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ABSTRACT

To explore the impact of communication styles on physiological health, coronary-prone Type A and low-stress Type B subjects were administered two surveys testing reactions to hypothetical, stressful situations. While not revealing a correlation between Type A behavior and specific perceptions of, or strategies for, dealing with compliance-gaining situations, the studies did suggest profitable directions for future research. Further study is needed, for example, both on the characteristics of Type A communication and on the impact of Type A behavior on interpersonal relations. (Materials used in the study are appended.) (MM)

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COMMUNICATION AND TYPE A CORONARY-PRONE BEHAVIOR  
A STUDY OF PERCEPTION AND MESSAGE CONSTRUCTION IN  
COMPLIANCE-GAINING SITUATIONS

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## ABSTRACT

This paper examines the communicative aspects of coronary-prone behavior. Specifically, two studies are reported which examine perception and message construction by Type A and Type B coronary-prone subjects. The first study found only limited associations between the Type A variable and the perception of compliance-gaining situations. The second found no differences in the use of persuasive strategies by Type A and B subjects. Factors which possibly account for these findings are discussed. Conclusions and suggestions for future research are made which should be useful to scholars interested in this subject.

Communication and Type A Coronary-Prone Behavior:  
A Study of Perception and Message Construction  
in Compliance Gaining Situations

Communication research infrequently examines behaviors related to physiological health. Absence of such studies creates a gap in our knowledge of the importance of communication. In an initial attempt to address this shortcoming, this paper examines the communicative aspects of coronary-prone behavior, a much studied aspect of behavioral medicine. A coronary-prone behavior pattern called Type A refers to a "...particular action-emotion complex which is possessed and exhibited by an individual who is engaged in a relatively chronic and excessive struggle. More often than not this struggle is to obtain a usually unlimited number of things from the environment in the shortest possible period of time and/or against the opposing efforts of other persons or things in the environment" (Roseman, 1978, p. xv).

Persons classified as Type A's possess a stressful behavioral style characterized by overt competitiveness, aggressiveness and hostility; a chronic sense of time urgency which tends to make the person accelerate the rate of activities; an excessive sense of punctuality, and a motivation to utilize all the minutes of the day for goal-oriented activities. Conversely, Type B's generally lack these traits. Although Type B's are necessarily not free from stress, they confront stressful situations less frenetically (Roseman, 1978).

A substantial body of literature documents the association of Type A behavior pattern with coronary-heart disease (see reviews by Matthews, 1982; Review Panel on Coronary-Prone Behavior and Coronary Heart Disease, 1981; Sparacino, 1979). Perhaps the Western Collaborative Group Study best represents this research (Rosemann, Friedman, Straus, Wurm, Kositchek, Hahn, & Wertaessen, 1964; Rosemann, Jenkins, Brand, Friedman, Straus, & Wurm, 1975). This eight-and-a-half year longitudinal study followed 3,000 middle-class working males. About 50 percent of the subjects were classified Type A. The results indicated the Type A's developed coronary-heart disease at 2.37 times the rate of their Type B counterparts. This and other studies show that even after controlling such known risk factors as smoking, hypertension, age, and heredity, the Type A behavior pattern remains a significant factor in predicting coronary-heart disease (Brand, Roseman, Sholtz, & Friedman, 1976; Roseman, Brand, Sholtz, & Friedman, 1976; Haynes, Feinleib, Kannel, 1980; Haynes, Geinleib, Levine, Scotch, & Kannel, 1978). For example, in the Western Collaborative Group Study, the relative risk for Type A's was still 1.97 times greater than Type B's after statistically adjusting for these risk factors. Although the causal process is not fully understood, it is thought that the behavior pattern is part of the pathophysiologic process from which coronary ailments result. Additionally, research indicates Type A behavior is a factor in the development of respiratory infections (Stout & Bloom, 1982). Clearly,

Type A behavior impedes the maintenance of personal health and well-being.

This study investigates the communicative behaviors that differentiate Type A's from Type B's. We hope this research not only improves our understanding of the social and psychological factors related to Type A behavior but also increases our awareness of the links between communication and physical health. Since this is an exploratory study, we decided to investigate two aspects of the communication process. In addition to yielding a broader picture of the association between communication and Type A behavior, examination of two aspects of communication allows us to assess their relative importance. Recommendations can then be made about priorities for future research.

This study focuses on perception and message construction in compliance gaining situations. We chose to study this type of situation for several reasons. First, such encounters constitute a major facet of human social contact. As Marwell and Schmitt note in their 1967 paper:

It is clear that people spend a great deal of time trying to get others to act in ways they desire. It is equally true that people vary in the ways they go about attempting such interpersonal control. Yet students of social control have only recently begun to explore these variations... (p. 350).

Second, compliance gaining situations, as opposed to, say, ritualized interchanges, provide the opportunity to observe differences in the communicative behaviors of Type A's and Type B's. The competitive and aggressive tendencies of Type A's should affect their communicative behavior in situations involving conflict. Third, the study of situations (Argyle, Furnham & Graham, 1981) generally, and compliance gaining situations in particular (Wiseman, & Schenck-Hamlin, 1981) constitutes an important item on the research agenda in communication. Consequently, the results of this study should contribute to this growing body of literature.

#### PERCEPTIONS OF COMMUNICATION SITUATIONS

It has become commonplace to note how an object is perceived differently by individuals with varying motivations and expectations. The case of the optimist who sees a glass half-full and the pessimist who sees the same glass half-empty is but one common illustration of this principle. That such perceptual processes affect communication was vividly illustrated in a study by Bradac and Bell (1977). These authors found that members of an audience expecting to hear a fluent speaker counted fewer verbal errors than members expecting a nonfluent speaker. For several reasons we suggest that Type A coronary-prone behavior affects perceptions of situations, compliance gaining situations in particular. First, evidence indicates that this individual characteristic affects person

perception. Smith and Brehm (1981) found that Type A subjects made more trait attributions after observing a person than did Type B subjects. Additionally, individuals high on the hard-driving competitiveness dimension of Type A coronary-prone behavior pattern, as compared to those low in competitiveness, made more positive attributions of the observed person when no future contact was expected but made more negative attributions when expecting to oppose the person in a conflict game simulation. These results imply Type A's and B's have different perceptual processes. A second rationale for expecting Type A behavior pattern to affect the perception of compliance gaining situations evolves from research on performance tasks. Snow (1978) observed that in performance situations Type A subjects set higher goals or standards than Type B subjects. Glass' (1977) research indicates that Type A's attempted to control their environment more than B's. Additionally, Type A's, relative to Type B's, decreased their performance efforts only following prolonged and salient failure (Bunson & Matthews, 1981). Since compliance gaining situations entail intentional behavior or performance, we expect Type A's to perceive these communication situations differently from Type B's. Specifically, Type A's should be more confident that the problem can be resolved in their favor, more certain as to what to say and do, and less tense or nervous about dealing with the problem than Type B's. Second, coronary-prone behavior traits should be reflected in the perceptions of the compliance



gaining situation. Type A's, compared to Type B's, should see the situation as more competitive than cooperative, desire to solve the problem sooner, and feel greater hostility toward the person from whom compliance is sought.

It is unclear how these perceptions will vary across types of conflicts. Will these perceptions be different for conflicts involving friends than those with strangers? Differences in communication among friends and acquaintances constitutes an important element of many theories of relational development (Miller & Steinberg, 1975; Berger & Calabrese, 1976). To our knowledge, no research on Type A behavior pattern has examined this problem. It may be the case that conflicts with friends are more salient than those with strangers. Consequently, the perceptual processes described above would be accentuated. That is, an additive interaction would be observed between the Type A/B variable and the acquaintance/friend variable.

Another difference among conflicts is the perceived importance of the outcome. Does this variable mediate the perceptual processes previously described? We suggest that this variable will produce an additive effect. Conflicts with important outcomes are likely to produce more stress than conflicts with insignificant outcomes. Much research on Type A behavior conceptualizes this behavior pattern as a process of coping with stressful situations and events (Matthews, 1982). Consequently, we predict an interaction

between the Type A/B variable and the conflict importance variable such that the differences between Type A's and B's will increase with the importance of the conflict.

## METHOD

### Subjects

Seventy-one students enrolled in introductory courses at a state-supported university volunteered to participate in this study. Subjects were informed that their reactions to a communication situation were needed in a survey of attitudes and behaviors related to interpersonal communication. Ages ranged from 16 to 44 with a median of 20. Of the total, 62 percent were female and 37 percent male.

### Procedure

Each participant was given a book containing the following: compliance gaining scenario A, reaction scales, compliance gaining scenario B, reaction scales, Jenkins Activity Survey (Glass, 1977), and demographic questions. Two kernel scenarios were used. One described a student who wanted to study while a neighbor played a stereo loudly. This situation is similar to one used by Wiseman and Schenck-Hamlin (1981) in a multi-dimensional scaling study of compliance gaining strategies. The second scenario, derived from Clark (1979) involved a student trying to get a classmate to complete work on a required group project. We constructed four versions of each scenario (see Appendix 1). In two versions, the conflict was between close friends while in the other two it was between

acquaintances. In two versions, the conflict had important outcomes (the student was studying for a final exam; the group project counted 75 percent of the course grade) while in the other two the outcomes were minimal (no test; group project counted 10 percent). After reading each scenario, students completed rating scales assessing their reaction to that situation. Half of the students read the noise conflict first and the class project conflict second, while the order was reversed for the other half. Hence the situations were counterbalanced. Subjects were randomly assigned to all conditions.

### Measures

The student version of the Jenkins Activity Survey (Glass, 1977) was used to measure Type A behavior. Twenty-one of the questionnaire's 44 items were summed to compute a Type A score. Subjects' scores ranged from 2 to 16 with a median of 7.25. We operationally defined Type A's as those with scores equal to or greater than 9 and Type B's with scores less than or equal to 6.

We constructed a questionnaire to assess the perceptions described above and to validate the manipulation of the two situational independent variables, familiarity and outcome. Five-interval Likert responses followed each of 22 statements (Appendix 2): three items for each of the six perceptual variables, three for the consequences manipulation, and one for the familiarity manipulation.

### Statistical Analysis

Statistical analysis was undertaken in three steps. First, the reliability of the dependent measures was assessed. Second, we validated the manipulation of the situational variables. This analysis included a test for the effects of situation order. Third, we tested main and interactive effects of the Type A variable.

## RESULTS

### Assessment of Reliability

Scales were computed by summing the three items for each perceptual variable. We calculated alpha coefficients (Cronbach, 1951) to assess the reliability of these scales. Four of the six scales for each situation yielded coefficients greater than .75. With alpha coefficients less than .60, two scales were unacceptable: competitiveness and time urgency. Analysis of the items composing those scales indicated that reliability could be improved by deleting one of the three items. The resulting alphas, as well as those for the other four scales, are contained in Table 1. Additionally, items were included in the questionnaire to validate the experimental manipulation of familiarity and consequences, three for the latter and one for the former. The summed scale for perceived consequences resulted in acceptable alphas of .90 and .81 for the stereo and class situations respectively.

### Validation of Manipulations

A 2 X 2 X 2 X 2 (order by familiarity by consequences by situation) analysis of variance was calculated for each of the variables assessing the perceived consequences and familiarity. For the consequences variable, several effects obtained statistical significance: a main effect for consequence ( $F=6.10$ ;  $df=1,62$ ;  $p < .02$ ;  $\eta^2=.06$ ); a main effect for situation ( $F=7.74$ ;  $df=1,62$ ;  $p < .01$ ;  $\eta^2=.02$ ); a situation by order interaction ( $F=15.69$ ;  $df=1,62$ ;  $p < .01$ ;  $\eta^2=.02$ ); and a significant situation by order by familiarity by consequences interaction ( $F=3.99$ ;  $df=1,62$ ;  $p < .01$ ;  $\eta^2=.02$ ). Although these effects are statistically significant, the eta squares indicate that the effects do not account for meaningful proportions of the variance in the dependent variable. This was especially surprising with regard to the expected main effect for the manipulation of consequence. These results indicate that the intended manipulation was unsuccessful. For this reason, no subsequent analysis will utilize the consequences independent variable.

A comparable four-way analysis of variance for the perceived familiarity variable yielded the following significant effects: a main effect for familiarity ( $F=288.21$ ;  $df=1,63$ ;  $p < .001$ ;  $\eta^2=.49$ ); situation by consequence interaction ( $F=6.81$ ;  $df=1,63$ ;  $p < .02$ ;  $\eta^2=.009$ ); situation by order interaction ( $F=5.52$ ;  $df=1,63$ ;  $p < .03$ ;  $\eta^2=.007$ ); and a situation by familiarity by consequences interaction ( $F=5.85$ ;  $df=1,63$ ;  $p < .02$ ;  $\eta^2=.007$ ). Of these statistically

significant effects, only the familiarity main effect yielded pragmatically meaningful results. This one effect accounted for 70 times as much variance as any of the other effects. Consequently, follow-up tests were conducted only for the main effect of familiarity. Examination of the means indicated that subjects' perceptions coincided with the experimental manipulation.

### Primary Analysis

A 2 X 2 X 2 (Type A by familiarity by situation) repeated-measures analysis of variance with situation as the within factor was computed for each of the six dependent variables. Although there were several familiarity and situation effects, Type A variable failed to produce any significant main or interactive effects. Analysis of the power of these ANOVAS revealed that we had an acceptable chance of detecting large and medium size effects, but not medium or small ones (Cohen, 1977).<sup>1</sup> Since the absence of Type A effects was quite surprising, we decided to conduct another analysis which slightly increased the power of our test: we examined the correlations between the ungrouped Type A scores and each dependent measure.<sup>2</sup> This correlational analysis utilized all subjects and the full range of scores whereas the variance factorial analysis omitted subjects with middle-range Type A scores and grouped the remaining subjects into two levels. Of the resulting 12 coefficients, six for each situation, only two were statistically significant: uncertainty ( $r=.24$ ;  $p<.03$ ) and confidence ( $r=.21$ ;  $p<.05$ ), both of the stereo situation. The direction

of these correlations indicated that the more Type A attributes a person possesses, the more the person feels certain about what to say and confident of successfully resolving the problem. Although these conclusions were consistent with the Type A theory and research, the magnitude of the correlations indicated that Type A has only a small effect on these perceptions. Consequently, we concluded that Type A has only a minor effect on some perceptions of the compliance gaining situation involving the stereo.

#### DISCUSSION: STUDY I

The obvious conclusion to draw from these results is that perceptions of compliance gaining situations do not distinguish between Type A's and B's. However, before we suggest that this null hypothesis is correct, let us examine alternatives. The failure to detect effects for coronary-prone behavior pattern could be attributed to a number of factors, methodological problems being the most obvious. If measurement instruments are not reliable and valid, true effects would not be detected. Neither of these claims apply to the measures utilized in this study. The measure of Type A coronary-prone behavior, the student version of the Jenkins Activity Survey, has detected differences between Type A's and B's in literally hundreds of prior studies. In addition to yielding acceptable levels of internal reliability, the dependent measures evidenced systematic variation due to

independent variables other than Type A, hence providing evidence of the measures' validity. For these reasons, we conclude that the measurement devices utilized in this study probably do not account for the failure to detect effects of the Type A variable.

A more likely factor contributing to the reported findings is the statistical power of our experimental design. As noted earlier, the probability of detecting medium and small effects in this study fell below the acceptable standard of .80. It is possible that significant effects would have been obtained if we had a more powerful design, e.g., had a larger sample size. However, we think the statistical power of the employed design does not jeopardize our ability to assess the relationship between Type A coronary-prone behavior and the perception of communication situations. The design utilized allows us to make confident conclusions concerning major effects. Conclusions about minor effects seem unimportant to us.

Another alternative conclusion is that coronary-prone behavior affects the perception of situations, but not the ones utilized in this study. In order to minimize the probability of this conclusion being valid, we utilized two different situations, each with four variations. Knowing of no theoretical rationale for distinguishing the compliance gaining situations used in this study from others, we think there is no reason to believe coronary-prone behavior will affect perceptions in other situations.



In absence of a more logical explanation of our findings, we conclude that Type A coronary-prone behavior has little, if any, effect on the perception of compliance gaining situations. The most important conclusion to draw from this finding is that this topic deserves no further investigation. The perception of communication situations does not seem to meaningfully discriminate Type A's from Type B's. Other areas of research, such as those described later in this paper, appear much more promising.

#### INSTRUMENTAL COMMUNICATION

The use of communication to obtain desired outcomes has been a central concern to our discipline since its inception. Recently, however, attention has focused on the strategic use of communication in interpersonal rather than public encounters. Prominent in this line of research are studies which focus on message strategies used by individuals to gain compliance from others (e.g. Miller, Roloff, Boster & Seibold, 1977). This study examines the strategy use patterns which distinguish Type A's from Type B's.

Current research on this topic focuses on the description of strategy types and factors influencing strategy use. Alternative typologies have been offered by Marwell and Schmitt (1967), Clark (1979), Cody, McLaughlin and Schneider (1981), and most recently, Wiseman and Schenck-Hamlin (1981). Studies on strategy use have examined situational and individual factors influencing the selection of persuasive messages. For example,

Cody et al. (1981) conclude that strategies which justify the requested action are more likely to be used among intimates than among nonintimates, especially in situations with short-term rather than long-term consequences. Roloff and Barnicott (1978) found that individuals who are devious and manipulative, i.e. high Machiavellians, are more likely to use psychological force techniques, e.g. "a good person would comply," "you will feel worse about yourself if you don't comply," than are people lacking those traits, especially in situations involving nonintimates rather than intimates.

One interesting study examined the compliance gaining behavior of Type A's and B's. Using a game paradigm to study conflict resolution, Van Egeren (1978) found that dyads composed of Type A's were more deceptive, i.e. did not act as promised, and less altruistic than Type B dyads, or dyads composed of a Type A and a Type B member. Additionally, Type A dyads more frequently selected competitive and punitive options while choosing less frequently ones of cooperation and reward. When allowed to exchange preformulated messages, communication within Type A dyads were more likely to express competition and make threats than those in other dyads. The reliability of these conclusions is indicated by a recent replication of the study in which the original findings were duplicated (Van Egeren, Sniderman, & Roggelin, 1982). However, these conclusions are limited to conflicts among strangers in a laboratory gaming situation. The present study examines the compliance gaining strategies utilized

in a different type of situation. Additionally, the Van Egeren study is limited to dyadic patterns while the present study investigates the strategies used by individuals.

From this prior research we expect Type A's to use more direct and more negative persuasive strategies than Type B's. Conversely, Type B's should use less direct and more positive strategies than Type A's. For example, we expect Type A's to be more likely to use threats and less likely to use hints.

Since this study is exploratory in nature, we also decided to introduce another variable which might interact with Type A coronary-prone behavior to affect the use of communicative strategies: status of the message receiver. To our knowledge, no previous study has examined this variable in relation to Type A behavior patterns. However, a great deal of research on topics ranging from source credibility to forms of address indicates that perceived status influences communicative transactions. We think the status of the recipient of the compliance gaining attempt will influence the type of message a person chooses to use. Are Type A's and Type B's equally sensitive to variations in status? Probably not. Type A's will react more strongly to the problem necessitating a compliance gaining message which originates from a high status source than from a low status source. Consequently, the differences between Type A and B subjects should increase with increases in the status of the message recipient.

## METHOD

### Subjects

One hundred and thirty-seven students enrolled in basic communication classes at a state university voluntarily participated in this study. Each person completed the instrument during class. The sample consisted of 38% men and 62% women with ages ranging from 17 to 42, median of 19.

### Procedure

Students were given a questionnaire booklet containing a compliance gaining message elicitation section and a self-report section. The first part consisted of a written scenario of a student's problem: a neighbor's barking dog was keeping the subject awake at night. Appendix 3 contains a verbatim description. Cody, McLaughlin and Jordan (1980) found that this situation yields a wide range of compliance gaining message strategies. We manipulated status by constructing three versions of the scenario, each being identical except for the identity of the dog owner. The three neighbors who owned the barking dog were a professor at the student's university, a student, and an unemployed, high-school drop-out. These three targets constituted high, equal, and low status manipulations. Instructions requesting respondents to write exactly what they would say or do in the situation followed the scenario. Students were randomly assigned to status conditions. The student version of the Jenkins Activity Survey and demographic items completed the questionnaire.

Scores on this instrument ranged from 1 to 16 with a median of 7.37. These figures are comparable to those obtained in study 1 and other research with student populations (Glass, 1977). Type A's were defined as students with scores greater than 7 and Type B's with scores less than or equal to 7.

### Analysis

The open ended responses were first assigned to compliance gaining strategy categories. We then compared the response frequencies of Type A's to Type B's. Separate chi square statistics were calculated for each of the three status conditions.

## RESULTS

### Message Coding

Since the situation utilized in this study was drawn from a prior investigation by Cody, McLaughlin and Jordan (1980), it seemed logical to also use the category scheme developed in that article. Consequently, all responses were assigned to one of nine strategy types: direct statement, reason, hint, cooperation, inaction, negative esteem, negative altercasting, threat, and coercion. Examples of each category may be found in the original article. Responses that were too ambiguous, too incoherent, or not legible were placed into a tenth category. Coding was done by the two junior authors who were trained and monitored by the senior author. Since coders were not informed of the Type A scores

associated with each message, experimenter expectations could not have influenced judgments of strategy type. Both coders judged all 130 messages obtained from subjects, agreeing 85% of the time. Reliability calculations resulted in a  $\pi$  of .91 (Scott, 1955), which we considered acceptable. The disagreements were arbitrated by the senior author.

### Statistical Analysis

Table 2 contains the results of the statistical analysis. As can be seen, none of the  $\chi^2$ 's reached a level of statistical significance. We must therefore conclude that the present data indicate no difference between Type A's and B's in the use of persuasive strategies.

## DISCUSSION OF STUDY 2

The absence of significant differences between Type A's and Type B's surprised us. Considering that this result is contrary to our predictions, the bulk of this discussion focuses on factors that may account for these findings. Specific suggestions for future research are included.

Previous research sufficiently documents the conclusion that Type A's and B's respond differently to some though not all situations. Glass' (1977) research on this topic concludes that the difference between these two groups of individuals emerges in situations that are uncontrollable or ones that are threatening. The compliance gaining scenario used in the second study may not fit either of those criteria. We selected the neighbor problem because a prior study, and

a pre-test for this study, indicated that a wide range of persuasive strategies are utilized in this situation. We thought the coronary-prone behavior variable might partially explain this diversity of strategies. Evidently not in the situations investigated here. None-the-less, a different type of situation may elicit the differences in communicative strategies sought in this study. Perhaps the resistance to compliance gaining attempts paradigm (McLaughlin, Cody, & Robey, 1980) provides a useful model for future research. Specifically, one might examine the responses of Type A's and B's to others' attempts to gain compliance. For example, one could compare the two groups' reactions to threatening messages as well as to rational ones. We think such situations will be more fruitful for study than the ones utilized in the present study.

Another possible explanation of our failure to detect predicted differences between Type A's and B's is that the coding scheme we utilized was not sensitive to communicative differences that actually existed in the data. The compliance gaining categories are based on form rather than style of messages. Consequently, responses which differ radically in style may be classified similarly. For example, both of the following responses were categorized as "reasoning" responses:

Hello, Mr. Johnson. I am your new next door neighbor. All last night your dog barked and made noise. Would it be too much trouble to ask you to try and keep the noise down? I don't mean to start a fight or hassel (sic). I just would like to sleep at night.

I would tell that person that his dog keeps me up at night barking, and it starts all the other dogs in the neighborhood to start barking. Then I would tell him that if he could do anything about it to do it.

Obviously these responses contain disparate elements, though both are of the same form. That is, both contain a reason for the compliance gaining attempt. On the other hand, the first message indicates more concern with the impression being made on the receiver than does the second message. And, the first one contains an imbedded ("Would it be too much trouble...") request rather than an imperative for action ("I would tell him ...to do it."). The use of coding schemes sensitive to these factors, such as that used by Clark (1979), might detect differences between Type A's and B's. We currently are undertaking a reanalysis of the data which will test this alternative explanation.

Of course it may also be the case that Type A's do not differ in their instrumental communicative behavior from Type B's. Although our data are consistent with this null hypothesis, we think such a conclusion is premature. In addition to the major points discussed above, numerous other shortcomings of our study could account for our failure to observe predicted effects, e.g. the sample size could have been larger, behavior rather than self-reports could have been observed. Consequently we hesitate to discount the hypothesized relationship between Type A coronary-prone behavior and instrumental communication.



## CONCLUSION

The purpose of this investigation was the examination of communicative factors associated with Type A coronary-prone behavior. We intended to study several facets of communication in order to assess priorities for future research. Although our results provide little evidence of the existence of a relationship between Type A coronary-prone behavior and communicative behavior, our study should be useful to researchers interested in this problem. In summarizing our two studies, we emphasize the implications of the findings for future scholarship on this topic.

The first study assessed the impact of Type A behavior on the perception of communication situations, specifically ones involving compliance gaining attempts. We found little evidence of an association between perception and Type A behavior. Our discussion of the results concluded that this problem does not warrant further attention. We think other avenues of research will be more productive.

The second study examined the communication strategies utilized by Type A's and B's in compliance gaining situations. Although the results were no more compelling than those of the first study, we concluded that research on this topic deserves further consideration. Several factors may account for the failure of this study to support the hypotheses. Currently we are assessing these alternative explanations empirically.

We plan to continue our inquiry into the communicative behaviors associated with Type A coronary prone behavior. Several additional problems deserve attention. What communicatory style characteristics are associated with Type A behavior? Although considerable comment has been made on the vocal styles of Type A's and B's (e.g. Matthews, Krantz, Dembroski, & MacDougall, 1982), no one has examined the full range of expressive behaviors. The work by Norton and his colleagues (Montgomery & Norton, 1981; Norton, 1978) provides a useful framework from which to examine this question. Another potentially important topic of research is the impact of Type A behavior on the development and maintenance of interpersonal relationships. Considerable evidence indicates that social bonds act as a barrier to personal illness (e.g. Henderson, 1977; Lin, Simeone, Ensel, & Kuo, 1979; cf. Thoitis, 1982). Perhaps Type A's are less successful than Type B's in developing meaningful interpersonal relationships and thus lose a source of physical and emotional support. These research problems illustrate other potential connections between Type A coronary-prone behavior and communication.

Although much of this paper is speculative, its contents should not be discounted. In absence of impressive data and results, we hope our admittedly tenuous conclusions and suggestions for research sensitize readers to the problems and promises of research on this potentially important topic.

## FOOTNOTES

<sup>1</sup>The power for all effects were .10, .42, and .80 for small (.10), medium (.25) and large (.40) effect sizes respectively (Cohen, 1977).

<sup>2</sup>The power coefficients for correlations were .13, .55, and .94 for small (.10), medium (.25) and large (.4) effect sizes respectively (Cohen, 1977).

Table 1: Reliability Coefficients for  
Dependent Variables in Study 1

<u>Variable Name</u>	<u>Group Problem</u>	<u>Stereo Problem</u>
Uncertainty	.90*	.85
Anxiety	.77	.77
Confidence	.84	.81
Consequences	.90	.81
Competitiveness	.86	.60
Time urgency	.80	.61
Hostility	.90	.88

\*All coefficients are Cronbach alphas.

Table 2: Percentage of Responses in Each Message Category by Type A and B Subjects for Superior, Equal, and Subordinate Status Targets

MESSAGE STRATEGY	TARGET STATUS					
	Drop-out		Student		Teacher	
	Type A	Type B	Type A	Type B	Type A	Type B
Simple statement	35%	37%	19%	20%	12%	22%
Reason	35	32	44	20	56	43
Hint	10	0	7	20	12	9
Cooperation	0	0	4	0	6	0
Inaction	5	11	4	7	6	9
Negative Esteem	10	5	7	0	0	4
Negative Altercasting	0	0	4	13	0	13
Threat	5	11	11	7	6	0
Coercion	0	5*	0	13	0*	0
<hr/>						
N =	20	19	27	15	16	23
$\chi^2$ =	4.05		9.80		6.65	
df =	6		8		7	
p <	.67		.28		.47	

\* Percentages do not total to 100 because of rounding error.

## Appendix 1: Scenarios Used in Study 1

### 1. Scenario A: Low Consequence/Acquaintance

You have been working with several members of a class on a required group project. The instructor's evaluation of the group's work counts only 10 percent of the grade for the class. Consequently, this is not an important assignment. Unfortunately, one person in the group has consistently turned in such poor work that the group's grade may be lowered significantly. You did not know this person before taking this class. You have decided to talk to him/her about doing a good job on the last part of this project which is due in only three days.

### 2. Scenario A: Low Consequence/Friend

You have been working with several members of a class on a required group project. The instructor's evaluation of the group's work counts only 10 percent of the grade for the class. Consequently, this is not an important assignment. Unfortunately, one person in the group has consistently turned in such poor work that the group's grade may be lowered significantly. This person happens to be a close friend whom you have known for many years. You have decided to talk to him/her about doing a good job on the last part of this project which is due in only three days.

### 3. Scenario A: High Consequence/Acquaintance

You have been working with several members of a class on a required group project. The instructor's evaluation of the group's work counts for 75 percent of the grade for the class. Consequently, this is a very important assignment. Unfortunately, one person in the group has consistently turned in such poor work that the group's grade may be lowered significantly. You did not know this person before taking this class. You have decided to talk to him/her about doing a good job on the last part of the project which is due in only three days.

4. Scenario A: High Consequence/Friend

You have been working with several members of a class on a required group project. The instructor's evaluation of the group's work counts for 75 percent of the grade for the class. Consequently, this is a very important assignment. Unfortunately, one person in the group has consistently turned in such poor work that the group's grade may be lowered significantly. This person happens to be a close friend whom you have known for many years. You have decided to talk to him/her about doing a good job on the last part of this project which is due in only three days.

5. Scenario B: Low Consequence/Acquaintance

You just started studying one night when the student living next door to you turns the stereo up very loud. The noise makes it impossible for you to study. You have known this person only since the beginning of the semester and have been unsuccessful in past efforts to get him/her to turn the volume down. Even though you are not studying for a test, you go next door to talk to this person about the noise.

6. Scenario B: Low Consequence/Friend

You just started studying one night when the student living next door to you turns the stereo up very loud. The noise makes it impossible for you to study. Although this person happens to be a close friend whom you have known for many years, past efforts to get him/her to turn down the volume have been unsuccessful. Even though you are not studying for a test, you go next door to talk to this person about the noise.

7. Scenario B: High Consequence/Acquaintance

You just started studying for the mid-term exam in the hardest course required for your major when the student living next door turns the stereo up very loud. The noise makes it impossible for you to study. You have known this person only since the beginning of the semester and have been unsuccessful in past efforts to get him/her to turn the volume down. Since this test is a major one, you go next door to talk to this person about the noise.

8. Scenario B: High Consequence/Friend

You just started studying for the mid-term exam in the hardest course required for your major when the student living next door turns the stereo up very loud. The noise makes it impossible for you to study. Although this person happens to be a close friend whom you have known for many years, past efforts to get him/her to turn the volume down have been unsuccessful. Since this test is a major one, you go next door to talk to this person about the noise.



Appendix 2: Perception Measures Used in Study 1

REACTIONS TO SITUATION

Directions: This questionnaire is composed of statements concerning your reactions to the situation described on the preceding page. Try to think of people you know who might fit that description. Please indicate the degree to which each statement applies to you by marking the correct column.

	Strongly Agree	Moderately Agree	Slightly Agree	Undecided	Slightly Disagree	Moderately Disagree	Strongly Disagree
1. I would know what to say in this situation.							
2. I would feel tense in this situation.							
3. I could get this person to do what I wanted.							
4. The outcome of this situation would affect me significantly.							
5. This situation requires me to compete with the other individual.							
6. I would waste no time in handling this situation.							
7. The person in this situation would make me angry.							
8. In this situation, I would know what to do.							
9. I would feel relaxed in this situation.							
10. I could influence the person in the desired way.							
11. This situation would have important consequences for me.							
12. I am competing with the individual to get what I want.							
13. It would take a lot of time for me to resolve this situation.							

	Strongly Agree	Moderately Agree	Slightly Agree	Undecided	Slightly Disagree	Moderately Disagree	Strongly Disagree
14. I would be mad at the person in this situation.							
15. I would know how to act in this situation.							
16. I would feel nervous in this situation.							
17. I would be successful in this situation.							
18. I would be affected personally by the results of this situation.							
19. This situation requires cooperation among the individuals involved.							
20. I would hurry to take care of this situation.							
21. I would be very angry with the person in this situation.							
22. The person in this situation is a close friend of mine.							

## Appendix 3: Scenarios Used in Study 2

### 1. Low Status Target

You recently rented a house and signed a one-year lease. Upon moving in, you met a neighbor who is an unemployed, high-school drop-out. Unfortunately, you have discovered that this neighbor's dog barks and howls almost all night, causing the other dogs in the neighborhood to bark. The resulting noise is unbearable.

### 2. Equal Status Target

You recently rented a house and signed a one-year lease. Upon moving in, you met a neighbor who also is a student at \_\_\_\_\_. Unfortunately, you have discovered that this neighbor's dog barks and howls almost all night, causing the other dogs in the neighborhood to bark. The resulting noise is unbearable.

### 3. High Status Target

You recently rented a house and signed a one-year lease. Upon moving in, you met a neighbor who teaches at \_\_\_\_\_. Unfortunately, you have discovered that his neighbor's dog barks and howls almost all night, causing the other dogs in the neighborhood to bark. The resulting noise is unbearable.

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