterparts if they are to be successful.

The data were partially consistent with this reasoning. The results indicated that agents' and targets' power interacted to affect strategy persistence, message persistence, and diversity, with the same pattern in cell means for each of these dimensions of message behavior. Subjects were more persistent and more diverse in the two unequal power conditions than in the two equal power conditions. According to the reasoning above, we would expect individuals with high relative power to be more persistent and more diverse because they have more options available to them, and low relative power individuals to be

more persistent and diverse out of need.

Replicated effects

In this section the current results are compared with those of similar previous investigations. Specific findings from Miller (1982), Howard et al. (1986), and Boster et al. (1989) are reviewed, and effects which were replicated, or failed to replicate, are noted. This information should prove useful because replicated findings engender more confidence in their validity than isolated or inconsistent findings.

Recall that Miller (1982) found that power affects strategy selection, although the effect was moderated by the type of relationship between the parties. Specifically, in non-interpersonal relationships, he found that as the relative power of the agent increased, the likelihood of use ratings of several compliance gaining strategies (i.e., debt, moral appeal, negative self-feeling, positive, and negative altercasting) decreased. In interpersonal situations, the opposite was the case; as the power of the agent increased, the ratings of strategies increased.

Because of differences in the types of strategies measured, how power was conceptualized and measured, and the fact that relationship type was not a variable considered in the present research, it is difficult to assess the extent to which the current results are comparable to, much less consistent with, those of Miller (1982). At a very superficial level, however, the results do not appear

consistent across studies. Miller's results indicated that the effects of power on strategy ratings within relationship type were consistent across strategy type. In contrast, the current findings suggest that effects of power on message behavior vary depending upon message content.

This inconsistency in results is not surprising. Hunter and Boster (1987) provide convincing evidence that strategy selection ratings form a single nonlinear factor. The relatively uniform effects of power on selection ratings of different strategies may be a reflection of parallelism among strategies. In the current experiment, the coded strategy types were not assumed or expected to be indicative of one underlying dimension, and therefore were expected to exhibit differential correlations with a potential antecedent.

In another selection study, Howard et al. (1986) found that relational partners who were relatively more dependent were perceived to use weaker strategies such as manipulation (e.g., hinting and flattering) and supplication (e.g., pleading and acting helpless). These findings were not replicated. Howard et al.'s flattering strategy was similar to the liking strategy, and their acting helpless strategy was similar to the inefficacy strategy in the current study. Unlike Howard et al.'s results, the current experiment found no significant effects for power on liking strategies, and inefficacy was used most often in unequal power conditions.

Howard et al. (1986) also found that less dependent

partners were perceived as more likely to bully (i.e., use threats). This finding was replicated in the current results. Threats were used most often when the targets were dependent on the agents, the effect being particularly distinct in the high relative power condition.

Several of Boster et al. (1989) findings concerning the effects of power on message behavior were replicated in the current investigation. Both studies found more diversity and persistence in the unequal relative power conditions than in the equal power conditions. Both experiments also found inefficacy and threat strategies were employed more frequently in the high relative power condition than in either of the equal power conditions, and that compromise, direct requests, and inefficacy were used more frequently in the low relative power condition than in either of the equal power conditions. The Boster et al. finding of threats being used more frequently in the low relative power condition than in either of the equal power conditions was replicated for the low mutual dependence but not high mutual dependence condition.

The effects that did not replicate included the finding that when subjects were in the low relative power condition, they used altruism more frequently than when in the high relative power and expertise and that's-not-all were employed more frequently in the high relative power condition than in either of the equal power conditions. No significant effects for power on the use of altruism,

expertise, or that's-not-all were obtained in the current experiment.

Boster et al. (1989) also found that the relationship between message behavior and success is moderated by relative and absolute power. Thus, the both the Boster et al. and the current experiment were generally consistent with the moderator model.

In terms of specific power by message behavior interactions, Boster et al. found that diversity and persistence were negatively related to success in the low mutual dependence and low relative power conditions, and diversity was positively associated with success in the high relative power condition. Consistent with Boster et al., the current study found that both strategy persistence and message persistence were counterproductive in low relative power condition. Boster et al.'s findings that persistence was negatively related to success in the low mutual dependence was replicated for female agent, male target dyads, and diversity was negatively related to success in the low relative power condition and positively associated with success in the high relative power condition was replicated with male, male dyads. The finding that diversity was negatively related to success in the low mutual dependence condition was not replicated.

The effects for specific messages showed less correspondence between studies. Boster et al.'s (1989) finding that compromises were effective when subjects were

in the high relative power condition was replicated. However, the current study did not find that liking was negatively related to success in the low mutual dependence situation, nor that the that's-not-all strategy was negatively correlated with success when mutual dependence was high. Similarly the findings that direct requests and threats were effective when subjects were in the high relative power condition, and direct requests were counterproductive in the low relative power situation were not replicated. In all cases, the failures to replicate were due to nonsignificant results rather than reverse findings.

Other results

The most striking feature of the results was the overwhelming prevalence of higher-order interactions. Virtually every substantive relationship investigated was moderated by both power and individual differences. Even most interactions required qualification stemming from still higher-order interactions. Literally, as the number of potential moderators considered increased, the prevalence and magnitude of the observed effects increased. Due to limitations in both statistical power, and the pragmatic realities of meaningful interpretation, the analyses were restricted to five-way interactions. Yet one is left to ponder the possibilities of still more complex interactions.

In many respects the finding of complex interactions is not surprising. In fact, interactions are common to social

influence research. There is little in social influence that has not been shown to depend on some other factor. The relations among power, message behavior, and effectiveness are apparently no exception.

The findings of higher-order interactions have important implications for the compliance gaining literature. Not infrequently compliance gaining researchers have lamented the lack of, or inconsistency in, substantive findings in the literature (e.g., Burleson et al., 1988; Dillard & Burgoon, 1985; Levine & Wheelless, 1990). Some researchers have been quick to place the blame of methodological flaws such as the use of the strategy selection procedures (e.g., Burleson et al., 1988) or hypothetical situations (Levine & Wheelless, 1990). In fact, dissatisfaction with findings may be one of the factors that led to the methodological debates that have threatened to dominate the literature. The present data suggest an alternative explanation, the presence of complex interactions. Perhaps then, the rather meager and often inconsistent findings that characterize the compliance-gaining literature stem, at least in part, from a failure to recognize adequately the complexity inherent in social influence. The current findings would be meager indeed if only main effects and simple interactions were considered.

Two individual effects of substantial strength merit discussion. First, power condition was a reasonably strong predictor of perceived power. Because power was controlled

by varying partner's alternatives, this relationship should not be considered fait accompli. Rather, it suggests that subjects were aware of the power differences in the situation and their perceptions of power showed some correspondence to the actual power distribution.

The second substantial specific finding that was the effect of message valence in the low-high power condition. Although effect was discussed above in relation to predicted effects, it will be discussed in more detail here.

Overall, there was a general trend for specific strategies to be counterproductive under conditions of low relative power. The clear exception was message valence. Simply using positively toned messages, regardless of type, was the one factor that was clearly advantageous in this condition. Across individuals, being nice was strongly associated ($r = +.52$) with success in the low relative power condition. The effect was especially strong for male agents with female targets ($r = +.86$), and for those scoring high in wanted control ($r = +.73$).

The major exception to this finding was for females with female targets ($r = -.22$). Perhaps females are socialized to be suspicious of other females. This may be especially true when a female who is in an inferior power position is overly nice to a female with greater power. If this is the case, positive message behavior may be less likely to be reciprocated causing the advantage to disappear.

The finding that positive messages are effective for the weak fits squarely with the previous research on effective negotiation and conflict spirals. It was argued that message behavior is often reciprocated. The use of positive messages by those in an inferior bargaining position should discourage aggression by their more powerful counterparts, and instead foster cooperative and, ultimately, productive exchanges.

Qualifications on Results

The vast majority of the results discussed thus far must be qualified by the presence of statistically significant and substantial individual differences. Recall that agent's sex, target's sex, need for expressed power, need for wanted power, need for affiliation, and self esteem were all discussed as potential moderators. The data indicated that taking these factors into account was prudent. Although relatively few main effects for these factors were evident, each of them was found to interact with power to affect variables of interest.

Specifically, interactions involving individual differences were found in two important areas; in predicting message behavior, and in differential message effectiveness. First, recall that power condition was found to predict message behavior. Although the data suggested that this relationship might be mediated by perceived power, the data also suggest that this relationship is moderated by each of the individual difference factors assessed. That is, power

was found to interact with each of the individual differences to affect some aspects of message use. Need for expressed control interacted with power condition to effect five out of the ten observed strategies and all four dimensions of message behavior. In general, however, and with the exception of expressed control, these interactions were relatively infrequent.

The findings concerning differential message effectiveness represent a second domain that must be qualified by the presence of treatment by subject interactions. Consistent with the moderator model, message effectiveness varied as a function of power. That is, success was found to be a function of a three-way interaction between agent's power, target's power, and message behavior. Moreover, the data indicated still higher-order interactions involving each of the individual difference factors. The data were consistent with the presence of four-way interactions involving each of the individual differences controlled or measured in conjunction with power and message use, and a five-way interaction between agent's sex, target's sex, agent's power, target's power, and message behavior.

Of the individual differences in the power by message behavior interactions, the four-way interactions involving the trait-like personality factors were generally less frequent and less striking than the interaction involving agent's and target's sex. The five-way interaction

involving sex and power was the most striking. It involved every coded aspect of message behavior except the use of expertise and liking strategies.

The conclusions drawn from these data must also be qualified by an important statistical limitation, experiment wise error. As the number of statistical tests performed increases, the probability of obtaining some false positive results increases. Adopting the traditional probability level of $\alpha = .05$ (as used in the current analyses) means that by chance alone, one in 20 significance tests will yield statistically significant results. The significance tests performed on the current data literally number in the thousands. The implication is that some type I errors are a virtual certainty.

There are, of course, statistical remedies for dealing with experimentwise error. Although there are a variety of specific techniques were available, all involve lowering the alpha level as some function of the number of tests performed. Unfortunately, all of these procedures necessarily involve a compromise between the probability of type I error and statistical power. As the likelihood of obtaining false positive results is reduced, the probability of false negative results increases proportionally.

Given the number of statistical tests reported here, adjusting alpha to a level that would allow sufficient confidence in every statistically significant result is simply not reasonable. The costs of such a solution in

terms of statistical power, and the corresponding type II error rate would be statistically unacceptable. Thus, a more reasonable approach is much preferred.

The more reasonable approach advocated is a simple awareness of the potential for type I errors, and a corresponding pragmatic skepticism when drawing inferences from the analyses. Such a method mandates that little confidence be placed upon specific individual findings, unpredicted results, and upon meager results. Rather, inferences should be made only when clear trends in the results are evident, the results were consistent with a priori predictions or the results of previous research, or when considering strong and highly significant individual effects. For this reason, the previous discussion of the results highlighted those findings that were predicted a priori, were consistent with previous research, or were large effects. Moreover, exact probabilities were provided throughout to aid the reader drawing reasonable conclusions.

The one type of finding where experiment-wise errors were most likely were is in the findings of statistical interactions. Because testing for interaction involved a substantially greater number of significance tests than testing for main effects, a greater number of significant results would be expected on the basis of chance alone. However, because the number of significant results obtained in testing for interactions was substantially greater than the number expected by chance, and because some of the

effects were quite large, the findings of significant interactions can not be explained solely in terms of Type I errors.

Qualifications on Design

There are several characteristics of the present research design that merit discussion, and have implications for compliance gaining research. The vast majority of compliance gaining studies have subjects either select or generate compliance gaining messages in response to either hypothetical or recalled situations. The current study differs from this typical research in at least two important ways. First, subjects were actually trying to influence another with real consequences. Second, the target was a real person with goals of his or her own, who responded to the agent's compliance gaining messages.

These differences are important for several reasons. First, the design allowed for success to be observed. As noted in the first chapter, perhaps no issues has been as neglected as that of effectiveness in compliance gaining. The current design, in essence, puts the compliance back into compliance gaining. Expanding the scope of compliance gaining research to consider the consequences of message behavior in addition to its antecedents offers a more complete view of the social influence process.

Second, because there were real consequences attached to subjects' messages, the experimental and mundane realism of the study was enhanced, thereby increasing internal and

external validity. Subjects were led to believe that their performance on the task would determine the amount of credit they received for their participation. Moreover, subjects were paired with another whose interests competed with their own, and who might well form various impressions of the subject. Partners not only resisted compliance attempts, but strove to exert influence of their own. These experimental demands tended to make the task both challenging and involving. These demands also mirror the demands in actual interpersonal influence situations. Thus, there is reason to believe that the current research design allows for more confidence in the validity of the results than other commonly used research strategies.

Although subjects were required to influence another, some aspects of the experiment were obviously contrived. Specifically, subject did not buy and sell actual cars, nor did any money actually changed hands. One could question if the messages used were similar to the messages the same individuals would use if actually buying or selling an used car. The consequences of making a poor deal were also clearly less extreme in the experimental environment than in the situation the experiment attempted to emulate. Subjects also has less information about the car than they would have had a real car been present. Those feature may have limited the viability of appeals based upon qualities of the car.

In addition, subjects communicated with written rather than spoken messages, and one might question the extent that

written messages correspond to spoken messages. One would expect written messages to be less spontaneous and more thoughtful than spoken messages, and written messages, because of the effort and processes involved, are also likely to be shorter and linguistically different than spoken messages.

Thus, the data were not entirely naturalistic, and the difference between the experimental task and its natural counterpart may well be important, but, one must address two important issues to assess the worth of the data adequately. First, do the contrived elements of the study change the substantive conclusions drawn from the data? Although they are likely to have affected the values of specific variables in the study, it is less likely that they substantially altered the general relationships observed between variables. Second, one must compare the strengths and weaknesses of the current design to other available research alternatives. Although the current design did not yield entirely natural data, it represents a better proxy than other current procedures. Subjects, after all, were actually attempting to influence another.

A final limitation concerns the generalizability of situation provided. One might question how informative data on buying and selling hypothetical used cars are to other interpersonal influence situations. The situation, for example was likely to limit type of message strategies used. The qualities of object and that's-not-all strategies, for

example, might not be used in other contexts. Strategies such as direct requests, threats, and compromise, however, are more general. Yet, again the crucial question is if the particular type of situation used would change the global relationships among variables, and hence alter the substantive conclusions drawn from the results. There are no obvious reasons why it would. Thus, although some of the strategies used might be specific to used cars or product sales in general, the results should have implications for most interpersonal influence situations.

Summary

In summary, this study sought to investigate the association between power, message behavior, and outcomes. The data suggest that message behavior and message effectiveness are a function of statistical interactions between power and individuals differences. Although there were several limitations, these general findings may be relevant across most interpersonal influence situations.

END NOTES

1. Order effects were investigated with separate 2 x 2 (subjects' power in the first trial by partners' power in the first trial) independent groups ANOVAs for each strategy type, dimension of message behavior, and success. Main effects for subjects' power were found for the use of direct requests. Direct request were more common when subjects were initially assigned to a high rather than low power condition, $F(1,102) = 5.74$, $p < .02$, $\eta^2 = .05$, $r = .22$. Three main effects were detected for others' power. Qualities of objects [$F(1,102) = 5.16$, $p < .03$, $\eta^2 = .05$, $r = .22$] and threats [$F(1,102) = 5.61$, $p < .02$, $\eta^2 = .05$, $r = .23$] were used more frequently when partner's initial power was low, and the that's-not-all strategy was used more frequently when partner's initial power was high, $F(1,102) = 4.55$, $p < .04$, $\eta^2 = .04$, $r = .20$. No statistically significant interactions were obtained, and no order effects of any kind were evident for the other strategies, the dimensions of message behavior, or success.
2. A recent meta-analysis by Rhodes & Wood (1992) documents a non-linear (inverted U shaped) effect of self-esteem on resistance to persuasion. Both a visual examination of scatterplots and a non-linear transformation of self-esteem

scores (absolute value of deviations from the mean) suggest that this trend was not evident in the current data. Self-esteem had no main effects, non-linear or otherwise, on success. Further, no evidence of non-linearity within power condition was obtained.

LIST OF REFERENCES

.

LIST OF REFERENCES

- Axelrod, R. (1980a). Effective choice in the prisoner's dilemma. Journal of Conflict Resolution, 24, 3-25.
- Axelrod, R. (1980b). More effective choice in the prisoner's dilemma. Journal of Conflict Resolution, 24, 379-403.
- Berger, C.R. (1985). Social power and interpersonal communication. In M.L. Knapp and G.R. Miller (Eds.) Handbook of Interpersonal Communication (pp. 439-499). Beverly Hills, CA: Sage.
- Bacharach, S.B., & Lawler, E.J. (1981a). Power, Tactics, and Outcomes. San Francisco, CA: Jossey-Bass.
- Bacharach, S.B., & Lawler, E.J. (1981b). Power and tactics in bargaining. Industrial and Labor relations Review, 34, 219-233.
- Boster, F.J., Kazoleas, D., Levine, T., Rogan, R.G., & Kang, K.H. (1989). The impact of power and message content on bargaining success. Presented at the annual meeting of the International Communication Association, San Francisco, CA.
- Boster, F.J., & Levine, T.R. (1988). Individual differences and compliance-gaining message selection: The effects of verbal aggressiveness, argumentativeness, dogmatism, and negativism. Communication Research Reports, 5, 114-119.
- Boster, F.J., Levine, T., & Kazoleas, D. (1989). The impact of argumentativeness and verbal aggressiveness on strategic diversity and persistence in compliance-gaining behavior. Presented at the annual meeting of the Speech Communication Association, San Francisco, CA.

- Boster, F.J. & Lofthouse, L.J. (1986). Situational and individual difference determinants of the persistence and content of compliance gaining behavior: A test of the generalizability of some compliance gaining message choice findings. Paper presented at the annual meeting of the International Communication Association, Chicago, IL.
- Boster, F.J. & Stiff, J.B. (1984). Compliance-gaining message selection behavior. Human Communication Research, 10, 539-556.
- Burleson, B.R., Wilson, S.R., Waltman, M.S., Goering, E.M., Ely, T.K., & Whaley, B.B. (1988). Item desirability effects in compliance-gaining research: Seven studies documenting artifacts in the strategy selection procedure. Human Communication Research, 14, 429-486.
- Clark, R.A. (1979). The impact of self interest and desire for liking on the selection of communicative strategies. Communication Monographs, 46, 257-273.
- Clark, R.A. & Delia, J.G. (1976). The development of functional persuasive skills in childhood and early adolescence. Child Development, 47, 1008-1014.
- Cody, M.J., McLaughlin, M.L., & Jordan, W.J. (1980). A multidimensional scaling of three sets of compliance-gaining strategies. Communication Quarterly, 28, 34-46.
- Cohen, A.R. (1956). Experimental effects of ego-defense preference on interpersonal relations. Journal of Abnormal and Social Psychology, 52, 19-27.
- Cohen, A.R. (1959). Some implications of self-esteem for social influence. In C.I. Hovland, & I.L. Janis, I.L. (Eds). Personality and Persuasibility. New Haven, CN: Yale University Press.
- Dahl, R.A. (1957). The concept of power. Behavioral Science, 2, 201-218.
- Delia, J.G., Kline, S.L., & Burleson, B.R. (1979). The development of persuasive communication strategies in kindergartners though twelfth-graders. Communication Monographs, 46, 241-256.
- deTurck, M.A. (1985). A transactional analysis of compliance-gaining behavior: Effects of noncompliance, relational contexts, and actors' gender. Human Communication Research, 12, 54-78.

- Deutsch, M., & Krauss, R. (1960). The effects of threat upon interpersonal bargaining. Journal of Abnormal and Social Psychology, 61, 181-189.
- Deutsch, M., & Krauss, R. (1962). Studies of interpersonal bargaining. Journal of Conflict Resolution, 6, 52-76.
- Dillard, J.P. & Burgoon, M. (1985). Situational influences on the selection of compliance-gaining messages: Two tests of the predictive utility of the Cody-McLaughlin typology. Communication Monographs, 52, 289-318.
- Dillard, J.P., Segrin, C., & Harden, J.M. (1989). Primary and Secondary goals in the production of interpersonal influence messages. Communication Monographs, 56, 19-38.
- Eagly, A.H. (1983). Gender and social influence. American Psychologist, 971-981.
- Falbo, T. & Peplau, L.A. (1980). Power strategies in intimate relationships. Journal of personality and Social Psychology, 38, 618-628.
- Gouldner, A.W. (1962). The norm of reciprocity: A preliminary statement. American Sociological Review, 25, 161-178.
- Helm, B. Bonoma, T.V., & Tedeschi, J.T. (1972). Reciprocity for harm done. Journal of Social Psychology, 87, 89-98.
- Hovland, C.I. & Janis, I.L. (1959). Personality and Persuasibility. New Haven, CN: Yale University Press.
- Howard, J.A., Blumstein, P., & Schwartz, P. (1986). Sex, power, and influence tactics in Intimate relationships. Journal of Personality and Social Psychology, 51, 102-109.
- Hunter, J.P. & Boster, F.J. (1987). A model of compliance gaining message selection. Communication Monographs, 54, 63-84.
- Huston, T.L. (1983). Power. In H.H. Kelly, E. Berscheid, A. Christensen, J.H. Harvey, T.L. Huston, G. Levinger, E. McClintock, L.A. Peplau, & D.R. Peterson Close Relationships (pp. 169-219). New York: W. H. Freeman.

- Instone, D., Major, B., & Bunker, B.B. (1983). Gender, self confidence, and social influence strategies: An Organizational simulation. Journal of Personality and Social Psychology, 44, 322-333.
- Janis, I.L. & Field, P.B. (1959). Sex differences and personality factors related to persuasibility. In C.I. Hovland, & I.L. Janis, I.L. (Eds). Personality and Persuasibility. New Haven, CN: Yale University Press.
- Johnson, P. (1976). Women and power: Toward a theory of effectiveness. Journal of Social Issues, 3, 99-110.
- Kearney, P., Plax, T.G., Richmond, V.P., & McCroskey, J.C. (1984). Power in the classroom IV: Alternatives to discipline. In R.N. Bostrum (Ed.) Communication Yearbook 8. Beverly Hills, CA: Sage.
- Kearney, P., Plax, T.G., Richmond, V.P., & McCroskey, J.C. (1985). Power in the classroom III: Teacher communication techniques and messages. Communication Education, 34, 19-28.
- Kelman, H.C. (1961). Processes of opinion change. Public Opinion Quarterly, 25, 57-78.
- Kipnis, D., Schmidt, S.D., & Wilkinson, I. (1980). Intraorganizational influence tactics: Explorations in getting one's way. Journal of Applied Psychology, 65, 440-452.
- Knapp, M.L. (1984). Interpersonal Communication and Human Relationships. Boston: Allyn and Bacon.
- Krauss, R.M., & Deutchsh, M. (1966). Communication in interpersonal bargaining. Journal of Personality and Social Psychology, 4, 572-577.
- Levine, T.R. & Wheelless, L.R. (1990). Cross-situational consistency and use-nonuse tendencies in compliance-gaining tactic selections. The Southern Communication Journal, 56, 1-11.
- Lim, T.S. (1990). Politeness behavior in social influence situations. In J.P. Dillard (Ed.) Seeking Compliance: The production of interpersonal influence messages. Scottsdale, AZ: Gorsuch Scarisbrick.
- Linton, H. & Graham, E. (1959). Personality correlates of persuasibility. In C.I. Hovland, & I.L. Janis, I.L. (Eds). Personality and Persuasibility. New Haven, CN: Yale University Press.

- Marshall, L.J. (1990). The development of paper and pencil measures of need for affiliation and need for achievement. Unpublished preliminary paper, Department of Communication, Michigan State University, East Lansing, MI.
- McCroskey, J.C. & McCain, T.A. (1974). The measurement of interpersonal attraction. Speech Monographs, 41, 261-266.
- Michener, H.A., & Suchner, R.W. (1972). The tactical use of social power. In J.T. Tedeschi (Ed.) The Social Influence Processes (pp. 239-287). New York: Aldine Atherton.
- Michener, H.A., Vaske, J.J., Schleifer, S.L., Plazewski, J.G., & Chapman, L.J. (1975). Factors affecting concession rate and threat usage in bilateral conflict. Sociometry, 38, 62- 80.
- O'Keefe, B.J. (1988). The logic of message design: Individual differences in reasoning about communication. Communication Monographs, 55, 80-103.
- Oskamp, S. (1971). Effects of programmed strategies on cooperation in the prisoner's dilemma and other mixed-motive games. Journal of Conflict Resolution, 15, 225-259.
- Rhodes, N. & Wood, W. (1992). Self-esteem and intelligence affect influenceability: The mediating role of message reception. Psychological Bulletin, 111, 156-171.
- Roloff, M.E. & Barnicott, E.F., Jr. (1979). The influence of dogmatism on the situational use of pro- and anti-social compliance-gaining strategies. The Southern Speech Communication Journal, 45, 37-54.
- Rosenberg, M. (1965). Society and the adolescent self-image. Princeton, NJ: Princeton University Press.
- Rule, B.G., Bisanz, G.L., & Kohl, M. (1985). Anatomy of a persuasion schema: Targets, goals, and strategies. Journal of Personality and Social Psychology, 48, 1127-1140.
- Schutz, W.C. (1958). FIRO: A three-dimensional theory of interpersonal behavior. NY: Holt, Rinehart & Winston.
- Scudder, J. (1986). Power, threat use, and the formation of agreements: An alternative compliance gaining approach. A paper presented at the annual meeting of the Speech Communication Association. Chicago, IL.

- Sorrentino, R.M. & Hancock, R.D. (1987). Information and affective value: A case for the study of individual differences and social influence. In M.P. Zanna, J.M. Olson, and C.P. Herman (Eds.) Social Influence: The Ontario Symposium, 5, 247-286.
- Spowl, J.P. & Senk, M. (1986). Sales communication: Compliance gaining strategy choice and sales success. Paper presented at the annual meeting of the Eastern Communication Association, Atlantic City, NJ.
- Stapleton, R.E., Nelson, B.L., Franconere, V.T., & Tedeschi, J.T. (1975). The effects of harm-doing on interpersonal attraction. Journal of Social Psychology, 96, 109-120.
- Tedeschi, J.T., & Bonoma, T.V. (1972). Power and influence: An introduction. In J.T. Tedeschhi (Ed.) The Social Influence Processes (pp. 1-49). New York: Aldine Atherton.
- Tedeschi, J.T., Schlenker, B.R., & Lindskold, S. (1972). The exercise of power and influence: The source of influence. In J.T. Tedeschhi (Ed.) The Social Influence Processes (pp. 287-345). New York: Aldine Atherton.
- Thibaut, J., & Kelly, H. (1959). The Psychology of Groups. New York: John Wiley.
- Wheless, L.R., Barraclough, R., & Stewart, R.A. (1983). Compliance-gaining and power in persuasion. In R.N. Bostrum (Ed.) Communication Yearbook 7. Beverly Hills, CA: Sage.
- White, K.D., Pearson, J.C. & Flint, L. (1987). Adolescents' compliance-resistance: Effects of parents' compliance strategy and gender and adolescents' gender. A paper presented ant the annual meeting of The International Communication Association, Montreal, Canada.
- Wiseman, R.L. & Schenck-Hamlin, W. (1981). A multidimensional scaling validation of an inductively-derived set of compliance-gaining strategies. Communication Monographs, 48, 251-270.
- Youngs, G.A. (1986). Patterns of threat and punishment reciprocity in a conflict situation. Journal of personality and Social Psychology, 51, 541-546.

APPENDICES

APPENDIX A.

Summary of Basic Design

Sex Composition		Self Power/Other Power				
Self/Other	Trials	1	2	3	4	5
Male/Male	P	H/H	H/L	L/H	L/L	
Female/Female	P	H/H	H/L	L/H	L/L	
Male/Female	P	H/H	H/L	L/H	L/L	
Female/Male	P	H/H	H/L	L/H	L/L	

Note: "P" denotes practice trail. Power conditions were counterbalanced across trails.

Independent Variables

Controlled, Repeated factors:
Factors:

- 1) Self power
- 2) Other power

Controlled, Independent groups factor,
1) Subjects' Sex
2) Partners' Sex

Measured:

- 4) Self esteem
- 5) Need for Affiliation
- 6) Need for Expressed Power
- 7) Need for Wanted Power
- 8) Perceived Own Power
- 9) Perceived Other Power

Dependent Variables

Coded Messages

- 1) Strategy type
- 2) Strategy persist.
- 3) Message persist.
- 4) Diversity
- 5) Valance (+,-)

Measured:

- 6) Success
- 7) Attractiveness

APPENDIX B

Values used for Power Manipulations

Cars used in each power condition

Prelude: High Buyer/High Seller: Seller Poor/Buyer poor Alt.

Jeep: Low Buyer/Low Seller: Seller Good/Buyer Good Alt.

Grand AM: Low Buyer/High Seller: Seller Good/Buyer poor Alt.

Corolla: High Buyer/ Low Seller: Seller Poor/Buyer Good Alt.

Retail, wholesale, and alternative values for each car/condition

	Condition/Car			
	Prelude 11	Jeep 00	Grand-Am 01	Corolla 10
Retail (List)	6,400	4,900	6,900	7,800
Wholesale (Invoice)	5,300	3,800	5,800	6,700
Buyer alternative	6,075	4,175	6,575	7,075
Seller alternative	5,625	4,525	6,525	7,025
Buyer alt = Strong, retail - 725; Weak, Retail - 325				
Seller alt = Strong, Wholesale +725; Weak, Wholesale + 325				

APPENDIX C

Instructions

Today you will be playing the "used car sales" game. One person will be assigned the role of the buyer and one person will be given the role of seller. Obviously, the buyer wants to get the best deal (i.e., pay the least money) possible on his or her new used car, but the seller wants to make as much profit (sell the car for as much) as he/she can. **The better you do at this game, the more extra-credit you can earn!**

The game will be played for five rounds (six including practice), each with a different car up for sale. After a practice round, you will be given a series of five descriptions of cars (one at a time) which are to be bought and sold. Each car description will include the make and model of the car, its millage, and a description of its options (e.g., stereo, air conditioning etc.) You will also be given the retail and the wholesale price of the car. The retail price is the "asking" or "sticker" price. It includes the cost of the car plus seller profit. The wholesale price is the "seller's cost" or "break even" point for the seller. The seller wants the buyer to pay the retail price but the Buyer would like to buy the car at wholesale cost.

Buyer's success is determined by how far the agreed upon price is below the retail price (i.e., retail minus price sold for). The farther the sales price is below retail, the better the buyer does (hence more extra credit!). Seller's success is determined by how far above wholesale the sales price is (i.e., price sold for minus wholesale). The farther the sales price is above wholesale, the more profit is made by the seller and the better the seller will do in the game.

There is, however, a catch to this game. Each buyer and each seller will have an alternative offer. When a person really wants to buy a car, there is usually more than one person or dealership the person can buy from. The same is usually true for sellers; there is more than one possible buyer for each car. So, in order to make this game more realistic, each person will have an alternative offer. For

the buyer, this is the price they could buy a comparable car for (from someone else). For the seller, this is the price another costumer has offered to buy the car for. The buyer does not know the seller's alternative and the seller does not know the buyer's alternative. Either the buyer or the seller can take their alternative offer at any time. If one person takes their alternative, this forces the other to take their alternative as well. If one person takes their alternative in a give round, both the buyer's and the seller's success will be calculated on the basis of each's alternatives.

In the game, the buyer and the seller will communicate by written messages. No talking please. The buyer will start by sending a message to the seller. The buyer and the seller will then alternate sending messages until (a) they agree upon a sales price, (b) an alternative offer is taken, forcing the other person to take their alternative, or (c) each have sent five messages. If, after each person has sent five messages an agreement has still not been reached, each will automatically take their alternative offer. Once a round has ended, the buyer and seller will move on to another car until all five cars have been bought and sold.

Remember:

1. Please make sure the correct subject number and the correct car are on each message, and that you use the messages in the correct order (see message number).
2. Write the sales price, whether agreed upon or an alterative, on the last message.
3. Do not talk during a round except to ask a question to the experimenter.
4. Each participant will receive extra-credit for their full participation in the study although the actual amount of extra-credit will vary.

APPENDIX D

Information Provided on Car Cards

1985 Honda Prelude

- | | |
|---------------------------------------|-------------------------------|
| - Si 2-Door Coupe | Retail (sticker) = \$6,400 |
| - 65,000 Miles | Wholesale (Invoice) = \$5,300 |
| - Air Conditioning | Buyer Alternative = \$6,075 |
| - Power Steering | Seller Alternative = \$5,625 |
| - AM/FM Cassette Stereo w/ 4 speakers | |

1984 Jeep

- | | |
|-----------------|-------------------------------|
| - Laredo | Retail (sticker) = \$4,900 |
| - 70,000 miles | Wholesale (Invoice) = \$3,800 |
| - 4 wheel drive | Buyer Alternative = \$4,175 |
| - 6 cyl. engine | Seller Alternative = \$4,525 |
| - AM radio | |

1988 Pontiac Grand-AM

- | | |
|-----------------------|-----------------------------|
| - 2-Door Coupe | Retail (sticker) = 6,900 |
| - 40,000 miles | Wholesale (Invoice) = 5,800 |
| - Sunroof | Buyer Alternative = 6,575 |
| - Stereo w/ tape & CD | Seller alternative = 6,525 |
| - Cruise control | |
| - Air Conditioning | |
| - Power Steering | |

1989 Toyota Corolla

- | | |
|--------------------|-----------------------------|
| - 4-Door Sedan DX | Retail (sticker) = 7,800 |
| - 17,000 miles | Wholesale (invoice) = 6,700 |
| - Air conditioning | Buyer Alternative = 7,075 |
| - Stereo Cassette | Seller Alternative = 7,025 |

MICHIGAN STATE UNIV. LIBRARIES



31293008770145