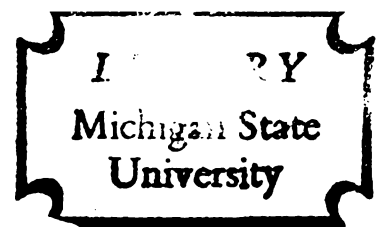






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MESSAGE SELECTION

presented by

Franklin Joseph Boster

has been accepted towards fulfillment  
of the requirements for

Ph.D. degree in Communication

Gerald R. Miller

Major professor

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AN EMPATHY MODEL OF COMPLIANCE-GAINING  
MESSAGE SELECTION

By  
Franklin Joseph Boster

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## ABSTRACT

### AN EMPATHY MODEL OF COMPLIANCE-GAINING MESSAGE SELECTION

By

Franklin Joseph Boster

In this dissertation a model of compliance-gaining message selection is presented. The model assumes that the persuader estimates the emotional reaction of the listener to the persuasive message on a continuum from positive to negative. Each persuader has a point on that continuum (ethical threshold) which the person would use and those that he would not use. If the message is more positive than the ethical threshold, then the person would use that message. If the message is more negative than the ethical threshold, then that message would be rejected.

Data from two experiments, one performed by Marwell and Schmitt and the other by Miller, Boster, Roloff, and Seibold, were found to be consistent with the model.

The question of situational differences in compliance-gaining message selection was also investigated. Again both the Marwell and Schmitt data and the Miller et al. data were examined. The primary situational determinant of compliance-gaining message selection was the beneficial nature of the situation. Persons were found to be willing to use more negative messages when they were trying to persuade the other "for his own good."

Franklin Joseph Boster

Finally, the question of individual differences in compliance-gaining message selection was examined.

Christie and Geis' Machiavellianism scale was found to be multi-dimensional and only one of the dimensions, negativism, was found to correlate substantially with compliance-gaining message use. This finding was interpreted as illustrating that cynical persons are willing to use more negative messages to gain compliance than are those who are less cynical.



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would have taken another four years. The Hunter family provided enough real life examples to convince me that the model was actually correct. Another important contribution was the Hunter pool, which kept me from jumping the fence at the University Club, and hence was indirectly responsible for keeping me out of jail.

My committee members, Dr. Erwin Bettinghaus, Dr. Edward Fink, and Dr. Eugene Jacobson, have all made major contributions to this thesis. All three possess encyclopedic knowledge of the field of social psychology in general, and persuasion specifically. Dr. Bettinghaus made numerous suggestions which always served to improve the quality of the manuscript. It was in Dr. Fink's seminar on interpersonal communication tactics that I was first introduced to the work of Marwell and Schmitt. In Dr. Jacobson's seminar in social psychology I first presented some of my ideas on compliance. His criticisms of my presentations were, without fail, of great value.

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## CHAPTER I

### INTRODUCTION

Advances in technology and the degree of interdependence among persons makes the consequences of resolving conflicts and regulating human affairs by the traditional method of armed conflict or the coercion of rigid traditions passed on with the weight of many generations undesirable. Instead nearly all social control is a matter of verbal messages. Much of the regulation of behavior consists of the formally written role structure of organizations such as governments, churches, or General Motors. Another considerable portion is found in the informal role structures such as marriage and friendship. However, a considerable amount of social regulation is still the dyadic persuasion context in which the persuader generates utterances which are aimed at getting the listener to do what the persuader wants (or to cease from doing what the persuader dislikes).

Even the briefest study of such situations reveals that in any given situation there are a virtual infinity of messages which the persuader might use. Thus, a scientific study which focuses on the particular message is virtually impossible. It is possible to find a classification scheme

for messages which would render persuasion a matter of a small and manageable set of message categories? Several such schemes have been offered. One of the most famous is implied in Kelman's (1961) work on processes of social influence. Kelman divides messages into three categories: (1) messages focused on the power of the persuader, (2) messages focused on the attractiveness of the persuader, and (3) messages focused on the credibility of the persuader. (French 1956) and French and Raven (1968) offer a more extensive set of categories. They divide Kelman's power dimension into two categories: reward power and coercive power. They retain the attractiveness dimension, but rename it referent power. They retain the expertise dimension of credibility, and they develop the somewhat novel notion of legitimate power. Numerous other authors have created similar schema (e.g., Parsons, 1963, Etzioni, 1961; Festinger, 1953); however, the most detailed category system was created by Marwell and Schmitt (1967). They developed 16 categories which they termed "strategies." The 16 strategies which they generated are presented in Table 1.

Each of the previously mentioned authors have tackled the problem of compliance-gaining message selection by analyzing the content of persuasive messages. In the present monograph a very different approach is taken. The purpose of this dissertation is to introduce a model of the

Table 1. The Definition of Sixteen Compliance-Gaining Strategies (Marwell and Schmitt, 1967, 357-358).

1. Promise	If you comply, I will reward you.
2. Threat	If you do, comply, I will punish you.
3. Positive Expertise	If you comply, you will be rewarded because of "the nature of things."
4. Negative Expertise	If you do not comply, you will be punished because of "the nature of things."
5. Liking	Actor is friendly and helpful to get target in "good frame of mind" so that he will comply with request.
6. Pre-Giving	Actor rewards target before requesting compliance.
7. Aversive Stimulation	Actor continuously punishes target making cessation contingent on compliance.
8. Debt	You owe me compliance because of past favors.
9. Moral Appeal	You are immoral if you do not comply.
10. Positive Self-Feeling	You will feel better about yourself if you comply.
11. Negative Self-Feeling	You will feel worse about yourself if you do not comply.
12. Positive Altercasting	A person with "good" qualities would comply.
13. Negative Altercasting	Only a person with "bad" qualities would not comply.
14. Altruism	I need your compliance very badly, so do it for me.
15. Positive Esteem	People you value will think better of you if you comply.
16. Negative Esteem	People you value will think worse of you if you do not comply.

psychological processes which take place when the persuader decides to use or not to use a given persuasive message. The model assumes that the persuader evaluates each message by forecasting the probable emotional impact of the message on the listener (i.e., will the listener be pleased or hurt or enraged by the persuasive message in question?). If the perceived emotional impact of the message is more positive than an ethical threshold (which varies from person to person), then the persuader will use that message. If the perceived impact of the message is less positive than the ethical threshold, then the persuader will reject that message. This substantive model is mathematized and the resulting mathematical model is tested against data gathered by Marwell and Schmitt (1967) and by Miller, Boster, Roloff, and Seibold (1977). These tests strongly support this empathy model. Further evidence for the model is presented in the form of a correlation between the ethical threshold defined by the model and the person's standing on the Machiavellianism scale (Christie and Geis, 1970) which was found in data gathered by Kaminski, McDermott, and Boster (1977).

#### The Marwell and Schmitt Study

As proof of the generality of their strategies, Marwell and Schmitt constructed a questionnaire to ask people about their compliance-gaining behavior. The questionnaire posed four hypothetical situations. For each situation, Marwell and Schmitt generated 16 specific messages, one for each of

the compliance-gaining strategies which they defined. All told, the respondent was asked to evaluate 64 messages as to whether s/he would or would not use a given message in order to persuade a listener in some given context. An example of such a message would be a father trying to persuade his son to do homework by saying, "If you study hard now, you will be able to do well in college and get a really exciting job when you're older." This particular message would represent the strategy "positive expertise," stressing the positive consequences for the persuadee which follow when s/he complies.

Marwell and Schmitt (1967) present no detailed logical analysis of their categories and there appear to be at least minor problems of this sort. For example, if a father seeks to improve his son's homework by using "positive esteem," he might say, "Your friends would be proud of you if you did well in math." But this message might also be listed under "positive expertise." Certainly it stresses positive consequences which follow from compliance. Clearly there is a fertile area of future research in clarifying the Marwell and Schmitt category scheme so that the strategies are truly exclusive.

On the other hand, the generative power of the Marwell and Schmitt category scheme is unquestioned. Three subsequent studies have used their scheme to create new compliance-gaining questionnaires (Miller et al., 1977; Kaminski et al., 1977; Hunter and Hunter, 1977). In all, the scheme was

applied to 11 situations not used by Marwell and Schmitt, and suitable messages were always found for each strategy in each situation. Thus there is reason to believe that the 16 strategies defined by Marwell and Schmitt can be applied to numerous persuasion contexts.

Marwell and Schmitt (1967) administered their questionnaire to 608 undergraduates and performed a factor analysis on the resulting data. They summed the four responses for each strategy (i.e., responses to the four messages for that strategy; one in each of the four situations) and correlated the resulting 16 scores. They offered an interpretation for a five factor solution with oblique factors and noted a second order factor analytic solution with two factors (the positive messages versus the negative messages). However, this analysis was flawed by a basic misinterpretation of the meaning of the factor analysis. They did not interpret the factors as dimensions of individual differences in persuader behavior, but as dimensions for categorizing the strategies into higher order or more abstract super categories. They offered a highly qualified and diffident attempt to relate this factor analytically generated set of super categories to the five category system of French and Raven (1968) but even they found the actual identification very forced. They further confuse their interpretation by arguing that there are no significant individual differences in compliance-gaining behavior and that the small degree of apparent

differences were largely a matter of "halo" or "use of scale" problems (with no definition of either term). This argument is logically contradictory to their acceptance of the dimensions of the factor analysis which can only be dimensions of the alleged non-existent individual differences.

The error made by Marwell and Schmitt is a subtle but important one. Their analysis is not an analysis of compliance-gaining behavior, but rather a logical and semantic analysis of compliance-gaining messages. There are undoubtedly schemes which constitute a set of super categories for the Marwell and Schmitt strategies. However the test of such an assertion would not be found in the study of compliance-gaining behavior, but in the logical and semantic analysis of messages. For example, does each message that can be generated within the strategy "promise" have substantive content which logically falls under the rules used by French and Raven (1968) to define their category "rewarding activity"? If so, then the strategy is indeed a subordinate category to the French and Raven category. This is a logical and not an empirical question.

What of the five factors found by Marwell and Schmitt (1967)? Are there five dimensions which determine which persuaders will use which strategies? If so, then there must be at least  $2^5=32$  qualitatively different patterns of selecting and rejecting messages for use in persuasion, i.e., at least 32 different types of persuaders. This of course would



contradict the work of Marwell and Schmitt and many other writers who have asserted the universalistic character of compliance-gaining strategy selection. Many previous writers have assumed that all persuaders are willing to use all strategies, but will use different strategies in different situations (see for example, the discussion of Miller et al., 1977). The analysis to follow will show the five factor solution in the Marwell and Schmitt data to be an artifact of nonlinear relations between the strategy scores. A reanalysis of the Marwell and Schmitt data shows that the data fit a unidimensional model in which persuaders base their acceptance or rejection of messages on what they perceive to be the emotional impact of that message on the listener. That is, the five factors of the Marwell and Schmitt analysis are actually five nonlinearly different versions of the same variable.

However as an offshoot of the new analysis, this study will offer evidence that the Marwell and Schmitt strategies are relevant to compliance-gaining behavior. Except for certain strategies (i.e., promise, threat, and altruism), the messages within a given strategy tend to be very similar in terms of frequency of usage. In particular, almost all positive messages would have frequencies greater than nearly all negative messages. To state it technically: the differences in mean usage of messages from different strategies is large relative to the differences in mean usage of messages

from within the same category.

Situational Determinants of Behavior: the Miller et al. Study

Marwell and Schmitt (1967) suggest that strategy usage will vary from one situation to the next. Miller et al. (1977) sought to test this hypothesis by relating strategy use to two classic dimensions of interpersonal interaction. The interpersonal-noninterpersonal dimension essentially contrasts persuasive behavior between intimates and strangers. The long-term-short-term dimension contrasts persuasive behavior in transient situations with persuasive behavior between people who will be in contact over a long period of time. For example, one might hypothesize that persuaders would be least likely to use negative strategies with intimates since such strategies might destroy future aspects of the relationship, or one might hypothesize that persuaders would be less likely to use negative strategies in long-term relationships where the persuader is subject to retaliation.

Miller et al. (1977) claim to have found considerable support for situational determinants of compliance-gaining behavior, but that evidence was oddly equivocal. No general hypothesis such as those stated in the previous paragraph was supported. Within each strategy there were statistically significant differences in mean usage of messages generated for different situations. However the direction and degree of such differences was not consistent from strategy to strategy.

This dissertation will argue that the differences in mean usage found in their data are better explained by variation in the emotional impact of different messages of the same strategy. This dissertation will argue that the evidence Miller et al. cite for situational determinants results from the research design by both Marwell and Schmitt and by Miller et al. in which different messages were written for different situations, i.e., a research design in which message variation within strategies is confounded with variation due to situational determinants.

An alternate analysis of the Miller et al. data is presented which suggests that there are no situational determinants in the Miller et al. data. Ironically, this new analysis applied to the Marwell and Schmitt data revealed situational determinants on a different dimension, i.e., a difference between situations in which the persuader does or does not view himself/herself as acting in the persuadee's "best interests."

Additionally, Miller et al. performed a factor analysis of their 64 messages. This analysis yielded eight factors, which would imply at least  $2^8=256$  qualitatively different types of persuaders. This dissertation will argue that this finding is in part an artifact of small sample size (168 respondents as opposed to Marwell and Schmitt's 608), but largely a function of nonlinear relations between strategy scores. A reanalysis of the Miller et al. data shows strong

support for the unidimensional empathy model proposed here.

### An Empathy Model of Compliance-Gaining Message Selection

Attempts to persuade others produce emotional reactions in them. These reactions lead others to react in ways which have consequences for the persuader. For example, the listener may quietly conform, react violently, feel flattered, feel resentment, etc. These responses lead to either immediate or delayed reactions to the persuader. Suppose that my bridge partner and I have a disagreement concerning whether to use Blackwood's slam convention or a club convention. My partner might conclude that I was correct in choosing the club convention and resume play feeling fortunate to have partnered with a budding genius. Or s/he might become incensed and refuse to play further with me. Or s/he might go along with me at the moment while harboring resentment which is later manifested by putting me into "unmakable" contracts. In all cases, there is an immediate emotional response in the listener and a subsequent reaction toward the persuader.

The fact that there is a subsequent consequence for the persuader means that most theorists would predict that the persuader would be sensitive to the emotional reaction of the listener. Most major communication theorists would predict that the selection of the compliance-gaining message would depend in part on the perceived (i.e., predicted) emotional response in the listener. The model to be presented here assumes that compliance-gaining message selection is

based entirely on this perceptual process. The excellent fit of data to the model is thus interpreted as implying that other causal factors are either perfectly correlated with the impact perception process or are small in magnitude.

Assume that all compliance-gaining messages can be scaled on a dimension which is the emotional impact that that message would have on a listener, i.e., assume that all messages can be scaled in terms of whether they are received positively or negatively. If a persuader is choosing between two messages, then assume that s/he will always try the message with the more positive (or less negative) value on the emotional impact scale first. The word "impact" will always be used for the dimension defined here, i.e., perceived affective response to the message, and will be denoted  $A$ .

Further assume that all persuaders see the same positive to negative rank order among the messages. It follows that for any given person, there will be a value which divides the affective impact dimension into these messages which are acceptable to the persuader and those messages which are not acceptable to the persuader. This value is an ethical threshold for the persuader which measures how far down the scale (in a negative direction) the persuader is willing to go in order to achieve the persuadee's compliance. The ethical threshold for a given person will be denoted by the letter  $T$ .

Consider a person responding to a compliance-gaining message questionnaire. Let  $U_{pi}$  be a Bernoulli variable which is 1 if person  $p$  would use message  $i$  and 0 if  $p$  would not use  $i$ .

How does usage  $U_{pi}$  relate to impact value  $A_i$  and threshold value  $T_p$ ?

$$U_{pi} = \begin{cases} 1 & \text{if } A_i > T_p \\ 0 & \text{if } A_i \leq T_p \end{cases}$$

Note in particular that usage is negatively correlated with ethical threshold; the higher the value of  $T_p$ , the more likely it is that  $U_{pi}$  will be 0. If one counts across messages to get a total usage score  $U_p$ , then persons with a high usage score accept almost all messages and thus have a very low ethical threshold, while persons with a low usage score reject nearly all messages and thus have a very high threshold. That is, the natural way of scoring the compliance-gaining instrument (i.e., usage) is a reverse scoring in relation to the natural way of mathematizing the threshold model of message selection.

The preceding model is a very severe model in that it requires binary usage data to conform to the assumptions of a Guttman scale. These stark conditions are not realized in the data. Why are the data not perfect as implied by the model laid out above? One possibility is to assume that the perceptual process is not perfect. In evaluating the impact of a given message, there are at least two factors which might confuse the persuader's momentary assessment: ambiguity and uncertainty. Any compliance-gaining message is usually a short utterance and contains words that can be interpreted

in either moderate or in extreme ways. In order to decide upon usage, the persuader must assume some particular interpretation of the message and must therefore pick only one of the possible values that the message might take on. That is, the impact value used in a particular decision will vary at random from some central value to the extent that the message is ambiguous.

Another random element in the decision process is uncertainty concerning the listener. Different people or people at different times will react to a given message in different ways. However the decision process requires the persuader to imagine a particular listener in order to make a definite response. Thus the decision made will be that for only one of many possible potential listeners. As a result perceived impact will vary randomly from some central value to the extent of uncertainty about the listener's characteristics.

Since the resolution of ambiguity and uncertainty in a particular decision are assumed to be momentary random cognitive processes, this means that a more realistic model of message selection should assume a random deviation in the perceived impact. Let us then use the symbol  $A_i$  for the central or typical perceived impact, and denote by  $e_{pi}$  the random deviation in the persuader's perception which is determined by ambiguity and uncertainty. Our model then becomes,

$$U_{pi} = \begin{cases} 1 & \text{if } A_i + e_{pi} > T_p \\ 0 & \text{if } A_i + e_{pi} \leq T_p \end{cases}$$

$$U_{pi} = \begin{cases} 1 & \text{if } A_i - T_p > -e_{pi} \\ 0 & \text{if } A_i - T_p \leq -e_{pi} \end{cases}$$

The previous equation is deterministic because it assumes that the random deviation  $e_{pi}$  is known. If the random deviation is not known, then we replace the preceding equation by a regression equation.

$$\begin{aligned} E[U_{pi} | A_i, T_p] &= \text{Prob } (A_i - T_p > -e_{pi} | T_p, A_i) \\ &= \text{Prob } (e_{pi} > T_p - A_i | T_p, A_i) \\ &= 1 - \text{Prob } (e_{pi} \leq T_p - A_i | T_p, A_i) \\ &= 1 - \emptyset(T_p - A_i) \end{aligned}$$

where  $\emptyset$  is the cumulative distribution function of the random deviation  $e_{pi}$ . If the random deviation is distributed normally with mean 0, then an algebraic identity yields the regression equation

$$E[U_{pi} | A_i, T_p] = \emptyset(A_i - T_p)$$

Figure 1 shows this regression curve graphed in two ways: with expected usage as a function of perceived affective impact for a given person and with expected usage as a function of thical threshold for a given message. Figure 1a shows



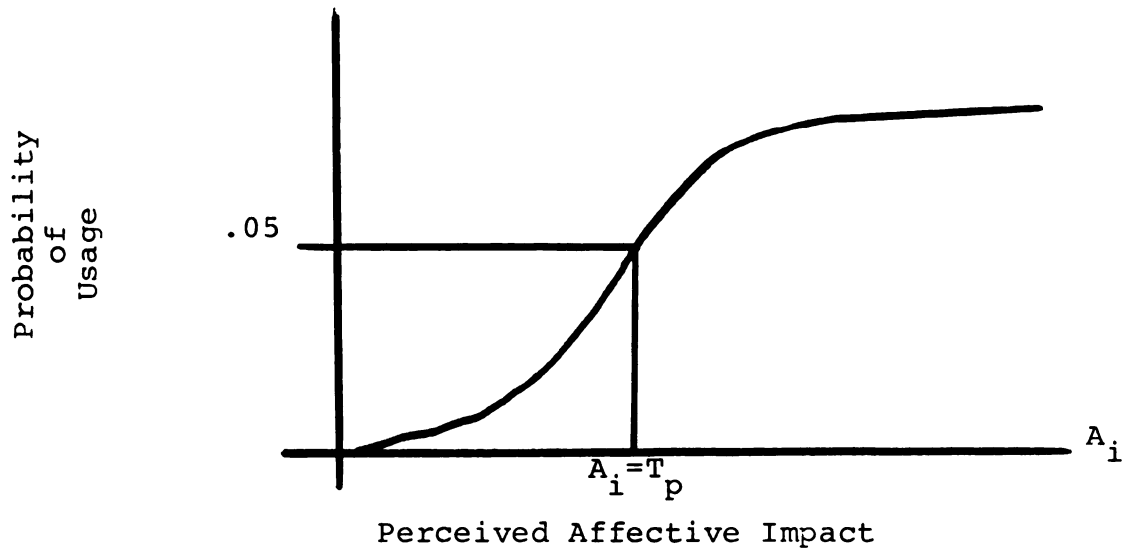


Figure 1a. The Expected Usage of a Compliance-Gaining Message as a Function of the Perceived Affective Impact of the Message on the Listener.

usage as a function of impact for a given person. The curve starts at 0 for highly negative messages and moves to 1 for highly positive messages. That is, the curve shows a probabilistic shift from rejection to acceptance of the message as the perceived affective impact of the message becomes more positive (or less negative). The midpoint of the shift (i.e., the point where expected usage is a probability of .50) depends on the persuader and is located at that point at which the message impact is exactly equal to the persuader's ethical threshold (i.e., the point at which  $A_i = T_p$ ). Figure 1b shows expected usage as a function of ethical threshold for a given message. The curve decreases from 1 for persons

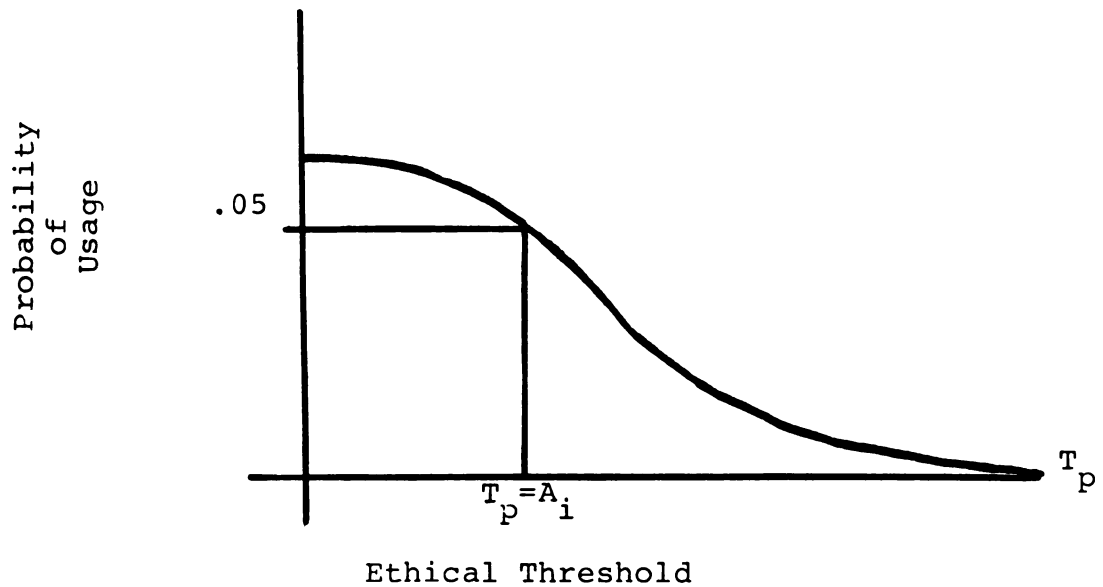


Figure 1b. The Expected Usage of a Compliance-Gaining Message as a Function of the Ethical Threshold of the Persuader.

with a very low threshold to 0 for persons with a very high threshold. That is, the proportion of persuaders who would use a given strategy drops from "all" among the most idealistic standards. The midpoint of the shift in probabilities (i.e., the point at which expected usage is a probability of .50) depends on the given message and is located at the point where persuaders have thresholds exactly equal to the message impact value (i.e., at the point where  $T_p = A_i$ ).

The probabilistic model presented above is a variation of latent trait theory (Lord and Novick, 1968). The difference lies entirely in the orientation of the variables.

In latent trait theory the underlying theoretical variable "ability" is assumed to be positively or directly related to the observed variable "performance" (i.e., correctness of response). In the compliance-gaining model, the observed variable of usage is negatively or inversely related to the theoretical variable which is the ethical threshold. Thus the analog of "item characteristic curves" in the compliance model are the decreasing ogives of Figure 1b rather than the traditional increasing ogives which look like those of Figure 1a. In order to make the statistical analysis easy for those who are familiar with latent trait theory, graphs will always be drawn with U, or total usage, as the independent variable, i.e., graphs will always be drawn with the ethical threshold variable reversed in orientation. In particular this means that the model predicts that usage of a given message will be an increasing ogival function of total usage score (with that message score subtracted).

## CHAPTER II

### THE DIMENSIONALITY OF COMPLIANCE- GAINING MESSAGES

Our basic assumption concerning individual differences in the use of compliance-gaining messages is that persons with "idealistic standards" will be more likely to reject any given message than will "unscrupulous" persons. This same rank order should apply whether the message is negative, moderate, or positive. Thus the model suggests that a correlational analysis of the use of various messages would yield a one factor solution; that factor being the persuader's perception of the persuadee's response to the message, or empathy. However neither Marwell and Schmitt nor Miller et al. report a unidimensional solution. The data to be presented in this chapter will show that the multidimensionality found in prior studies is an artifact of nonlinear relations between message use for any given message and the underlying empathy dimension. The regression of single messages onto empathy will be shown to be ogival. The presence of such nonlinearity is well known to produce "difficulty factors" in item correlations, since items with similar means correlate more highly with each other than with items of either higher mean or lower mean. Thus in this case

either factor analysis or cluster analysis will tend to identify a dimension for the negative messages, a dimension for the positive messages, and possibly one for moderate messages.

#### Item Characteristic Curves

In both the Marwell and Schmitt study and in the Miller et al. study, there were 64 individual compliance-gaining messages presented. For each, the respondent's stated frequency of usage should be an indication of high or low empathy for that respondent. Thus the sum of reported frequencies across the 64 messages should be an excellent indicator of empathy. It would seem a straightforward matter to simply plot the regression of mean use of each message as a function of empathy score and check these plots for the predicted nonlinearity. These plots were constructed, but the results tended to be somewhat unclear because of sample size problems. The key location for nonlinearity in ogival curves tends to be at the endpoints, but the endpoints are also the location of the categories with the smallest number of respondents. To provide better estimation at the ends, the item characteristic curves were grouped and averaged.

First the items were rank ordered by mean usage. They were then grouped by quartile, and the item characteristic curves in each quartile were averaged. These average item characteristic curves for the Marwell and Schmitt data are shown in Figure 2. The average item characteristic curves

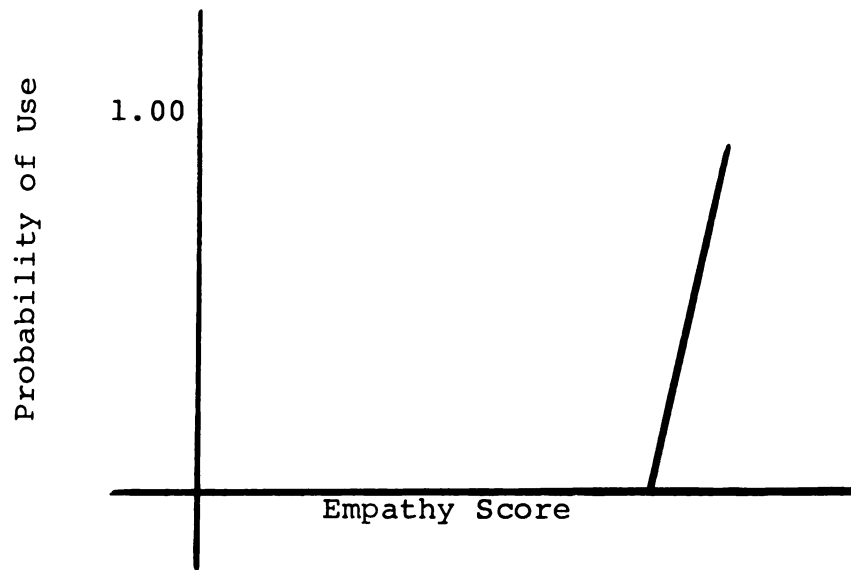


Figure 2a. An Item Characteristic Curve of the Relationship Between Empathy Score and the Probability of Compliance-Gaining Message Usage for the Most Negative Quartile of Messages in the Marwell and Schmitt Study.

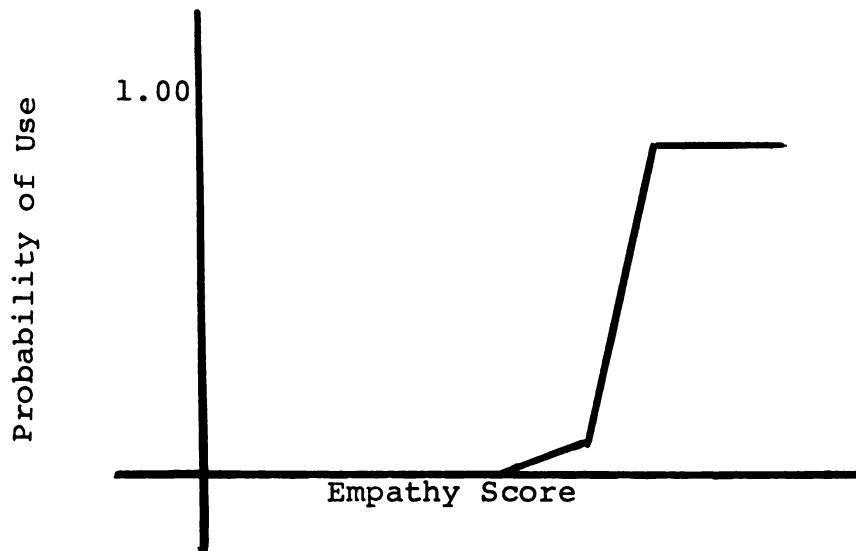


Figure 2b. An Item Characteristic Curve of the Relationship Between Empathy Score and the Probability of Compliance-Gaining Message Usage for the Second Quartile of Messages in the Marwell and Schmitt Study.

for the Miller et al. data are presented in Figure 3. Figures 2a and 3a show the averaged item characteristic curves for the most negative messages. Here there is a clear nonlinearity in that all persons with less than average scores (i.e., greater than average empathy) reject the messages completely. Thus the use or failure to use negative messages does not differentiate between those of high and moderate empathy (i.e., both get scores of 0). Figures 2d and 3d show the averaged item characteristic curves for the most positive messages. Here the nonlinearity is at the upper end of the distribution, i.e., at the low empathy end of the scale. All persons of lower than average empathy use these messages without hesitation, and hence all get maximal scores. Thus the use or failure to use positive messages does not differentiate between persons of moderate empathy and persons of low empathy. That is, negative messages distinguish only between persons of moderate and very low empathy while positive messages distinguish only between persons of moderate to high empathy.

To see the nonlinearity implied by the ogival item characteristic curves, let us consider the construction of two empathy tests: one constructed only of the most negative messages, and the other constructed only of the most positive messages. What would the regression of positive test scores on negative test scores look like? The answer is shown in Figure 6, and can be obtained by combining the results shown in Figures 4 and 5 for positive and negative messages.

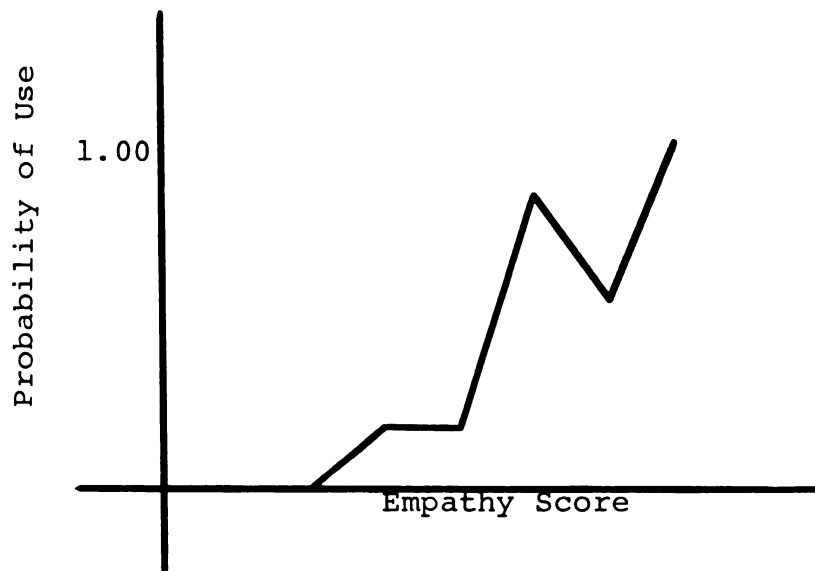


Figure 2c. An Item Characteristic Curve of the Relationship Between Empathy Score and the Probability of Compliance-Gaining Message Usage for the Third Quartile of Messages in the Marwell and Schmitt Study.

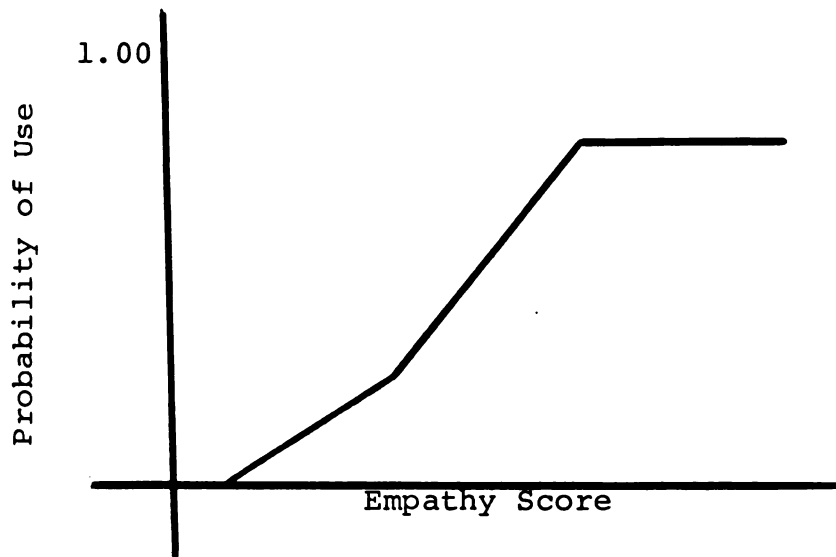


Figure 2d. An Item Characteristic Curve of the Relationship Between Empathy Score and the Probability of Compliance-Gaining Message Usage for the Most Positive Quartile of Messages in the Marwell and Schmitt Study.



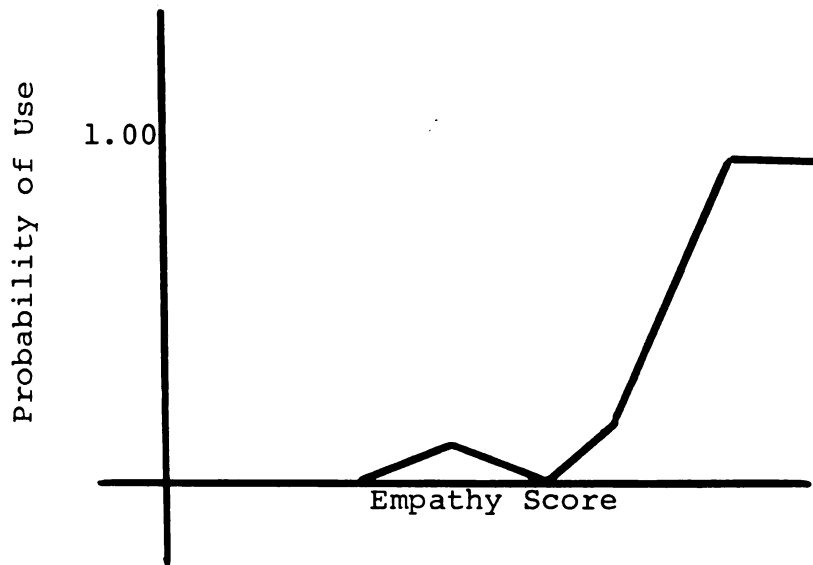


Figure 3a. An Item Characteristic Curve of the Relationship Between Empathy Score and the Probability of Compliance-Gaining Message Usage for the Most Quartile of Messages in the Miller et al. Study.

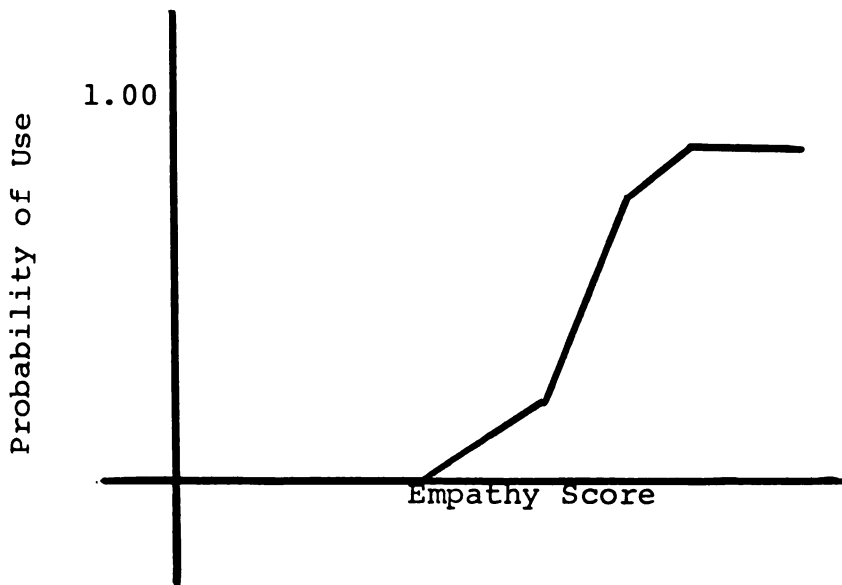


Figure 3b. An Item Characteristic Curve of the Relationship Between Empathy Score and the Probability of Compliance-Gaining Message Usage for the Second Quartile of Messages in the Miller et al. Study.

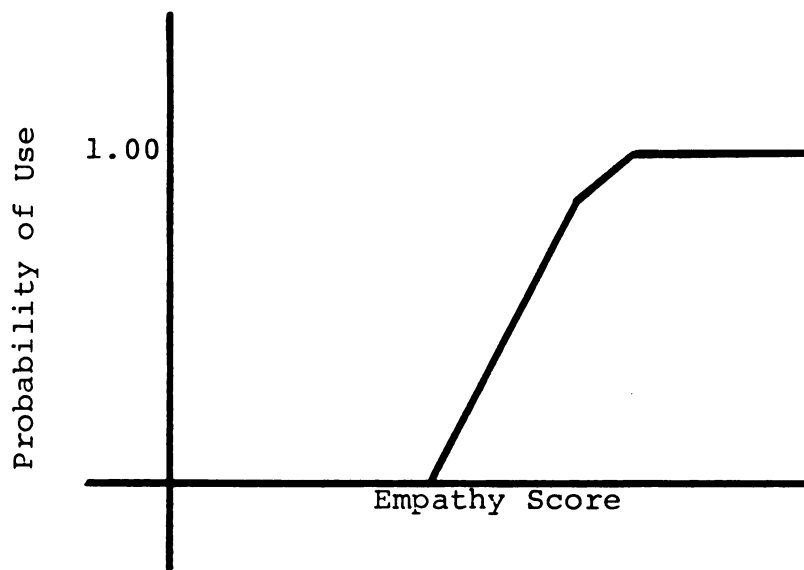


Figure 3c. An Item Characteristic Curve of the Relationship Between Empathy Score and the Probability of Compliance-Gaining Message Usage for the Third Quartile of Messages in the Miller et al. Study.

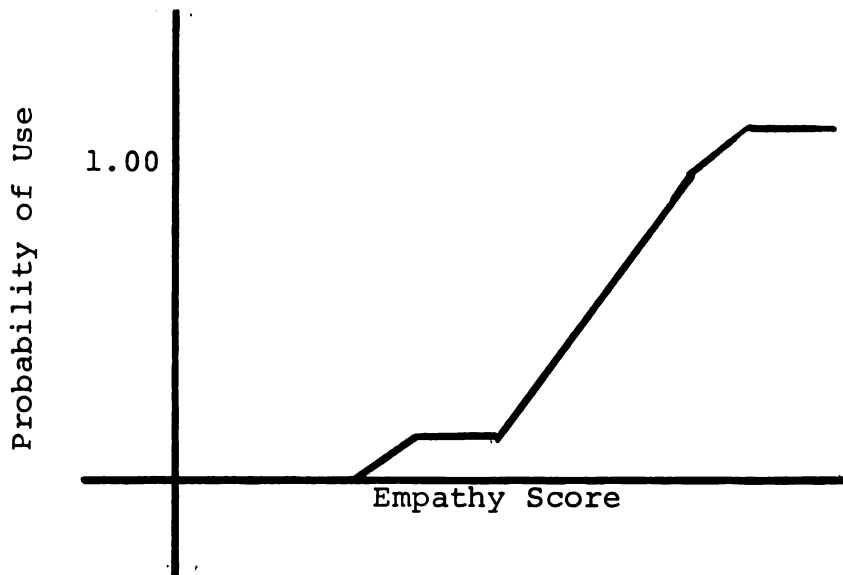


Figure 3d. An Item Characteristic Curve of the Relationship Between Empathy Score and the Probability of Compliance-Gaining Message Usage for the Most Positive Quartile of Messages in the Miller et al. Study.

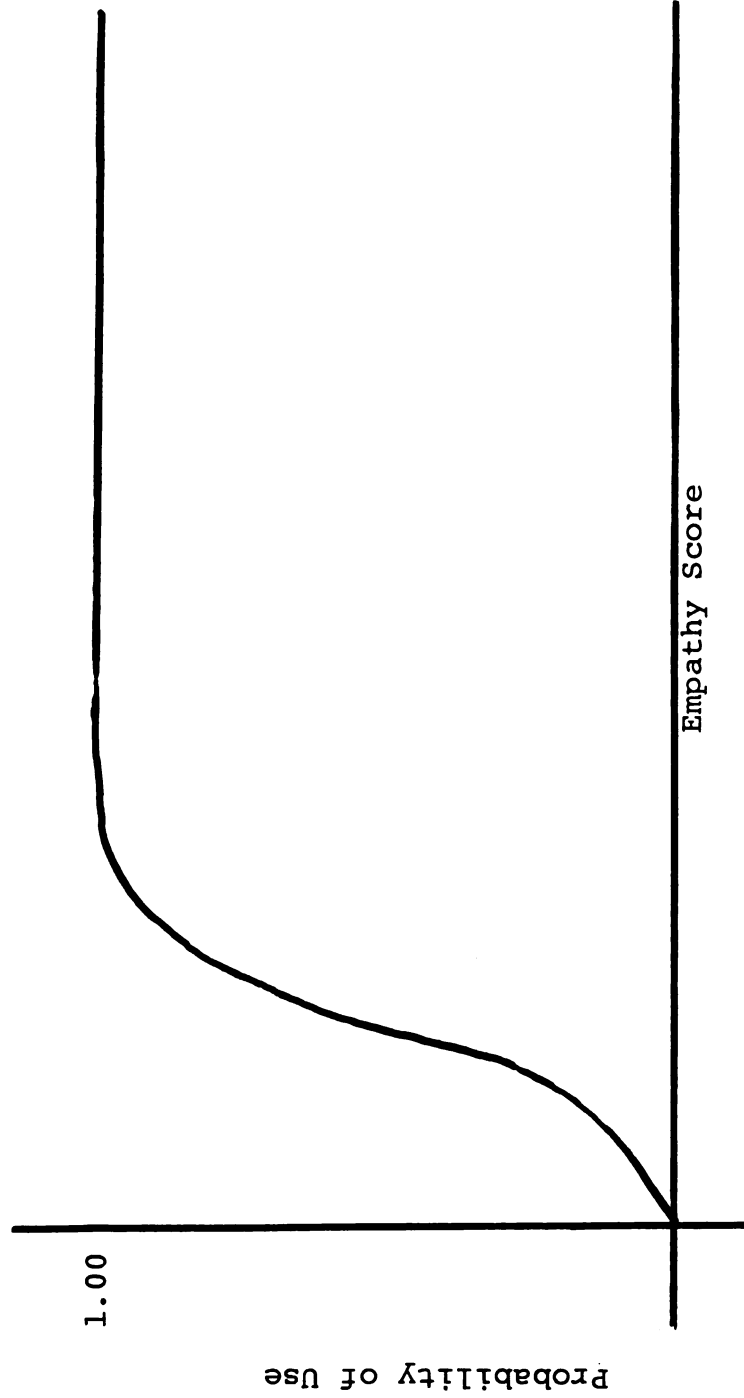


Figure 4. An Item Characteristic Curve of the Regression of the Probability of Compliance-Gaining Message Usage on Empathy Scores for a Hypothetical Positive Message.

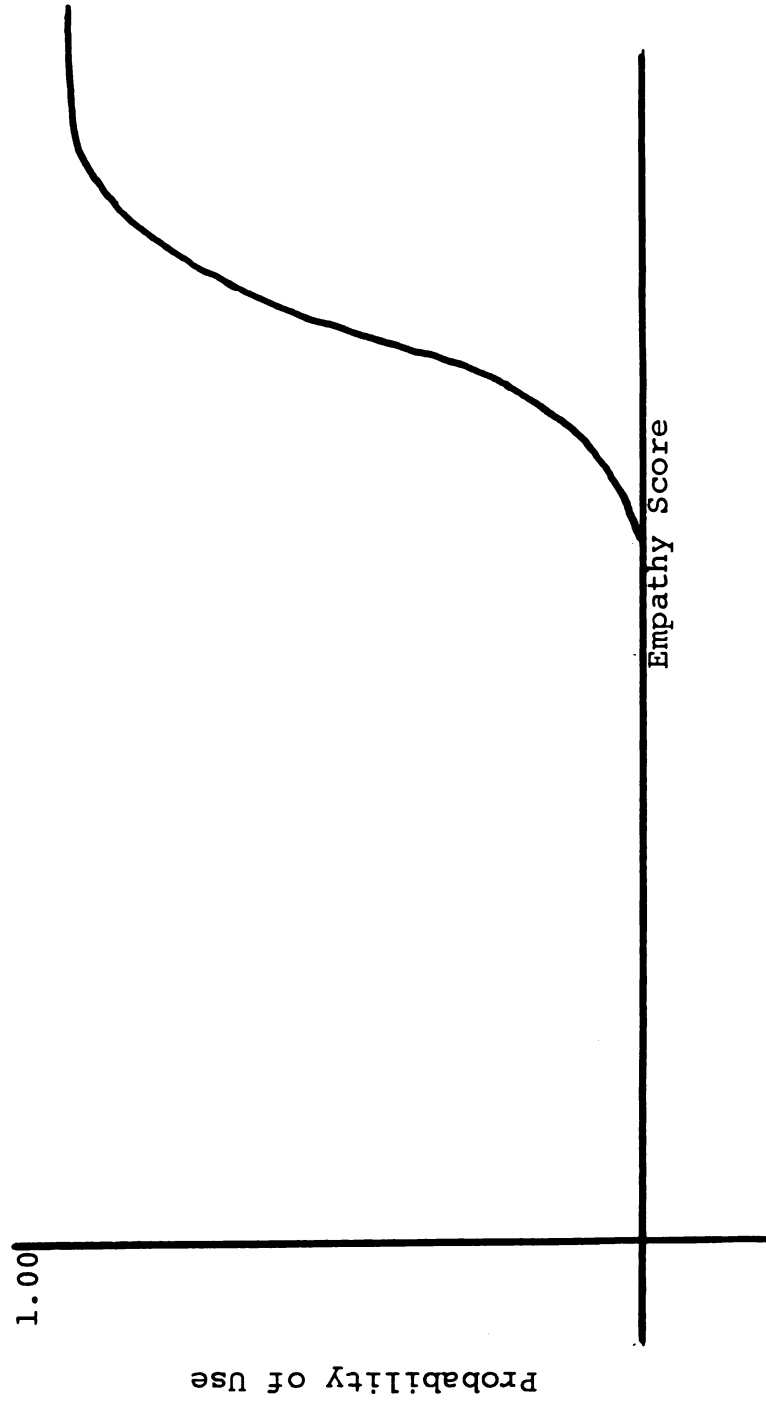


Figure 5. An Item Characteristic Curve of the Regression of the Probability of Compliance-Gaining Message Usage on Empathy Score for a Hypothetical Negative Message.

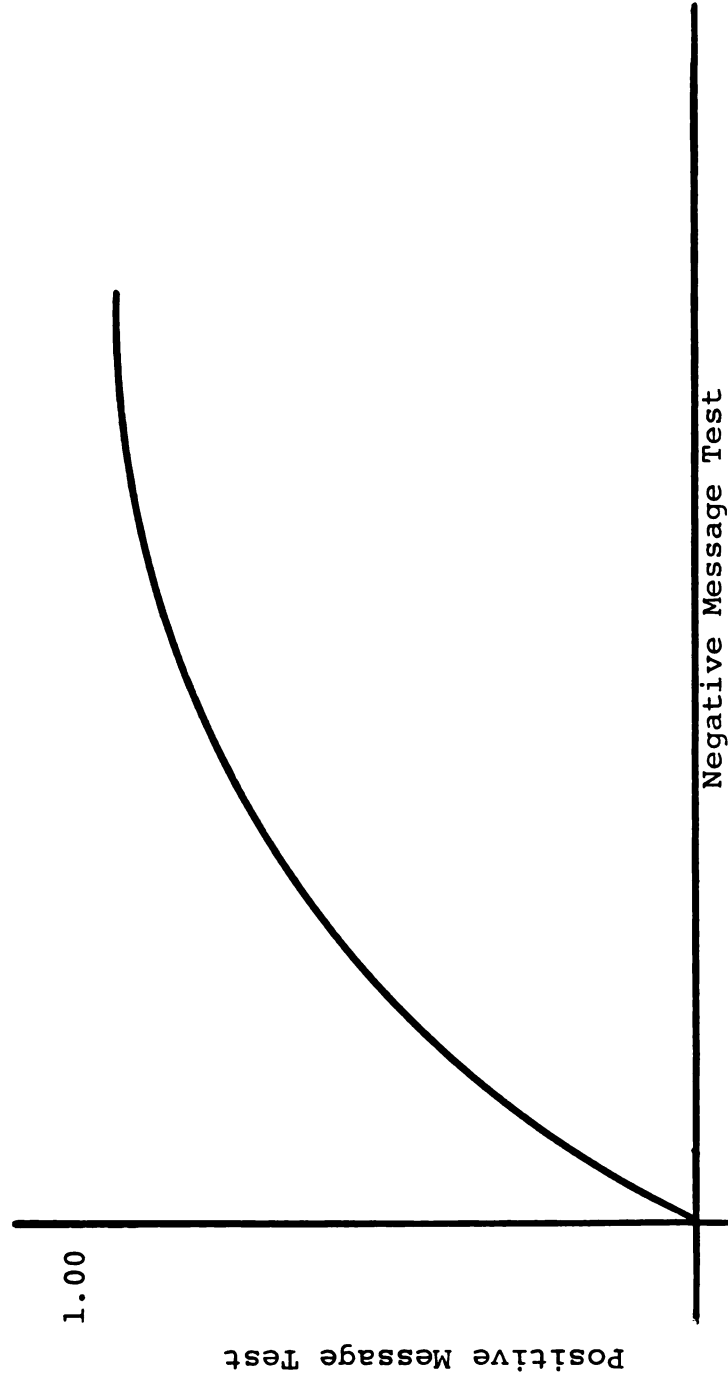


Figure 6. The Nonlinear Relationship Between Items of Different Empathic Impact Implied by the Nonlinear Relationship Between Message Usage and Empathy.

Consider people at different levels of empathy. Those people with below average empathy will all get low scores on the negative message test, yet they will spread out over almost the full range of scores on the positive message test. Thus Figure 4 shows an extremely steep rise in the regression curve for people with low scores on the negative message test. On the other hand, those persons with less than average empathy will spread out over the whole range of the negative message test, but will all get maximal or near maximal scores on the positive message test. Thus the regression curve over most of the range of the positive message test is high and flat. On the other hand, two tests made up of negative messages would both differentiate between the same people and would lump the same people together. Thus the regression of two tests with all negative messages would be linear. Similarly, two tests made up of positive messages would be linearly related to each other. Thus the correlations between tests of similar empathic impact would be high, while tests of very disparate impact would be low.

Correlations between use scores on single messages follow a similar pattern to those generated above for tests in which all messages are pitched to the same degree of affect. However the correlations for single messages will all be lowered by the random response components which are averaged out in tests.

### Simplex Patterns

If compliance-gaining messages are listed in order of the mean frequency of usage, the message items which are adjacent in the list should have larger correlations than items which are highly separated on the list, since items with similar mean usage will correlate more highly than items with dissimilar means. The corresponding fact about the correlation matrix is that correlations close to the main diagonal should be high and should shade off to very low correlations in the far corners. A hypothetical correlation matrix of this sort is shown in Table 2.

Table 2. A Hypothetical Correlation Matrix Representing a Guttman Simplex of the Strict Kind.

	Variable 1	Variable 2	Variable 3	Variable 4	Variable 5
Variable 1	1.00	.70	.49	.35	.25
Variable 2	.70	1.00	.70	.49	.35
Variable 3	.49	.70	1.00	.70	.49
Variable 4	.35	.49	.70	1.00	.70
Variable 5	.25	.35	.49	.70	1.00

The correlation matrix shown in Table 2 is called a Guttman simplex (Guttman, 1955). The correlations not only decrease as they leave the diagonal, but they satisfy a strict product rule (i.e., the exact magnitude of the non-adjacent correlations can be predicted from the correlations just off the main diagonal). For dichotomous items in latent

trait theory, this would only happen if the items were perfectly reliable, i.e., if the ogives were step functions. The product rule is even less appropriate in the present case in which the responses are on six and eight point scales. However, Guttman's derivation of the pattern of principal components of a simplex depends only slightly on the exact product rule; the general pattern of his results actually depends entirely on the coarse structure of the data, i.e., on the pattern of correlations decreasing from the main diagonal. Guttman (1955) found that the first principal component would either be flat (for large correlation matrices) or would be peaked at the middle item. The second principal component would have large positive loadings for items at one end of the list and large negative loadings for items at the other end of the list. The third and fourth and succeeding principal components are similarly predictable, though the patterns are successively more complicated.

The crucial point is that all factors past the first are actually artifactual, produced by the nonlinearity of the relation between each item and the underlying trait. After VARIMAX rotation, these principal components become the "difficulty factors," i.e., a factor for the easy items, a factor for the medium items, a factor for the hard items. These specious difficulty factors could explain how Marwell and Schmitt and Miller et al. could get multiple factor solutions to correlation matrices which actually stem from a



single empathy dimension.

Tables 3 and 4 show the strategy correlation matrices for the Marwell and Schmitt data and for the Miller et al. data respectively. In both cases there is a pronounced simplex pattern of decreasing correlations toward the top right and the lower left corners of the correlation matrix. Most of the correlations which deviate from the predicted pattern deviate by only minor amounts which are well within the limits predicted by sampling error.

However, there are a few correlations which are truly deviant and which warrant further comment. The crucial fact to consider is that the strategy scores correlated by Marwell and Schmitt or by Miller et al. were not scores for single messages but rather the sums of four scores over the four messages which represented each strategy (i.e., four scores for each message category). If several messages do not have the same mean value, then the sum over their responses will not have the usual ogival regression curve onto empathy. If the variation in means were sufficiently large, the resulting summed scores could yield a test which is linear on empathy. Data presented in the next chapter will show that this is somewhat true of all of the strategies, but especially true of some. In particular, the various threats used by Miller et al. vary enormously in their empathic impact. The correlations for threat are correspondingly deviant.

Table 3. The Correlations Between Compliance-Gaining Message Strategies Obtained in the Marwell and Schmitt Study.

Strategies	+Exp	Lik	-Exp	+Alt	+SF	+EST	PG	Prom	Altr	MA	-SF	Debt	-Est	-Alt	AS	Thr
Positive Expertise	1.00	.37	.52	.43	.42	.44	.31	.25	.26	.31	.33	.25	.29	.24	.23	.19
Liking	.37	1.00	.30	.35	.34	.32	.56	.35	.29	.17	.25	.15	.20	.18	.22	.14
Negative Expertise	.52	.30	1.00	.35	.35	.39	.30	.33	.39	.35	.38	.33	.39	.34	.35	.31
Positive Altercasting	.43	.35	.35	1.00	.58	.47	.30	.26	.25	.35	.44	.23	.35	.38	.22	.19
Positive Self-Feeling	.42	.34	.35	.58	1.00	.65	.37	.32	.33	.43	.61	.31	.50	.48	.32	.25
Positive Esteem	.44	.32	.39	.47	.65	1.00	.36	.31	.26	.39	.33	.31	.29	.24	.28	.29
Pre-Giving	.31	.56	.30	.30	.37	.36	1.00	.52	.31	.18	.27	.20	.27	.26	.26	.20
Promise	.25	.35	.33	.26	.32	.31	.52	1.00	.32	.20	.28	.24	.30	.27	.33	.32
Altruism	.26	.29	.39	.25	.33	.26	.32	.32	1.00	.34	.36	.44	.49	.39	.33	.35
Moral Appeal	.31	.17	.35	.35	.43	.39	.20	.20	.34	1.00	.54	.36	.50	.49	.33	.36
Negative self-Feeling	.33	.25	.38	.44	.61	.33	.28	.28	.36	.54	1.00	.42	.65	.57	.40	.38
Debt	.25	.15	.33	.23	.31	.31	.24	.24	.44	.36	.42	1.00	.53	.44	.41	.48
Negative Esteem	.29	.20	.39	.35	.50	.29	.30	.30	.49	.50	.65	.53	1.00	.56	.44	.46
Negative Altercasting	.24	.18	.34	.38	.48	.24	.27	.27	.39	.49	.57	.44	.56	1.00	.36	.45
Aversive Stimulation	.23	.22	.35	.22	.32	.28	.33	.33	.33	.33	.40	.41	.44	.36	1.00	.60
Threat	.19	.14	.31	.19	.25	.29	.32	.32	.35	.36	.38	.48	.46	.45	.60	1.00

Table 4. The Correlations Between Compliance-Gaining Message Strategies Obtained in the Miller et al. Study.

Strategies	Lik	+Alt	Altr	+Exp	Prom	-Exp	Thr	+SF	Debt	PG	-Alt	+Est	-SF	MA	AS	-EST
Liking	1.00	.35	.43	.52	.33	.42	.03	.53	.44	.15	.29	.46	.28	.22	.02	.30
Positive Altercasting	.35	1.00	.47	.45	.25	.32	.13	.59	.57	.19	.51	.40	.48	.47	.13	.32
Altruism	.43	.47	1.00	.40	.43	.36	.17	.50	.49	.22	.23	.36	.40	.36	.12	.31
Positive Expertise	.52	.45	.40	1.00	.41	.42	.14	.58	.54	.10	.39	.42	.44	.38	.07	.28
Promise	.33	.25	.43	.41	1.00	.34	.10	.39	.37	.28	.15	.30	.26	.19	.02	.24
Negative Expertise	.42	.32	.36	.42	.34	1.00	.25	.50	.50	.12	.33	.42	.42	.20	.16	.39
Threat	.03	.13	.17	.14	.10	.25	1.00	.12	.31	.01	.38	.23	.38	.30	.65	.39
Positive Self- Feeling	.53	.59	.50	.58	.39	.50	.12	1.00	.58	.15	.42	.61	.58	.43	.22	.49
Debt	.44	.57	.49	.54	.37	.50	.31	.58	1.00	.24	.51	.49	.55	.54	.26	.50
Pre-Giving	.15	.19	.22	.10	.28	.12	.01	.15	.24	1.00	.16	.29	.16	.30	.09	.24
Negative Altercasting	.29	.51	.23	.39	.15	.33	.38	.42	.51	.16	1.00	.46	.66	.59	.37	.52
Positive Esteem	.46	.40	.36	.42	.30	.42	.23	.61	.49	.29	.46	1.00	.53	.44	.31	.73
Negative Self- Feeling	.28	.48	.40	.44	.26	.42	.38	.58	.55	.16	.66	.53	1.00	.61	.36	.57
Moral Appeal	.22	.47	.36	.38	.19	.20	.30	.43	.54	.30	.59	.44	.61	1.00	.33	.50
Aversive Stimulation	.02	.13	.12	.07	.02	.16	.65	.22	.26	.09	.37	.31	.36	.33	1.00	.36
Negative Esteem	.38	.32	.31	.28	.24	.39	.39	.49	.50	.24	.52	.73	.57	.50	.36	1.00

Similar comments apply to the cluster interpretations given to the multiple factor solution by Miller et al. They noted that message clusters did not follow strategy designations, but frequently went either with situation or just haphazardly. They claimed that this was evidence for the existence of strong situational determinants in compliance-gaining behavior. Actually this analysis shows that messages vary considerably in mean within strategies and therefore we would expect the apparent clusters to bear only a very rough correspondence to strategy designations. Instead, the single messages group by mean response as predicted by the empathy model.

### Factor Analysis

There is a more structured way to check for simplex patterns within a formal factor analysis. The first two principal components (or principal axis factors) can be used to make a graph which should have a very special form. For each item a point  $(x,y)$  is plotted, where  $x$  is the loading of that item on the first principal component and  $y$  is the loading of that item on the second principal component. If the correlation matrix follows a simplex pattern, then the item points should fall roughly on the arc of a semicircle (variations in distance of these points from the origin can either be sampling error or differences in item reliability). The rank order along that arc should be the rank order of the item means. Tables 5 and 6 present factor loadings, obtained from a VARIMAX

Table 5. A Factor Analysis of 16 Compliance-Gaining Message Strategies for the Marwell and Schmitt Data.

<u>Strategies</u>	<u>Factor I</u>	<u>Factor II</u>
Negative Esteem	.75*	.24
Negative Altercasting	.67*	.22
Threat	.67*	.13
Negative Self-Feeling	.66*	.34
Debt	.64*	.16
Aversive Stimulation	.60*	.22
Moral Appeal	.58*	.27
Altruism	.51*	.30
Liking	.05	.66*
Positive Esteem	.25	.65*
Positive Self-Feeling	.42	.62*
Positive Expertise	.20	.60*
Positive Altercasting	.27	.60*
Pre-Giving	.18	.59*
Promise	.26	.48*
Negative Expertise	.38	.48*

$r_{12}$  (the correlation between those items which have their highest loading on Factor I and those items which have their highest loading on Factor II) = .71

Coefficient alpha for those items which have their highest loading on Factor I = .86

Coefficient alpha for those items which have their highest loading on Factor II = .83

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\* Denotes the factor upon which a strategy has its highest loading.

Table 6. A Factor Analysis of 16 Compliance-Gaining Message Strategies for the Miller et al. Data.

<u>Strategies</u>	<u>Factor I</u>	<u>Factor II</u>
Positive Self-Feeling	.76*	.25
Positive Expertise	.70*	.12
Liking	.68*	.00
Debt	.67*	.39
Positive Altercasting	.63*	.25
Altruism	.63*	.13
Positive Esteem	.60*	.44
Negative Expertise	.56*	.22
Promise	.55*	.01
Pre-Giving	.28*	.12
Aversive Stimulation	-.04	.75*
Threat	-.01	.73*
Negative Altercasting	.41	.62*
Negative Esteem	.44	.61*
Negative Self-Feeling	.52	.59*
Moral Appeal	.43	.55*

$r_{12}$  (the correlation between those items which have their highest loading on Factor I and those items which have their highest loading on Factor II) = .69

Coefficient alpha for those items which have their highest loading on Factor I = .87

Coefficient alpha for those items which have their highest loading on Factor II = .84

---

\* Denotes the factor upon which a strategy has its highest loading.

rotation of principal axis factors calculated using communalities, for the Marwell and Schmitt data and the Miller et al. data. In Figure 7 and 8 plots of these factor loadings for the Marwell and Schmitt data and for the Miller et al. data are shown. With the exception of "threat" in the Miller et al. data, there are no deviations which are greater than would be expected from sampling error.

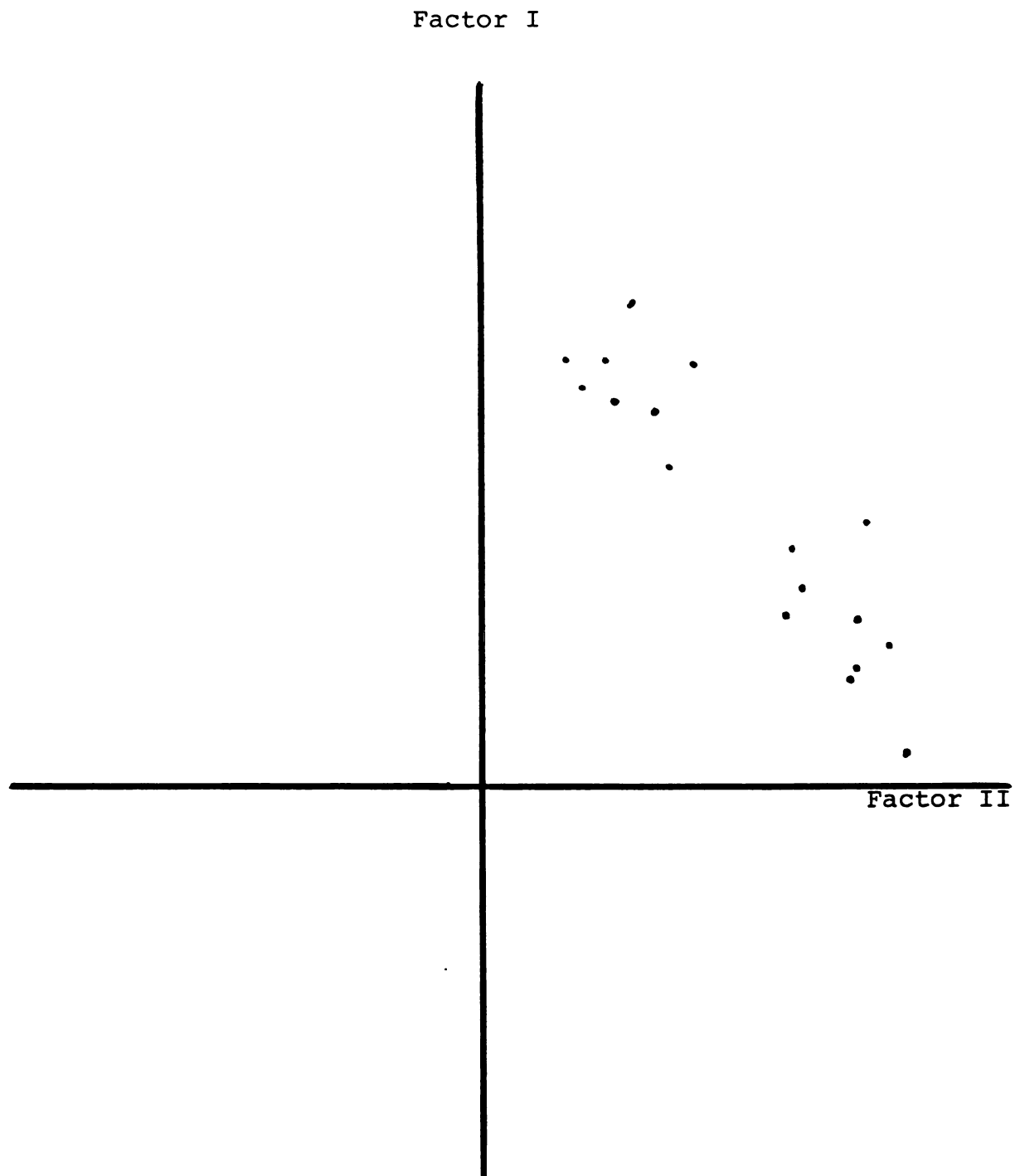


Figure 7. A Graph of Compliance-Gaining Message Strategies Scatterplotted as a Function of Their Factor Loadings on Two Factors for the Marwell and Schmitt Data.



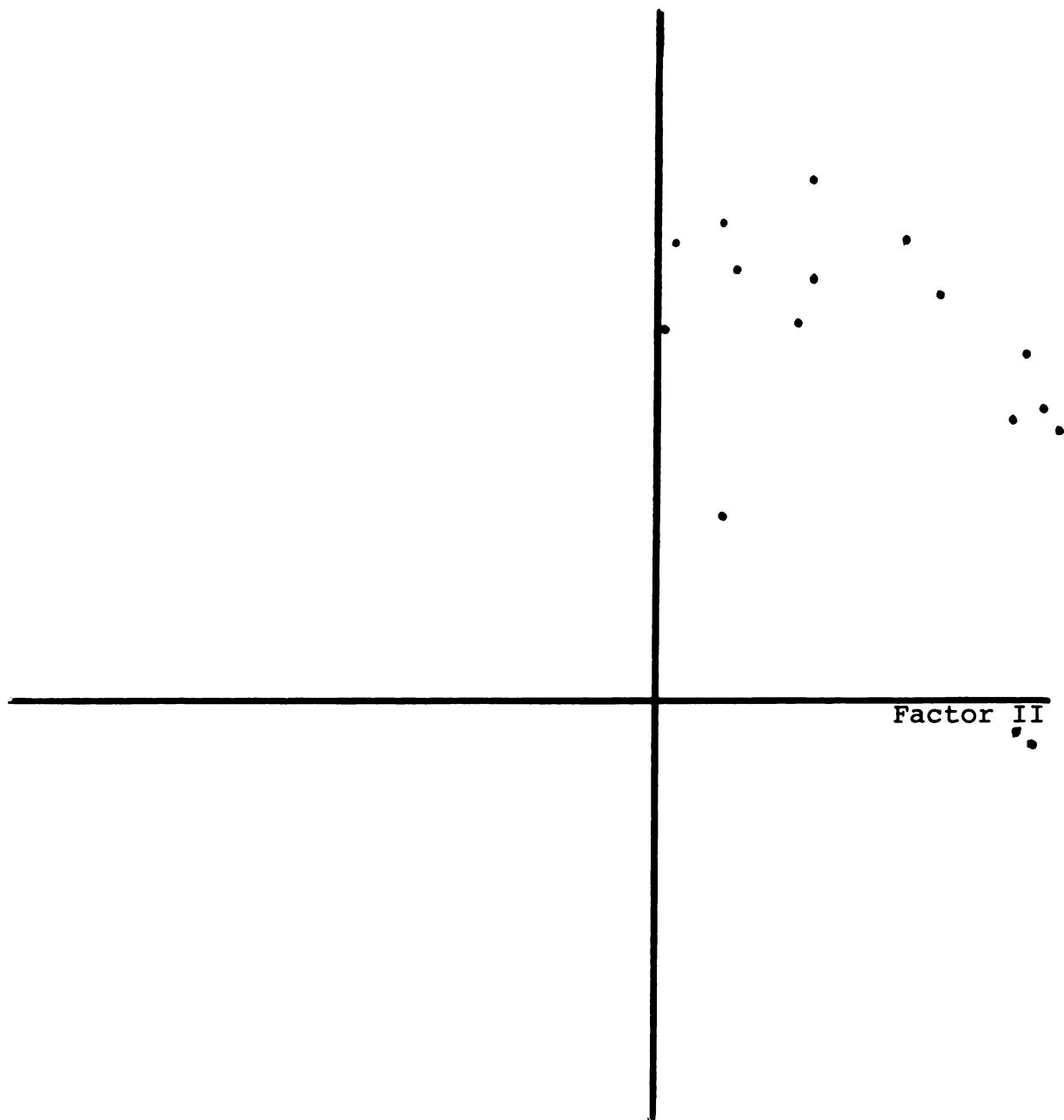


Figure 8. A Graph of Compliance-Gaining Message Strategies Scatterplotted as a Function of Their Factor Loadings on Two Factors for Miller et al. Data.

### CHAPTER III

#### COMPLIANCE-GAINING STRATEGIES AND SITUATIONAL DETERMINANTS

Three analyses related to compliance-gaining behavior have been presented. Marwell and Schmitt have presented a logical and semantic analysis of persuasive messages. Miller et al. have argued that there will be situational determinants of compliance-gaining behavior and have suggested that two relevant dimensions of compliance situations would be the extent of intimacy between persuader and persuadee and the length of time in which persuader and persuadee are likely to be in contact. Finally, the empathy model portrayed the process within the persuader as an assessment of the likely emotional reaction of the persuadee to the message and a comparison of that reaction with an ethical threshold that represents the persuader's lower bound for acceptable reactions in others. These analyses are not incompatible. The next section of the dissertation will state the psychological significance of the Marwell and Schmitt strategies in the language of the empathy model. A later section will do the same for situational determinants. Related analyses of the data will show support for the synthesis presented in each case.

### Strategy Value and Strategy Width

The empathy model implies that compliance-gaining messages can be scaled on the same continuum as persuaders. If a fixed scale of the ethical thresholds of persuaders has been determined, then according to the empathy model, all mathematical properties of a given message can be determined from the regression curve of message use onto ethical threshold (i.e., the "item characteristic curve"). In particular, the typical value of the message can be scaled by noting the threshold point at which the probability of using the message becomes .50. A negative message will have a high threshold value reflecting the fact that most persuaders will reject the message. A positive message will have a low threshold point reflecting the fact that most persuaders would use that message. Let us call this threshold point the "scale value" of the message.

How can Marwell and Schmitt's concept of strategy be conceptualized within the context of the empathy model? Marwell and Schmitt's strategies are categories of messages determined by the content of the message. Thus in principle we can associate with each strategy the set of all messages (in all situations) which are logically members of that strategy. Each such message will have an associated scale value. Thus associated with each strategy is the set of all possible scale values for the messages in that strategy. If a procedure for sampling messages from a strategy is defined, then that

procedure will determine a sampling of the corresponding scale values. Thus giving a procedure for sampling messages, there will be a statistical distribution of scale values for that strategy. This distribution will have a mean and a standard deviation. The mean scale value of the messages in the strategy might be called the "strategy value." The standard deviation of scale values for that strategy will be termed the "strategy width."

What would it mean for the Marwell and Schmitt concept of "strategy" to be irrelevant to compliance-gaining behavior? It would mean that the distribution of scale values would be the same for all strategies. In particular this would mean that all strategies have the same strategy value and that all strategies would have the same width. On the other hand, this means that to the extent that strategies have differing strategy values, the concept of strategy is relevant to behavior.

This process of measuring the importance of strategies is exactly equivalent to a one way analysis of variance in which messages are nested within strategies and the dependent variable is message scale value. The extent to which strategies are homogeneous sets of messages can be assessed by comparing the variance of strategy values to the mean of the strategy variances (i.e., the mean squared strategy width). This comparison is typically made in the form of a ratio of variance in strategy values to the sum of the two number which must then be a fraction. This number is comparable to  $\eta^2$ .

The previous analysis can also be done in two steps: (1) consider each situation separately and form strategy values within each situation, (2) sample from situations and hence sample situation specific strategy values. This is analogous to a two way analysis of variance in which messages are nested within situations and situations are crossed with strategies.

How can strategy values be estimated from observed data? The estimation proceeds in two steps: (1) scale values for single messages must be estimated and (2) the scale values for several messages from the same strategy must be averaged. Calculating scale values for the messages is complicated by the nonlinearity of the empathy model in relation to ethical thresholds. If the usage data were binary, then the scale value of each message could be obtained using the methods of latent trait theory. But there are even further complications in analyzing data from the compliance questionnaires because they use quantitative response scales (such as 1=very unlikely to 8=very likely).

However there is an alternate approach. Suppose that the shape of the regression of each message onto threshold is exactly the same except for location, i.e., suppose that there is the same amount of ambiguity and uncertainty in all messages. Then it can be shown that there is a function which maps scale values into mean usages and vice versa. That is, if the message regression curves differ only in location, then

there is a function such that  $U_i = f(A_i)$  and the inverse of that function satisfies  $A_i = f^{-1}(U_i)$ . That is, if the extent of ambiguity and uncertainty is the same for all messages, then mean usage can be regarded as an alternate scaling of messages (thought not a linear re-scaling). This suggests that a good approximate analysis of the extent to which strategies capture the variation in message values would be to use analysis of variance techniques on mean usage instead of the scale value, and this is precisely what will be done below. The impact of doing the analysis on mean usage is to slightly underestimate the difference between scale values for messages which are both at the same extreme end of the scale (i.e., either both extremely positive or both extremely negative) in comparison to differences between moderate messages. This produces a slight tendency to underestimate strategy widths for the extreme strategies in comparison with the moderate strategies.

If mean usage is used to scale the messages, then it is easy to calculate the error in that scale value. Error in this value is related to the number of persuaders by the usual formula for the standard error of the mean. If the variance in usage scores for a message is  $\sigma^2$  and the number of respondents to the questionnaire is  $N$ , then the error variance of the mean usage for that message is  $\sigma^2/N$ . Since the number of respondents in the Marwell and Schmitt study is 608 and the number of respondents in the Miller et al. study is 168, the

error mean usage values for messages is negligible in the present study.

The error in estimates of strategy values can be calculated using similar formulas but with a different sampling base. The sampling population for strategies is not a set of people, but a set of potential messages. Therefore, the sample size relevant to the estimation of the strategy value is not the number of respondents, but the number of messages. Thus the relevant sample size for both the Marwell and Schmitt study and Miller et al. study is only 4. The error variance in estimating strategy values is  $\sigma^2/n$  where  $\sigma^2$  is the strategy width for that strategy and  $n$  is the number of messages whose scale values (or mean usages) were averaged. In the Miller et al. data the typical estimated strategy width was 11.5, the number of messages was 4, and hence the typical error variance was 33.06. As will be seen in Table 7, this value is small in comparison with the differences between strategy values and thus plays no role at all in the major conclusions of any of the analyses.

On the other hand, the error variance in the estimates of the strategy width in the Marwell and Schmitt study is very large. The sample size for the estimation of the strategy width is also the number of messages rather than the number of respondents. Thus in the studies reanalyzed in this dissertation, the sample size for strategy widths is 4 and the resulting estimates are so error laden as to be

Table 7. The Strategy Values for Both the Marwell and Schmitt Data and the Miller et al. Data in Both Original Units and Transformed (0 to 100) Units.

<u>Strategies</u>	<u>Original Units</u>		<u>Transformed Units</u>	
	Marwell & Schmitt	Miller et al.	Marwell & Schmitt	Miller et al.
Positive Expertise	2.40	5.21	72.00	50.16
Liking	2.91	5.39	61.80	62.73
Negative Expertise	3.35	4.65	53.00	52.16
Positive Altercasting	3.38	5.35	52.40	62.16
Positive Self-Feeling	3.80	4.18	44.00	45.44
Positive Esteem	3.99	3.51	40.20	35.87
Pre-Giving	4.01	3.97	39.80	42.44
Promise	4.10	5.10	38.00	58.59
Altruism	4.48	5.29	30.40	61.30
Moral Appeal	4.61	3.27	27.80	32.44
Negative Self-Feeling	4.68	3.30	26.40	32.87
Debt	4.77	4.14	24.60	44.87
Negative Esteem	4.95	2.85	21.00	26.44
Negative Altercasting	4.98	3.69	20.40	38.44
Aversive Stimulation	5.08	3.00	18.40	23.58
Threat	5.14	4.21	17.20	45.87



virtually useless unless averaged. If  $s$  is the sample strategy width, then the confidence interval for the population strategy width  $\sigma$  is

$$P[ .57 s \leq \sigma \leq 3.64 s ] = .95$$

Thus if the sample estimate of the strategy width were 2.00, then the population strategy width might be anywhere from 1.14 to 7.28. In particular this degree of variation makes it impossible to make a meaningful comparison of the strategy widths observed in the Marwell and Schmitt study and the strategy widths in the Miller et al. study.

#### Mean Usage

In comparing strategy values from different studies it is important to note that message writing is not random across studies. Any one questionnaire writer will bring certain biases to his interpretation of a strategy in a given situation, e.g. one writer will think of one set of threats while another writer will think of an entirely different set of threats. Only if many messages were chosen for each strategy by many different item writers would both studies be likely to sample from the same full set of messages. The implications of this state of affairs depends on the strategy width of the strategy considered. If a strategy has a very narrow width, then two writers will necessarily find similar strategy values regardless of differences in their content selections. On the other hand if the category width is very large, then

it is possible for one writer to pick his messages from one end of the distribution while another writer picks all of his messages from the other end of the distribution. Thus if a strategy has a wide strategy width, then there can be considerable discrepancy between obtained strategy values.

Table 7 presents the strategy values for the Marwell and Schmitt study and for the Miller et al. study. In both cases each strategy value was obtained by averaging the mean usage for four messages written for that strategy as used in four situations. The first two columns give mean usage values in the raw scale units of the study in question. However the scales used in the two studies were not comparable; Marwell and Schmitt used a 6 point scale ranging from "definitely would use" to "definitely would not use," while Miller et al. used an 8 point scale from "extremely likely to use" to "extremely unlikely to use." In an attempt to make comparable scales, each scale was linearly transformed to a scale from 0 to 100 where 0 is the extreme response category for "unlikely to use" and 100 is the extreme response category for "likely to use." In this form, the two sets of mean usage values appear to be roughly comparable to one another, though the correlation is only .69 and nearly all discrepancies are in the direction of a larger number for the Miller et al. data than for the Marwell and Schmitt data.

Figure 9 presents the mean usage values for Marwell and Schmitt plotted as a function of the mean usage values

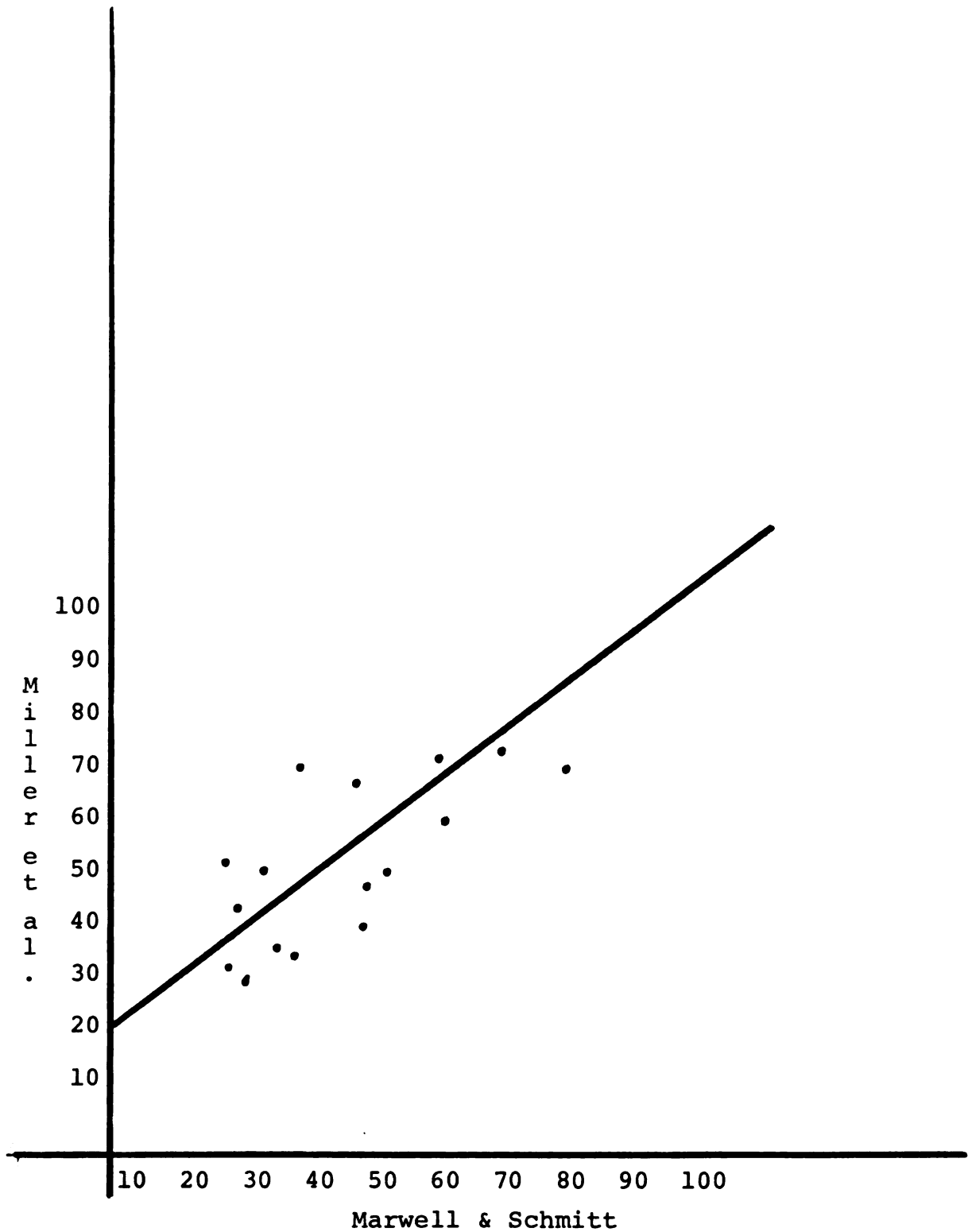


Figure 9. Marwell and Schmitt's Tansformed Usage Values Plotted as a Function of Miller et al's. Transformed Usage Values.

for Miller et al. with a reference line passed through the points. The points in Figure 9 fall into two categories: 13 of them cluster quite closely about the reference line while 3 of the points are quite distant from that line. For the 13 points which are close to the reference line, the correlation between mean usage values is .85. The discrepant strategies are threat, promise, and altruism. The fact that the intercept of the reference line is 19.00 rather than 0 can be interpreted to mean that the labels used by Miller et al. on their response scale did not cover as much of the range as the labels used by Marwell and Schmitt.

According to the empathy model, the results above would be interpreted as showing that 13 of the strategies have relatively narrow widths; while threat, promise, and altruism have wide strategy widths. There is some empirical evidence for this in the strategy widths estimated in these studies. On the 0-100 response scale the average estimated strategy width for the discrepant strategies is 16.00 while the average estimated strategy width for the congruent strategies is only 12.31. However the empathy model would predict that within study estimated strategy widths would be severe underestimates of the true strategy widths in the case of discrepant writers. If one writer is tapping the top end of the distribution while the second is tapping the bottom, then both writers will pick messages with a much smaller standard deviation than a writer or team of writers who sampled from

the entire distribution. Thus according to the empathy model, the preceding comparison of strategy widths would be expected to be a severe understatement of the true difference.

Is there a logical reason to believe that threat (or promise or altruism) might have a much larger width than positive esteem (or the other 12 strategies with congruent values)? Any convincing message concerning esteem has the same ultimate result: it makes the listener think that his associates would think more highly of him if he complies with the message request. Thus it seems likely that all convincing messages would tend to have the same emotional impact. The only variation in message value in the esteem strategy would result from reduced impact stemming from unconvincing messages. But such messages are not likely to be picked for a compliance questionnaire; especially after it has passed inspection by several other coinvestigators. On the other hand threats can vary from "I won't fix dinner tonight" to "I want a divorce," and hence can vary from indifference to the most extreme negative value. Promises too can vary from your sister's "I'll give you a hug" to the Genie's offer to "make you a king, grant you eternal life, build a palace beyond dreams, . . ."

The comparison of strategy values across the two studies yields exactly the results predicted by the empathy model.

How important are the strategies to the prediction of compliance-gaining behavior? The differences between strategy

values is large relative to the strategy widths. In the Miller et al. study the variance of strategy means was 160.26 while the mean strategy width was 11.5. A one way analysis of variance on the 64 mean usage values of the 64 messages yields an eta square of .55 for strategies. Thus if one were to predict that the mean usage of a given message would be the mean value for the strategy to which it belongs, then the correlation between predicted and obtained values would be .75. Thus the Marwell and Schmitt category scheme has considerable utility in yielding apriori estimates of message scale values.

#### Situational Determinants: The Miller et al. Study

Both Marwell and Schmitt and Miller et al. argue that people will use different messages in different situations, yet neither study offers a precise hypothesis for how such situational determinants would enter the process of message selection in compliance-gaining behavior. Such a model can easily be erected within the framework of the empathy model. Consider the context of a psychotherapist trying to convince a patient that he should be less fearful in relating to strangers. There is a strong professional ethic in psychotherapy concerning the nature of tactics to be used with patients: one should be gentle and accepting (though a few radical therapists have argued otherwise). Thus presumably psychotherapists set a higher ethical threshold for dealing with patients than for dealing with friends or family. On

the other hand a parole officer might lower his ethical threshold when dealing with released convicts since "the only language they understand is force."

If a situation is such as to temporarily lower a persuader's ethical threshold, then he will be more likely to use all strategies (though because of the nonlinear use-on-threshold regression curves the use of positive strategies would rise by less than the use of negative strategies). If a situation is such as to temporarily raise a persuader's ethical threshold, then he would be less likely to use all strategies (though the nonlinearity of use-on-threshold regression curves would mean that the use of negative strategies would rise by more than the use of positive strategies). In either case, the statistic which would most clearly show the extent of situational determinants is the mean overall usage of messages, i.e. the average of the mean usage scores across strategies, or what is equivalent: to characterize each persuader's response to a situation by averaging his 16 usage scores for that situation, and then to compare situations by comparing the averages of these scores across persuader's. The corresponding statistical test for situational determinants is a one way analysis of variance on the overall usage scores in which persuaders are crossed with situations.

This procedure is quite different from that used by Miller et al. They looked for situational differences in the usage of messages within each strategy separately. Any significant difference in mean usage of these four messages was

considered to be due to situational determinants. Since the mean differences were significant on each of the 16 strategies, they concluded that they had found strong evidence for situational determinants. They were however puzzled by the fact that the direction and extent of the alleged situational determinants varied considerably from strategy to strategy.

The results obtained by Miller et al. can be easily explained by the empathy model. Suppose that there were no situational differences in the Miller et al. study. Then would mean usage of each message of a given strategy be the same? Certainly not. For a strategy such as threat, there is an extremely wide strategy width for different messages chosen for the same situation. That is, the research design used by Miller et al. and by Marwell and Schmitt confounds the variation in message scale values due to situational determinants with variation due to strategy width. There are only two ways to disentangle these: to use more than one message per strategy in each situation, or to compare the results of the analysis across strategies. The latter method leads directly to the overall message use scores recommended above.

Table 8a presents the mean overall usage in the Miller et al. data as a function of situation. These numbers are means of scores totaled over 16 strategies and have a potential range of 16 to 128. Against that range the mean differences in the table seem small. Neither main effect is of any



Table 8a. Mean Compliance-Gaining Strategy Usage Summed Across 16 Strategies as a Function of Type of Situation in the Miller et al. Data.

	Interpersonal	Noninterpersonal	Average
Long Term	66.93	62.61	64.77
Short Term	57.53	68.48	63.01
Average	62.23	65.55	63.89

Table 8b. Mean Compliance-Gaining Strategy Usage Summed Across 15 Strategies (Threat Excluded) as a Function of Type of Situation in the Miller et al. Data.

	Interpersonal	Noninterpersonal	Average
Long Term	61.05	59.98	60.52
Short Term	55.02	62.65	58.84
Average	58.04	61.32	59.68

consequence, although there is some tendency for the main diagonal means (67 and 68) to be larger than the minor diagonal means (58 and 62), however this effect would not match any stated hypothesis in the compliance literature (nor any that emerged from examining the situations in detail). Table 9a shows the corresponding analysis of variance. Although

all three effects are significant, it is important to remember that this is a within-groups design with 168 persons per cell. Thus even the most miniscule effects would register as significant. The true size of the effects is better measured by the correlation ratio  $\eta^2$ . Then  $\eta^2$  is .01 for intimacy and  $\eta^0$  to two decimal places for length of relationship, showing these effects to be negligible as claimed. However the  $\eta^2$  for the interaction is .08 which is not negligible even though it is small.

The presence of a systematic interaction term did not fit the Miller et al. analysis which found no consistent effect across strategies. Thus an examination was made for possible artifacts. The first consideration was the strategy which was known to have varied so wildly in the Miller et al. data, i.e., threat. The  $\eta^2$  for threat was .48 while the typical  $\eta^2$  for other strategies was only .03. This suggested that the interaction for the total score was primarily due to the differences obtained on threat.

To test this hypothesis, new overall usage scores were formed by summing over the 15 strategies left after threat was discarded. The mean usage scores without threat are presented in Table 8b, and the corresponding analysis of variance is in Table 9b. The main diagonal means (61 and 63) are still larger than the minor diagonal means (55 and 59), but only marginally so. The analysis of variance still shows statistical significance, although the correlation ratio is

Table 9a. The Analysis of Variance for the Miller et al.  
Usage Scores Summed Across Persons and 16  
Strategies.

<u>Source of Variation</u>	<u>Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F</u>	<u><math>\eta^2</math></u>
Intimacy (I)	1843.41	1	1843.41	33.18	.01
Length of Relationship (L)	523.29	1	523.29	8.70	.00
I X L	9805.79	1	9805.79	155.08	.08
Pearsons (P)	84485.88	167	505.90		.67
I X P	9278.84	167	55.56		.07
L X P	10043.96	167	60.14		.08
I X L X P	10559.46	167	63.23		.08
Total	126540.63	671	188.59		1.00

Table 9b. The Analysis of Variance for the Miller et al.  
Usage Scores Summed Across Persons and 15  
Strategies (Threat Excluded).

<u>Source of Variation</u>	<u>Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F</u>	<u><math>\eta^2</math></u>
Intimacy (I)	1298.37	1	1298.37	26.59	.01
Length of Relationship (L)	233.92	1	233.92	4.43	.00
I X L	3951.78	1	3915.78	71.11	.04
Persons (P)	74255.17	167	444.64		.70
I X P	8155.23	167	48.83		.08
L X P	8827.70	167	52.86		.08
I X L X P	9280.70	167	55.57		.09
Total	106002.95	671	157.98		1.00

reduced to .04 which is negligible. Thus it appears likely that the differences in Table 8b reflect trivial differences in the selection of messages within situations rather than strong situational determinants of compliance-gaining behavior.

However there are those who feel that any statistically significant difference should be considered, and hence an analysis of possible artifacts was carried out. Two such sources of artifact were noted: a possible writer effect and a possible message effect. In the Miller et al. study, each of the four co-authors wrote the messages for one of the situations. Thus if there were differential biases between writers in picking messages for the questionnaire, they would appear as differences in the four means of Table 8a. That is, writer biases in the Miller et al. study are perfectly confounded with situational differences. Although such differences should be greatly reduced by the process of summing over 16 different strategies, there is still ample room for such tiny effects as those shown in Table 8b. However without data in which writers pick messages for more than one situation, there is no means of testing this hypothesis.

The other artifact considered was message effects. The purpose of going to overall usage scores was to average out the variation due to the random variations in the impact of particular messages. However such averaging only works perfectly if an infinite number of message values are averaged; whereas, Table 8b only represents summation over 15

messages. The average squared strategy width (with threat left out) is .59 in the original units used in the analysis of Table 8b. If 15 scores are summed, then the corresponding variance in the mean due to strategy width is  $15(.59) = 8.90$ . (However the relative reduction in the effect of strategy width is found in the fact that the summed usage score  $U_p$  is increased by a factor of 15 which increases the variance of this score by a factor of 225. The same is true of the size of the variations due to situational effects, if any.) In order to compare this number with the entries in the analysis of variance table, one must note that the "sum of squares" in an ANOVA table is the variance of the designated set of means multiplied by the number of entries in the entire table, i.e. multiplied by  $168(4) = 672$  in the present case. In the present case,  $8.90(672) = 5980.8$  which is actually larger than the interaction sum of squares which is 3951.78. However there are two other complications which must be considered before this comparison can be made. The interaction variance is actually the variance of two means: the mean major diagonal versus the mean minor diagonal value. Thus the means compared are actually based on the average of two overall usage scores. This averaging reduces the message effect by a factor of 2 and yields a predicted message effect of 2990.4. Furthermore another degree of freedom is lost because the variance of the two means is calculated with respect to the observed grand mean. This reduces the predicted

sum of squares to 1495.29. If all the variation in the means in Table 8b were due to message effects (i.e. to strategy width) then for each effect, the ratio of observed to predicted sum of squares would have a chi-square distribution with 1 degree of freedom. These values are respectively .87, .16, and 2.64; none of which are significantly different from 1. Furthermore, the overall test is the sum of these chi-squares which has 3 degrees of freedom. This sum is 3.67 which is almost exactly equal to the predicted value of 3 (and is far from significance). Thus according to this statistical test, the very small differences in the means in Table 8b are just the size that would be predicted on the basis of the hypothesis that the only causal factor operating is message effects. That is, according to this analysis, it is reasonable to assume that the only mean differences found in the Miller et al. data are those generated by strategy width.

#### Situational Differences: The Marwell and Schmitt Study

The Marwell and Schmitt study was not designed to examine situational determinants of compliance-gaining message strategy use and certainly was not designed to consider the Miller et al. dimensions. But fortunately the four Marwell and Schmitt situations do in fact fall into the four cells of the Miller et al. dimensions of intimacy and length of relationship. Thus it was possible to run a cross-validation of the Miller et al. study on the Marwell and Schmitt data.

The strategy by strategy analysis mirrored the Miller et al. findings in that the main effects were small and inconsistent from strategy to strategy. However the interaction was not small and was consistent across strategies. The analysis of variance on the overall usage scores showed a correlation ratio of .13 for the interaction, while the correlation ratios for the main effects were .01 and .00 (though still significant since 2432 observations are involved!). The means are shown in Table 10 with reverse scoring so that a high mean indicates high usage.

Table 10. Marwell and Schmitt's Mean Compliance-Gaining Strategy Usage Scores Summed Across 16 Strategies (and Reverse Scored) and Tabled as a Function of the Miller et al. Typology of Situations.

	Interpersonal	Noninterpersonal	Average
Long Term	34.62	25.02	29.82
Short Term	26.28	31.61	28.95
Average	30.45	28.32	29.38

The pattern of means in Table 10 did not follow any substantive hypothesis associated with the Miller et al. dimensions. Therefore a careful study was made of the content of the four Marwell and Schmitt situations to see if there was some other situational dimension that cut across the diagonals of the Miller et al. cells. Such a dimension was found; the main diagonal involves situations in which the persuader is attempting to persuade other for his (the

persuader's) own benefit, i.e., only the persuader stands to gain from the persuadee's compliance. The minor diagonal involves situations in which the persuader could regard himself as "acting in the other person's behalf," i.e., persuading other for other's "own good," or for other's "benefit." In these situations both the persuader and the persuadee stand to benefit from the persuadee's compliance.

The data were recast with this new dimension crossed with length of relationship and the corresponding analysis was carried out. In Table 11 the means are presented according to the new dimensions, and in Table 12 the corresponding analysis of variance is presented.

Table 11. Marwell and Schmitt's Mean Compliance-Gaining Strategy Usage Scores Summed Across 16 Strategies (and Reverse Scored) and Recast as a Function of the Object of Benefit from the Persuasion Attempt and the Length of Relationship.

	Benefit Other	Benefit Self	Average
Long Term	34.62	25.02	29.82
Short Term	31.61	26.28	28.95
Average	33.12	25.65	29.38



Table 12. The Analysis of Variance for the Marwell and Schmitt Usage Scores Summed Across Persons and 16 Strategies.

<u>Source of Variation</u>	<u>Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F</u>	<u><math>\eta^2</math></u>
Benefit (B)	33578.10	1	33578.10	693.54	.13
Length of Relationship (L)	2734.37	1	2734.37	55.96	.01
B X L	456.11	1	456.11	9.53	.00
Persons (P)	141415.30	607	235.30		.53
B X P	29097.90	607	48.42		.11
L X P	29366.63	607	48.86		.11
B X L X P	28752.89	607	47.84		.11
Total	265401.30	2431	109.17		1.00

The main effect for length of relationship and benefit are both statistically significant, as is the length of relationship by benefit interaction. However both the length of relationship main effect and the interaction effect are small ( $\eta^2 = .01$  and  $.00$  respectively). The benefit effect, on the other hand, shows a correlation ratio of  $.13$ . An observation of the means in Table 11 shows that higher usage scores are obtained in the situations in which the persuader can regard himself as asking for compliance for the good of the persuadee.

Furthermore, this effect is not attributable to message effects. The average squared strategy width in the Marwell

and Schmitt data is .71. Therefore the sum of squares predicted from the message effect hypothesis is 6906.88. The ratio of observed sum of squares to predicted sum of squares is 4.86 which is statistically significant ( $\chi^2 = 4.86$  with 1 df;  $p < .05$ ). Computing this ratio for the length of relationship main effect and the interaction effect results in the values .40 and .07 respectively; neither of which is significantly different from one.

Since higher mean usage scores are obtained in the situations in which the persuader can regard himself as asking for compliance for the good of the persuadee, it is reasonable to assume that, given the empathy model, the effect of such situations is to temporarily lower persons' ethical thresholds. Therefore persons are more likely to use all strategies. It follows that persons are also more willing to use more negative strategies in such situations. There are historical precedents for such results, i.e., there are incidents in which persons are willing to go to any length to persuade others "for their own good." The Spanish Inquisition and the Salem witch-hunts are only two examples which immediately come to mind.

## CHAPTER IV

### INDIVIDUAL DIFFERENCES IN THE USE OF COMPLIANCE-GAINING MESSAGES

The model of compliance-gaining message use developed in Chapter I assumes that all individual differences in compliance-gaining message ratings can be measured by the ethical threshold  $T_p$ . If this assumption is correct then it would be useful to find a variable, or a set of variables, which would predict  $T_p$  accurately. One such variable is Machiavellianism. In this chapter the relevance of the Machiavellianism construct to compliance-gaining message ratings will be discussed and data will be presented which will show that a dimension of Machiavellianism is associated with  $T_p$  as predicted.

The work of Christie and Geis (1970) suggests that persons high in Machiavellianism should be willing to use almost any type of compliance-gaining message as long as they perceive that it will be successful in gaining the compliance of the receiver. Such a person's ethical threshold would exclude only those messages which are perceived to produce the most negative of responses in the receiver. However those persons who are low Machiavellians should be reluctant

to use any messages but those which are perceived to produce the most positive of responses in the receiver. Geis and Christie (1970) argue,

If high scorers on the Mach Scale are in fact unrestrained by the self-alleged ethical qualms of low scorers, they should actually engage in more manipulation than lows when both are given an equal opportunity to manipulate a fellow man in the laboratory (p. 168).

A high  $T_p$  means that  $p$  is reluctant to use any messages except those which are perceived to produce the most positive of responses in the receiver, and a low  $T_p$  means that  $p$  is willing to use almost any type of compliance-gaining message. Thus Machiavellianism and  $T_p$  should be negatively correlated. A high  $T_p$  means that  $p$  has given low usage ratings to the messages that he rated, and a low  $T_p$  means that  $p$  has given high usage ratings to the messages that he rated. Therefore the correlation between  $T_p$  and ratings of message use, summed across all messages, should be  $-1.00$ . Hence ratings of message use summed across all messages may be viewed as a measure of  $T_p$ . Since this measure is negatively associated with  $T_p$  and since Machiavellianism and  $T_p$  should also be negatively correlated, Machiavellianism and summed ratings of message use should be positively correlated, i.e., the greater one's Machiavellianism, the more one would be willing to use any compliance-gaining message that one perceives will be successful in obtaining compliance.

### A Study of Compliance-Gaining Message Selection and Machiavellianism

A study by Kaminski, McDermott, and Boster (1977) measured both compliance-gaining message selection and Machiavellianism. They used the same set of 16 compliance-gaining strategies used by both Marwell and Schmitt and by Miller et al. Six situations were constructed, and 138 participants made likelihood of use ratings for each of 16 messages in each of the six situations. These 96 ratings were summed in order to obtain a measure of  $T_p$  and were correlated with Machiavellianism, as measured by the Christie Mach IV test. The obtained correlation ( $r = .18$ ;  $r = .22$  corrected for attenuation) was significant ( $p < .05$ , one-tailed test) but not large. However the Machiavellianism scale is multidimensional, and hence the obtained correlation is only an average of the correlations between the use ratings and the various factors underlying the Mach IV scale. Hence in order to discover whether correlates of  $T_p$  exist among the dimensions of the Mach IV scale the dimensionality of the Mach IV scale was examined.

### Dimensions of Machiavellianism

In a factor analytic study Christie and Geis (1970, 368-379) obtained the responses of 1782 college students to the Mach IV scale, the Mach V scale, a revised F scale of 20 items, and a 10-item Anomia scale. A four factor solution was obtained. Three of these factors were defined primarily

by Machiavellianism items, and a fourth factor was defined primarily by F scale items. The three factors defined primarily by Machiavellianism items were termed "Duplicity," "Affirmative Negativism," and "Distrust in People." Summarizing the duplicity factor Christie and Geis suggest, "all of these items have to do with interpersonal candor or the lack of it except the two from the Anomia Scale regarding wealth and how one makes money" (1970, 371). Of Affirmative Negativism they add, ". . . examination of the items . . . indicates that the content is negative in reference to man and society" (1970, 373). Persons scoring high on this factor tend to agree that others will not work hard unless forced to do so, that to trust another is asking for trouble, etc. Of the Distrust in People factor Christie and Geis state, "Those scoring high on this factor are rejecting items indicating that most people are good, kind, brave, altruistic, dependable, moral, etc." (1970, 376). The Mach IV items are categorized as to which factor they were found to be a measure of, and they are presented in Table 13.

The results of factoring the Mach IV data collected in the Kaminski et al. study suggest the plausibility of a three-factor Machiavellianism solution. A VARIMAX rotation of principal axis factors calculates using communalities was performed on the Kaminski et al. data and the factor pattern matrix obtained from this analysis is presented in Table 14. Although only two factors were obtained, it may be noted from

Table 13. The Christie Mach IV Scale Items for the Factors Which They Were Found to Measure.\*

#### Duplicity

The best way to handle people is to tell them what they want to hear.

One should take action only when sure it is morally right.

Honesty is the best policy in all cases.

There is no excuse for lying to someone else.

All in all, it is better to be humble and honest than to be important and dishonest.

When you ask someone to do something for you, it is best to give the real reasons for wanting it rather than giving reasons which carry more weight.

It is wise to flatter important people.

#### Affirmative Negativism

Never tell anyone the real reason you did something unless it is useful to do so.

It is safest to assume that all people have a vicious streak and it will come out when they are given a chance.

Generally speaking, men won't work hard unless they're forced to do so.

Anyone who completely trusts anyone else is asking for trouble.

The biggest difference between most criminals and other people is that the criminals are stupid enough to get caught.

It is hard to get ahead without cutting corners here and there.

Most men forget more easily the death of their father than the loss of their property.

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\* One item, "People suffering from incurable diseases should have the choice of being put painlessly to death" was found

Table 13 (cont'd.)

## Distrust in People

Most people are basically good and kind.

Most people who get ahead in the world lead clean moral lives.

Most men and women are brave.\*

It is possible to be good in all respects.

Barnum was wrong when he said that there's a sucker born every minute.

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to load with items primarily taken from the F scale. This fourth factor was termed "Traditional Moralism" (Christie & Geis, 1970, 378-379).

\*The words, ". . . and women . . ." were not a part of the original Mach IV Scale, but rather were added by Kaminski et al.

Table 14 that Factor I contains both Duplicity and Distrust in People items; whereas, Factor II is composed primarily of Affirmative Negativism items. If Duplicity and Distrust in People are highly correlated, then the data may have been under-factored and a three-factor solution may provide a reasonable fit to the Kaminski et al. data.

Working under this assumption a factor model was developed in which items were divided according to the three content categories. In order for the model to provide a reasonable fit to the Kaminski et al. data, seven items of



Table 14. The Factor Pattern Matrix Which Resulted From Performing a VARIMAX Rotation of Principal Axis Factors, Calculated Using Communalities, on the Kaminski et al. Mach IV Data (N = 138).

	<u>Factor I</u>	<u>Factor II</u>
Honesty is the best policy in all cases.	.64*	.15
When you ask someone to do something for you, it is best to give the real reason for wanting it rather than giving reasons which carry more weight.	.61*	.22
All in all, it is better to be humble and honest than to be important and dishonest.	.60*	.14
Most people are basically good and kind.	.51*	.13
There is no excuse for lying to someone else.	.50*	.02
Most people who get ahead in the world lead clean moral lives.	.43*	-.08
Most men and women are brave.	.42*	.10
It is possible to be good in all respects.	.37*	-.21
Barnum was wrong when he said that there's a sucker born every minute.	.35*	.14
One should take action only when sure it is morally right.	.29*	-.15
Most men forget more easily the death of their father than the loss of their property.	.13*	.13
People suffering from incurable diseases should have the choice of being put painlessly to death.	.02*	.00

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\* Denotes the factor that an item loads most highly on.

Table 14 (cont'd.)

Never tell anyone the real reason you did something unless it is useful to do so.	.10	.57*
It is safest to assume that all people have a vicious streak and it will come out when they are given a chance.	-.02	.57*
Generally speaking, men won't work hard unless they're forced to do so.	-.18	.51*
The best way to handle people is to tell them what they want to hear.	.11	.45*
Anyone who completely trusts anyone else is asking for trouble.	.22	.33*
It is wise to flatter important people.	.01	.28*
The biggest difference between most criminals and other people is that the criminals are stupid enough to get caught.	.19	.26*
It is hard to get ahead without cutting corners here and there.	.00	.13*

---

\* Denotes the factor that an item loads most highly on.

The correlation between Factor I and Factor II is .30.

The reliability of Factor I is .69, as measured by coefficient alpha.

The reliability of Factor II is .55, as measured by coefficient alpha.

the original Mach IV scale were deleted. The multiple groups factor analysis solution and the reliabilities for each dimension of Machiavellianism are presented in Table 15 for the remaining 13 items. Table 15 shows that the hypothesized factor structure provides close fit to the Kaminski et al. data, although there are minor deviations such as the negative correlation of item 6 (Generally speaking, men won't work hard unless they're forced to do so) with Factor I (i.e., duplicity). These deviations, however, are small and without pattern as one might expect on the basis of chance fluctuation. Furthermore, in a study of college undergraduates Gerbing (1977) cross-validated this factor model with a much larger sample ( $N = 351$ ). Taken together, the Christie and Geis finding, the factor analysis and the multiple groups factor analysis of the Kaminski et al. data, and the Gerbing cross-validation provide considerable support for the three-dimensional model of the Mach IV scale which is presented in Table 13.

Given this factor model it was found that the correlation between Machiavellianism and use ratings was misleading. Summing the items which measured each of the dimensions of Machiavellianism, little correlation was found between use ratings and duplicity ( $r = .11$ ,  $.13$  when corrected for attenuation) and between use ratings and distrust in people ( $r = .06$ ,  $-.08$  when corrected for attenuation). However use ratings were found to correlate considerably higher with affirmative negativism ( $r = .35$ ,  $.53$  when corrected for attenuation;

Table 15. A Multiple Groups Factor Analysis Solution for a Three-Factor Mach IV Scaling Model Performed on the Kaminski et al. Data (N = 138).

Item	Factor I	Factor II	Factor III
1. Honesty is the best policy in all cases.	.78*	.16	.43
2. There is no excuse for lying to someone else.	.49*	.04	.36
3. All in all, it is better to be humble and honest than to be important and dishonest.	.54*	.12	.40
4. When you ask someone to do something for you, it is best to give the real reasons for wanting it rather than giving reasons which carry more weight.	.63*	.25	.47
5. It is safest to assume that all people have a vicious streak and it will come out when they are given a chance.	.11	.50*	.00
6. Generally speaking, men won't work hard unless they're forced to do so.	-.13	.51*	.00
7. Anyone who completely trusts anyone else is asking for trouble.	.20	.41*	.27
8. The biggest difference between most criminals and other people is that the criminals are stupid enough to get caught.	.19	.39*	.11
9. It is hard to get ahead without cutting corners here and there.	.07	.12*	-.03
10. Most people are basically good and kind.	.42	.20	.59*
11. Most people who get ahead in the world lead clean moral lives.	.34	.16	.49*

---

\* Denotes the factor on which an item has its highest loading.

Table 15 (cont'd.)

12. Most men and women are brave.	.28	.14	.58*
13. It is possible to be good in all respects.	.30	-.14	.31*

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\* Denotes the factor which an item has its highest loading.

Factor I is the Duplicity factor, and is defined by items 1-4. It has a reliability of .70 as measured by coefficient alpha.

Factor II is the Affirmative Negativism factor, and is defined by items 5-9. It has a reliability of .46 as measured by coefficient alpha.

Factor III is the Distrust in People factor, and is defined by items 10-13. It has a reliability of .55 as measured by coefficient alpha.

The correlation between Factor I and Factor II was .23.

The correlation between Factor I and Factor III was .68.

The correlation between Factor II and Factor III was .18.

$p < .05$ , one-tailed test).

It appears that the use ratings-affirmative negativism correlation arises from the cynicism of the highly negative persons who perceive that others are unscrupulous in their dealings, and conclude that they have to be equally unscrupulous in order to combat such others. Hence they will use almost any strategy so as to combat others that they perceive to be their adversaries.

Although one may wish to apply the same reasoning to the use ratings-distrust in people relationship, a close inspection of the scale suggests why no significant correlation was obtained between these two variables. The distrust in people items do not espouse the view that all human motives

are suspect or that others are adversaries to be faced and fought, as do the affirmative negativism items. Rather they tend to espouse the attitude that, although there may be a noble side to mankind, man is weak in the face of temptation. In particular persons who are religious, or come from a religious background, may have a very high ethical threshold (and therefore a low use score). However they may feel that others do not, i.e., others are weak in the face of temptation. Therefore, they would have a high distrust in people scale. If a sufficient number of people with such a background were included in the Kaminski et al. sample the use-distrust in people correlation would be expected to be very similar to the one obtained.

The lack of correlation between strategy use and duplicity may be a result of the nature of the strategies used in the experiment. There were no strategies which directly tapped lying. Perhaps more salient, there were no strategies which involved withholding information. Since these are the types of activities which would be likely to mark an individual with a high duplicity score, the low use ratings-duplicity correlation is less surprising.

Alternately the items in the duplicity scale are of the "never tell lies" variety. However a person with a high ethical threshold may be very willing to tell another a lie in situations in which the lie is told for the benefit of another's feelings. For example, one may consider it the most

ethical alternative to tell another that they have gotten all of the cancer in an operation, although the patient is expected to die in a matter of months.

## CHAPTER V

### SUMMARY, CONCLUSIONS, AND IMPLICATIONS FOR FUTURE RESEARCH

In this monograph, data from compliance-gaining message strategy experiments performed by Marwell and Schmitt (1967), Miller, Boster, Roloff, and Seibold (1977), and Kaminski, McDermott, and Boster (1977) were reanalyzed. A mathematical model was developed in order to predict persons' ratings of how likely they would be to use given compliance-gaining messages. This empathy model made several assumptions about human behavior. First the model assumed that compliance-gaining messages can be scaled on a continuum which ranges from negative to positive, i.e., those strategies which evoke negative affective responses in persuadees to those strategies which evoke positive affective responses in persuadees. Second the model assumed that there is a point,  $T$ , on this continuum which represents some person,  $p$ 's, ethical threshold. Finally the model assumed that if a message was more positive than a person's ethical threshold then that person would rate that message as one that he would use, and that if the message was more negative than a person's ethical threshold then that person would rate that message as one that he would not use.



The empathy model appears to be in conflict with the results obtained by Marwell and Schmitt and Miller et al. While the empathy model predicts that compliance-gaining message ratings will be unidimensional, both Marwell and Schmitt and Miller et al. found multidimensional factor solutions. However these multidimensional solutions were shown to result from the nonlinear regression of use onto compliance-gaining message. Further analyses illustrated the unidimensionality of the data by showing that the data fit a Guttman simplex model. These analyses demonstrated that the 16 compliance-gaining strategies developed by Marwell and Schmitt from a unidimensional scale. In addition, these results fail to disconfirm the assumptions that were made in the derivation of the model.

Although the empathy model made no prediction about situational differences in the use of compliance-gaining strategies, Miller et al. made such predictions. Miller et al. suggest that the use of compliance-gaining strategies will be affected by two dimensions: an intimate-stranger dimension and a relational duration dimension. Further, they claim that their data supported their predictions, i.e., that compliance-gaining strategy use is affected by intimacy and duration. However it has been shown that the design employed by both Marwell and Schmitt and Miller et al. confounds situational effects with message effects. Further analyses showed that the situational differences obtained by Miller et al.

could be attributed to message effects, and that the effects of intimacy and duration were trivial.

Ironically the Marwell and Schmitt data provided evidence for situational differences. These differences were of a magnitude such that they could not be attributed to message effects. An analysis of the Marwell and Schmitt situations showed that persons were more likely to use compliance-gaining strategies in situations in which their persuasion attempt could be construed as being in the best interests of the persuadee. That is, they were more willing to use compliance-gaining strategies when they were persuading others for their "own good," or at least the situation was such that their action could be perceived in this manner.

Although the empathy model did not predict this result, the finding is consistent with the model. The effect of such situations is to temporarily lower the subject's ethical threshold. According to the empathy model when one's ethical threshold is lowered it follows that one's total use score would increase. In sum, it appears that persons are willing to go to almost any length to persuade another when they are doing it for "the good," or in "the best interests," of that other.

Perhaps the most central assumption that was made in the development of the empathy model is that persons have an ethical threshold which affects the extent to which they are willing to use compliance-gaining strategies. Given the

centrality of this concept it is important to isolate those individual difference variables which determine persons' ethical thresholds. Machiavellianism was thought to be one such determinant: however, the correlation of Machiavellianism with ethical threshold (as measured by total use score) was not found to be substantial in the Kaminski et al. data.

This lack of association was found to result from the multidimensionality of the Mach IV measure. Both a blind multiple groups factor analysis and a multiple groups factor analysis supported the hypothesis of a three-dimensional factor solution of the Mach IV scale. Of the three factors that were gleaned from the Mach IV scale one, affirmative negativism, was found to be substantially associated with ethical threshold ( $r = .35$ ;  $r = .53$  when corrected for attenuation).

Negativism items generally express a misanthropic view of man, e.g., all people have a vicious streak, men will not work hard unless forced, one should not trust another, etc. The obtained correlation between negativism and ethical threshold is taken as a reflection of the high negativism person's attitude that others are unscrupulous and that such persons can only be contented by being equally unscrupulous. Persons who score low on the negativism scale would not share this attitude and their use scores would be correspondingly lower.

In summary, the empathy model has shown that persons' compliance-gaining message strategy selection is affected by

the strength (from negative to positive) of the compliance-gaining message and by one's ethical threshold. Further, one's ethical threshold can be predicted reasonably well from knowledge of attitudes on the negativism dimension of the Mach IV scale. Finally, ethical threshold is also affected by the nature of the compliance-gaining situation such that when the situation is one in which the compliance attempt is (or can be construed as) for the benefit of the persuadee, one's ethical threshold is lowered, thus increasing one's use of compliance-gaining strategies.

#### Implications for Future Research

Marwell and Schmitt's compliance-gaining message strategy selection experiment is suggestive for future research. There are innumerable directions that such research could take. Three directions that I consider to be fruitful will be presented in this concluding section. First there is a need for logical and semantic analyses of the 16 compliance-gaining strategies. There appear to be both overlapping concepts, e.g., both negative expertise and negative esteem are types of threats, and additional distinctions that could be made. For example, positive altercasting suggests that a person with good qualities would do some behavior. In some situations however one is attempting to get another not to do some behavior. Hence a new strategy could be formed in which it is suggested that, "a person with good qualities would not do the behavior" or that "a person with bad qualities would

perform the behavior (as opposed to negative altercasting which suggests that a person with bad qualities would not perform the behavior).

Second there is a need to search for other predictors of  $T_p$ . One situational variable, benefit, and one individual difference variable, negativism, have been found to affect  $T_p$ . Neither variable however provides perfect prediction of the ethical threshold. Not only do the effects of additional situational variables and individual difference variables on compliance-gaining message strategy selection need to be assessed, but also the effect of the interaction between these two kinds of variables on compliance-gaining message strategy selection needs to be assessed.

Finally it will be necessary to move the setting of the compliance-gaining message strategy selection experiment. That is, whether it be in a laboratory context or in a non-laboratory context, the results reported in this paper need to be validated through observing human action. In a sense the proof of the self-report data is in behaviorial observation.

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