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OF COMMUNICATIVE METHOD AND
INTERPERSONAL MUTUALITY

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CHAPTER I

INTRODUCTION

A large proportion of research in social psychology has been concerned with interpersonal communication. More often than not, when different investigators get interested in an area of experimentation that is fairly broad and influenced by many variables, an evolvement of several different categories of, or approaches to, the research area occurs. The area of interpersonal communication is no exception.

One approach to the study of interpersonal communication is the area of psycholinguistics, e.g., Brown (1959). Another is the study of persuasive communication, that is, the effects of different methods of communicating upon opinion change, e.g., Hovland, Janis, and Kelly (1953). Related to this latter approach is the study of the effects of the communicator himself; his status, for example. Still another approach is the investigation of communication networks (see Glanzer and Glaser, 1961) which began with the work of Bavelas (1950). Without belaboring the point, it can readily be seen that several varied approaches have developed. Few investigators,

however, have considered the effectiveness of communication per se. In other words, research, for the most part, has not dealt with the accuracy of the receiver's understanding of the sender's message.

One of the first studies to consider specifically the accuracy of interpersonal communication was a pair of experiments conducted by Leavitt and Mueller (1951). These investigators were primarily interested in communicative effectiveness as a function of feedback to the message sender. Essentially, their hypothesis was that feedback should make for greater effectiveness. The procedure consisted of college instructors who described certain geometric patterns verbally; and groups of students, ranging in size from 6 to 24, who were instructed to copy on paper what the instructors described. Students' papers, then, could be scored for accuracy. For example, one of the geometric patterns consisted of six identical rectangles' relationship to each other on the paper. Thus, a score ranging from 0-6 could be determined by the degree of correctness in drawing the six rectangles. In other words, a particular rectangle was scored perfect if it bore the correct relationship to the preceding rectangle.

In their first experiment Leavitt and Mueller established four different conditions of feedback ranging from the instructor's receiving a minimum amount of feedback, through two conditions of partial feedback, to a maximum or "free" amount of feedback. In addition to reproducing the rectangles, Ss were asked to estimate the number of rectangles that they thought they had reproduced correctly. The time taken to communicate the message for each condition was also measured. The results of this initial experiment indicated that as

the degree of feedback increased so did the accuracy on the communication task. The Ss' estimates of their own accuracy as well as the time required for communication also followed the same trend as the actual accuracy.

The second experiment that Leavitt and Mueller conducted for further clarification consisted of the two extremes of feedback only, i.e., the zero or minimum feedback vs. the free or maximum feedback condition. The results were consistent with the trend of the first experiment. The difference between the mean of the free feedback (5.9 out of 6) and the mean of the zero feedback (5.2 out of 6) was significant at the 1% level. Even though the groups in the zero feedback condition improved with practice, the free feedback groups were significantly more accurate in communicating the series of rectangles. The confidence that students expressed in their results was also significantly different for the two groups, i.e., the free feedback groups expressed more confidence in their results than the zero feedback group. Time expenditure was significantly greater for the free feedback group, but the gap between the two groups diminished towards the end of the experiment. Additional findings of the experiments were that sender experience was more important for accuracy of results than receiver experience, and the presence of feedback yields confidence and amity, whereas no feedback yields low confidence and hostility. Feedback or lack of feedback, according to Leavitt and Mueller, is a characteristic of the relationship between sender and receiver. Based on their findings, Leavitt and Mueller state that "continuing free feedback could lead directly back

into zero feedback, for once the common areas of misunderstanding have been clarified, contemporaneous feedback will no longer be necessary" (p. 409). Succinctly, it would seem that free feedback affords the learning of a mutual language, that is, a communicative language that is understood by the group.

Haney (1964) conducted an experiment similar to the one by Leavitt and Mueller. Again, zero feedback or one-way communication (unilateral) and free feedback or two-way communication (bilateral) were implemented. Haney's sample consisted of 398 persons who were distributed among 18 groups which ranged in size from 7 to 46. Although Haney attempted to select in each case a superior communicator or message sender for each of the 18 groups, his selection of superior communicators was not significantly substantiated. At any rate, the selection of message sender was not random. Like Leavitt and Mueller's task, the message involved the sender's communicating verbally a drawing which the group was to reproduce as accurately as possible.

Haney's results supported the Leavitt and Mueller study considerably. Based on several criteria, bilateral communication differed significantly from unilateral communication: (1) Bilateral communication was more accurate; (2) Ss in the bilateral condition experienced less frustration; and (3) When the condition was bilateral, Ss were more confident of their accuracy.

There were also some noteworthy exceptions to the superiority of bilateral communication. For example, it requires more time. The necessity of two-way communication is lessened when the message

between communicator and receivers becomes routine and familiar. If bilateral communication becomes entangled with the need to maintain order alone, or to reduce disruptive influences such as emotional responses, then unilateral may be advantageous.

Haney points out that he cannot substantiate Leavitt and Mueller's finding that two-way communication was accompanied by amity. He states that "the bilateral transactions observed in this study were frequently marked by rancor and impatience" (p. 135). The following observation is then made by Haney concerning the variables influencing effective two-way communication. These variables:

> will tend to be efficacious and constructive to the extent that the sender, particularly, and recipients can remain open and non-threatened by the communication experience. Defensive behavior especially by the sender whether manifested by aggression or withdrawal invariably was accompanied by a deteriorated communication performance (p. 134).

Haney believes that some foundation for understanding and accepting each other can contribute greatly to the success of communication. Although both Leavitt and Mueller (1951) and Haney (1964) seem to have their results confounded by the fact that one-way and two-way communication represent also two different levels of completeness of instruction, their work represents an initial step in studying some of the inherent variables which influence communication, especially the openness or non-threatening aspects of the communication experience.

Carl Rogers would probably feel that Haney is considering a very important, if not the most important, variable in communication

success. Rogers feels that interpersonal mutuality is crucial in the overall effectiveness of interpersonal communication. Rogers (1952, p. 47) writes "that the major barrier to mutual interpersonal communication is our very natural tendency to judge, to evaluate, to approve (or disapprove) the statement of the other person or the other group....to evaluate it from your point of view, your frame of reference." He continues by stating a rule that could be implemented to improve communication between persons: Each person can speak for himself only after he has first restated the ideas and feelings of the previous speaker accurately and to that speaker's satisfaction" (p. 48).

Two questions arise: does Rogers' rule improve communication and, if it does, why and how does it? Rogers believes that the rule contributes to effective communication because it aids the individuals involved to feel that now they are being understood by another person--that this person can place himself in another's position. When this empathic relationship occurs, there is no necessity to be defensive and exaggerate one's statements, according to Rogers' reasoning.

Speroff (1955) has set forth similar fundamentals concerning effective communication. He states:

> By 'empathizing' with the communicant the margin of communicative misunderstanding is narrowed, and such insightful remarks as 'Now this is what I think you mean...' and 'Is my understanding right in this matter? are examples of one's reciprocal empathic ability.... 'placing oneself in the other person's position, establishing rapport, and anticipating his reaction, feelings and behaviors' (p. 164).

There has also been research in the area of communication that lends indirect support to Rogers' proposal. Smith and Knight (1959)

demonstrated that a group's efficiency in problem solving can be significantly improved when feedback concerning personal matters is allowed. It has also been found (Shepherd and Nechsler, 1955) that in expressed communication the least difficulty is related to positive sociometric choice. Using a measure of attribute similarity (cognitive similarity) and a measure of communicative similarity (behavioral or actual process of communication), Triandis (1960) found that communication is more effective when the dyads interacting share common norms. He showed that both attribute similarity (similarity in the dimensions used by persons when examining events in their environment and the behavioral or communicative similarities contribute to more effective communication.

To date, theory and research seem to be saying that truly effective communication between persons can best be obtained when the persons interacting share something in common. Whether it is attribute similarity, language, common norms, empathizing, a frame of reference, mutuality, or a combination of these variables has not been demonstrated conclusively. The purpose of this study will be to test the effectiveness of the rule proposed by Rogers (considering it as a further refinement of two-way communication) and also attempt to isolate possible contributing variables, that is, the variables which are effective in aiding communication. It is assumed that these variables allow the persons interacting to feel some mutuality, in that, it affords the persons a common bond that bridges the gap of individual separateness. Two hypotheses will be tested to attempt a critical assessment of these variables:

(1) Effectiveness of communication will increase with an increase in the level of interpersonal acceptance; (2) Communication will be more effective as the method provides increasing amounts of feedback to the sender of the message from the receiver.

CHAPTER II

METHOD

SUBJECTS

The sample consisted of 84 male undergraduates at the University of Richmond. These Ss came from Introductory Psychology classes and from a Human Relations class in the School of Business Administration. Since the experiment was conducted with pairs of Ss, 42 dyads were used in the study. Two pairs had to be discarded from the data analysis because one pair was aware of the E's manipulation, and the other pair did not fully understand the instructions for the task.

COMMUNICATION TASK

The communication task involved the ability of a sender to communicate verbally a geometric pattern consisting of six equally sized rectangles (See Appendix A) to a receiver with neither party looking at the other or the receiver seeing the actual arrangement. Under all conditions Ss sat at a small table. The pairs sat towards each other but vision was blocked by a partition. A score ranging from 0-6 was determined for the receiver's reproduction by the

degree of correctness in drawing the six rectangles. In other words, a particular rectangle was scored perfect if it bore the correct relationship to the preceding rectangle.

PROCEDURE

Four levels of interpersonal mutuality were employed: true friends, contrived friends, contrived opposites, and a control group. (1) The true friends were obtained from the college classes by asking members of the classes who had a very close friend to bring that friend to the experiment and thus constitute a dyad. (2) The contrived friends were obtained by administering the Edwards Personal Preference Schedule to Introductory classes. Then, without actually using the results, the dyads were told that they had been selected for this experiment in communication based on the findings of this test. They were told that the test findings strongly suggested that they had much in common, that it should be satisfying for them to work together, that they could understand each other, and that their pairing together should be advantageous for the communication task. (3) The contrived opposites were told that they had been selected for this experiment in communication based on the findings of the Edwards Personal Preference Schedule. They, however, were told that the findings strongly suggested that they had little in common, that it might be difficult for them to work effectively on this task or to really understand each other, and that generally their personalities should not mesh properly for their pairing to be advantageous for the communication task. (4) The control group was randomly selected from the same Introductory population and given no information

regarding their degree of interpersonal mutuality. In this condition an effort was made to eliminate all true friends. Except for the true friends condition, Ss generally did not know who their partner would be, and they were obtained for the experiment either by signing up for a particular time in class or they were contacted on the telephone.

The two methods of communication were two-way communication and communication based on Rogers' rule. (1) Two-way communication is where both the sender and receiver are free to speak as much or as little as they so desire. This condition is essentially the same as any communication in which one party is dependent on the other as a source of information. (2) The Rogers' rule condition (a further refinement of two-way communication) is where all communication involves the use of the rule. This method of communication required the reading of an adaptation of Rogers' rule to all Ss in this condition: "Each person can speak for himself only after he has first restated the message of the sender accurately and to that sender's satisfaction." This condition usually required that the experimenter aided the dyad in following the rule.

All dyads were given the same instructions at the onset of the task:

> The experiment in which you are about to participate involves a communication task. The task is an attempt to assess one's ability in a dyad (or pair) to communicate information effectively. The information to be conveyed in this case can be utilized to obtain a score on the task. One member of the dyad will describe a geometric pattern which the other member will not see (pointing to the partition placed on the table to block their vision of each other). The member with the pattern will be the sender and he will attempt to communicate

> verbally the design to the receiver who will reproduce it on a blank sheet of paper. Since this is just verbal communication, the pairs will not be able to view each other or watch what the other is doing.

From this point on, the directions were different depending on which technique was implemented or which Ss condition was used. The time required to complete the task was recorded for each dyad. After completing the task the pair was requested to fill out a questionnaire, "INTERPERSONAL REACTION SCALE," that attempted to assess the pairs reactions to the task and to each other (Appendix B). Then, the two Ss were shown their results on the task and were given an explanation of the experiment. Before leaving each pair was requested not to tell anyone about the nature of the experiment because of possible contamination.

EVALUATION OF EXPERIMENTAL MANIPULATION

The purpose of this evaluation was to check on the degree of friendship or mutuality. Using a questionnaire (See Appendix C) containing items that would indicate the degree or range of friendship, an attempt was made to demonstrate the validity of making distinctions in the groups based on mutuality, that is, whether or not the groups that were separated on the basis of friendship were indeed friends. One item on the general questionnaire (Appendix B) concerning knowledge of the partner was used to show the degree of separation between true friends and all other conditions.

DEPENDENT VARIABLES

1. Time Required: each pair of Ss was timed from the beginning of the task until they jointly decided that they completed the task.

2. Confidence: represented an estimate of accuracy, that is, how many of the six rectangles did each member of the pair feel were reproduced correctly. This was item #1 of the Interpersonal Reaction Scale. The item was responded to separately by each member and prior to the E giving the pair feedback concerning their accuracy.

3. Accuracy: a score ranging from 0-6 was determined for receiver's reproduction by the degree of correctness in drawing the six rectangles.

4. Questionnaire: two questionnaires of the Likert-type were employed with a range of 1-7 (alternative ascending and descending items). One questionnaire (Appendix B) attempted to assess the pairs reactions to the task and each other. The second questionnaire (Appendix C) attempted to assess the degree of friendship among true friends.

DESIGN

The independent variables were the four subject condition (S), sender or receiver condition (C), and two methods of communication (M). The accuracy and time variables were interpreted by a two-factor ANOV (4 x 2)--the sender-receiver dimension was not necessary for these two independent variables.

CHAPTER III

RESULTS

INDUCTION OF INDEPENDENT VARIABLES

Since it was important to control the degree to which the pairs of Ss knew each other, two steps were taken that would hopefully distinguish the true friend condition from all other conditions. The first step was to check the degree to which the two persons assigned to a time period knew each other by asking them orally prior to the experiment. The second step was item #6 on the questionnaire which asked about the "Knowledge of the Other Person." This was administered after the communication task was completed but before the results were known by either party. Pairs asked about how well they knew each other before the communication task (excluding true friends) answered the item concerning their knowledge of each other differently than their oral response. Although all subject conditions showed significantly less knowledge of the other person than did the true friends, there was considerable interaction among all conditions (Subjects Method) except the true friend condition. This could have been a function of reacting differently

to the item or that the experimental conditions had an unsystematic influence on the respondent's reaction to the item.

The "Knowledge of Other Person" item (Item #6, Questionnaire--Appendix B) was analysed for the four mutuality conditions, the two methods of communication, and whether the member of the dyad was a sender or receiver (4 x 2 x 2). True friends stated significantly more knowledge of their partners than any of the other dyads did for the three other conditions ($F = 6.5$, p .05, Table 1). However, in the two way method of communication the contrived opposites and control Ss were significantly more knowledgeable of one another than contrived friends ($q = 3.4$, 3.2, p .05, Table 1). Rogers' rule method of communication showed that contrived friends were significantly more knowledgeable of the partner than contrived opposites or the control Ss ($q = 3.0$, 3.2, p .05, Table 1). The effects between two-way and Rogers' rule methods of communication were manifested with contrived opposites ($F = 7.22$, p .05, Table 1) and control Ss ($F = 7.22$, p .05, Table 1) showing significantly less knowledge of the other person in Rogers' rule method, and contrived friends ($F = 15.43$, p .05, Table 1) showing more knowledge of partner in Rogers' rule method of communication. It would appear that true friends differed significantly in knowledge of partner from all other subject conditions, but that there is much Ss by method interaction for all conditions except true friends.

A 2 x 2 ANCV was applied to the total score on the "INTERPERSONAL INFORMATION SCALE" for true friends. This was a further check on the degree that the true friends really know each other. And, whether

TABLE 1

Analysis of Variance for Item 6,
Knowledge of Other Person

Source	d.f.	MS	F
Subject Conditions (S)	3	51.78	22.13**
Sender or Receiver (C)	1	3.62	1.55
Method (M)	1	1.52	.65
S x C	3	1.04	.44
S x M	3	11.41	4.88**
C x M	1	.30	.14
S x C x M	3	.35	.15
Error	64	2.34	

* p .10

** p .05

TABLE 1a

Analysis of Variance for Subjects by Method Interaction Based on Knowledge of Other Person

Source	d.f.	MS	F
S at M_1	3	66.58	28.45*
S at M_2	3	59.60	25.47*
M at S_2	1	36.1	15.43*
M at S_3	1	16.9	7.22*
M at S_4	1	16.9	7.22*
Error	64	2.34	

* p .05

TABLE 2

Analysis of Variance of True Friends Based on the Interpersonal Information Scale

Source	d.f.	MS	F
Sender or Receiver (S)	1	.05	.01
Method	1	6.05	.78
S x M	1	.45	.06
Error	16	7.78	

the two-way and Rogers' rule groups of true friends differed significantly across the two methods of communication. The results demonstrated that the two-way and Rogers' rule dyads were not significantly different in degree of friendship (whether sender or receiver) with an $F = .78$, p .05, Table 2.

DEPENDENT MEASURES

A 2 x 2 ANCV of both accuracy and time indicated that there were no significant differences due to subject condition or the method used (Tables 3, 4). At the .10 level of confidence the Rogers' rule method of communication had a tendency to take more time than two-way method of communication ($F = 3.89$, p .10, Table 4). Relating back to the interaction of subjects and method concerning the knowledge of the other person, it is possible that the knowledge of partner for each condition confounded the results for accuracy and time. Although the contrived friends were significantly more knowledgeable of their partners in the Rogers' rule method ($F = 15.43$, p .05, Table 1, both control Ss and contrived opposites were significantly more knowledgeable of the other in the two-way method of communication ($F = 7.22$, p .05, Table 1). These results indicate that communication as defined by this experiment is not significantly improved by either the use of Rogers' rule or whether or not there is an increase in the acceptance or mutuality that pairs can feel toward each other in the communication task.

Confidence did manifest a Ss by Method interaction ($F = 5.28$, p .05, Table 5). True friends expressed significantly more confidence in the number of rectangles correct in the Rogers' rule

TABLE 3

Analysis of Variance of Accuracy
for the Communication Task

Source	d.f.	MS	F
Subject Condition (S)	3	3.80	1.11
Method (M)	1	.10	.03
S x M	3	6.97	2.04
Error	32	3.41	

TABLE 4

Analysis of Variance of Time Required
for the Communication Task

Source	d.f.	MS	F
Subject Conditions (S)	3	176.16	1.61
Method (M)	1	426.28	3.89*
S x M	3	66.34	.61
Error	32	109.48	

* p .10

TABLE 5

Analysis of Variance of Confidence for Subjects in the Communication Task

Source	d.f.	MS	F
Subject Condition (S)	3	1.42	1.28
Sender or Receiver (C)	1	1.25	1.13
Method (M)	1	.35	.32
S x C	3	1.35	1.22
S x M	3	5.86	5.28**
C x M	1	.45	.41
S x C x M	3	1.48	1.33
Error	64	1.11	

** p .05

TABLE 5a

Analysis of Variance of Confidence Across Methods for Subjects in the Communication Task

Source	d.f.	MS	F
True Friends (M at S_1)	1	6.40	5.77*
Contrived Opposites (M at S_3)	1	12.10	10.90*
Control (M at S_4)	1	4.9	4.55*
Error	64	1.11	

* p .05

TABLE 5b

Analysis of Variance of Confidence Between Subject Conditions for Two-way and Rogers' Rule Communication

Source	d.f.	MS	F
Two-way (S at M_1)	3	6.00	5.41*
Rogers' Rule (S at M_2)	3	4.47	4.03*
Error	64	1.11	

* p .05

method of communication as opposed to the two-way method of communication ($F = 5.77$, p .05, Table 5a). Since true friends had a higher degree of contact with one another, it is possible that their understanding and accepting of one another was also greater than the remaining Ss groups. Based on this notion, it would seem that true friends being less defensive with one another could utilize Rogers' rule more comfortably and to their advantage. Thus, true friends under Rogers' rule would express more confidence when compared to two-way communication. Contrived opposites were significantly less confident in the Rogers' rule method of communication as compared with contrived opposites in two-way communication ($F = 10.90$, p .05, Table 5a). Contrived opposites using Rogers' rule seemed to compound their difficulties in communicating. The confidence level may have reflected this. Control Ss were more confident with Rogers' rule ($F = 4.55$, p .05, Table 5a). This possibly demonstrates that Rogers' rule affords a common bond which the control Ss (two-way) did not have (control Ss generally had little knowledge of one another). This common bond, perhaps, adds comfort and confidence. Since contrived friends did not show any significant difference, there is the implication that being told of their similarities was more important than the method of communication used.

In two-way communication and Rogers' rule communication the general trend for each of the Ss conditions followed the expected pattern. True friends were significantly more confident than contrived opposites (Newman-Keuls, $q = 1.80$, p .05); and contrived friends were significantly more confident than control Ss for two-way communication (Newman-Keuls, $q = 1.80$, p .05). With Rogers'

rule true friends and contrived friends were significantly more confident than contrived opposites (Newman-Keuls, q = 2.00, p .05). These findings give some credibility to the manipulation of the Ss groups.

One item on the "INTERPERSONAL INFORMATION SCALE," Knowledge of Other Person has been previously analyzed. There were eight other items which constituted the "SCALE." Again, each item was interpreted by means of a 4 x 2 x 2 ANOV--the four Ss conditions, two methods, and the sender-receiver dimension.

The item concerning *how* intelligent one partner thought the other person was showed no significant differences due to any effects (Table 6). It would appear that any frustration that may have resulted from the treatments were not manifested by lowering the partner's intelligence.

With the item concerning the perceived adjustment of the partner, control Ss rated their partners better adjusted than true friends or contrived opposites (Newman-Keuls, q = 1.1, .9, p .05). Also, contrived friends rated their partners as being better adjusted than true friends and contrived opposites (Newman-Keuls, q = 1.5, 1.3, p .05). It is possible that true friends felt accepted by one another enough to be critical or that true friends just happen to know each other that well. Another explanation is that the communication task resulted in more frustration for the true friends because they felt that more was at stake and, as a result, rated their partners lower in adjustment than the contrived friends or controls. Contrived opposites may have lowered their judgments of

TABLE 6

Analysis of Variance for Perceived Intelligence of Partner in the Communication Task

Source	d.f.	MS	F
Subject Condition (S)	3	.84	1.60
Sender or Receiver (C)	1	.53	1.00
Method (M)	1	1.02	1.92
S x C	3	.91	1.72
S x M	3	.88	1.66
C x M	1	.30	.57
S x C x M	3	.01	.02
Error	64	.53	

TABLE 7

Analysis of Variance for Perceived Adjustment of Partner in the Communication

Source	d.f.	MS	F
Subject Condition (S)	3	2.57	5.04*
Sender and Receiver (C)	1	.45	.88
Method (M)	1	.80	1.57
S x C	3	.68	1.33
S x M	3	1.37	2.67
C x M	1	1.25	1.14
S x C x M	3	.01	.02
Error	64	.51	

* p .05

partners as a function of frustration that was kindled in the task situation.

The item concerning Personal Feeling or the degree of liking of partner followed the generally expected trend. True friends were significantly higher in liking their partner than contrived opposites or control Ss ($q = 2.9, 2.1, p < .05$), but true friends and contrived friends did not differ. Seemingly, individuals can be convinced of a degree of similarity or mutuality just by being told that it is so. This seemed to be comparable with the manifested degree of liking for true friends. Contrived friends were significantly better liked by one another than contrived opposites (Newman-Keuls, $q = 2.0, p < .05$). This strongly indicates that the contrived conditions were successful.

Essentially the same trend was shown for the item dealing with the desire of partners to Work Together Again as the Personal Feelings item. That is, true friends expressed significantly more willingness to do this task or one similar, again, than contrived opposites or controls (Newman-Keuls, $q = 2.7, 2.6, p < .05$). The difference between true friends (12.8) and contrived friends (11.3) was not significant. Again, it would appear that experimentally one can induce contrived friends comparable to true friends in so far as questionnaire responding is concerned. Also, receivers expressed significantly more willingness to work together again than did the senders regardless of the condition ($F = 5.00, p < .05$, Table 9). Probably the sender condition was associated with markedly more difficulties and frustrations than the receiver condition even though the receivers were not passive recipients of the information.

TABLE 8

Analysis of Variance for Personal Feelings
Towards the Partner in the Communication Task

Source	d.f.	MS	F
Subject Condition (S)	3	8.22	8.39*
Sender or Receiver (C)	1	2.83	2.89
Method (M)	1	.13	.13
S x C	3	.84	.86
S x M	3	.74	.76
C x M	1	.29	.30
S x C x M	3	.75	.77
Error	64	.98	

* p .05

TABLE 9

Analysis of Variance of Partners Willingness to Work Together in an Experiment of This Type in the Future

Source	d.f.	MS	F
Subject Condition (S)	3	7.9	5.49*
Sender or Receiver (C)	1	7.2	5.00*
Method (M)	1	1.25	.87
S x C	3	.21	.15
S x M	3	2.88	2.00
C x M	1	.05	.00
S x C x M	3	.75	.52
Error	64	1.44	

* p .05

TABLE 10

Analysis of Variance of Personal Satisfaction Associated with the the Communication Task

Source	d.f.	MS	F
Subject Condition (S)	3	5.75	4.53*
Sender and Receiver (C)	1	.12	.09
Method (M)	1	1.52	1.20
S x C	3	1.04	.82
S x M	3	.64	.50
C x M	1	.1	.79
S x C x M	3	1.52	1.20
Error	64	1.27	

* p .05

The item concerning Personal Satisfaction showed that true friends had more personal satisfaction associated with the communication task than friends (contrived) and control Ss, but not more than contrived opposites (Newman-Keuls, q = 1.9, 2.5, p .05). Personal Satisfaction would appear to be significantly greater if one is working with someone that he knows well (whatever the relationship means--mutuality, common language, acceptance, etc.). Contrived opposites did score Personal Satisfaction comparable to true friends which possibly means that the contrived opposites were reacting against the thought of working in a pair that was unmatched. Several Ss stated that when they were told that they were opposites with all its ramifications, this caused enough resentment that they were going to do well no matter what the experimenter said.

Assistance in the Communication Task demonstrated significant differences due to subject condition manipulation (F = 2.94, p .05, Table 11). True and contrived friends rated their partners as giving significant more assistance on the task than did contrived opposites or control Ss (Newman-Keuls, q = 1.0, 1.1, p .05). This probably reflects the true and contrived friends greater easy with one another as compared with controls and contrived opposites. Again, this gives more credance to the subject condition manipulation.

The items Personal Responsibility for the communication task and Interest in the Communication Task were not significantly different for any of the conditions (Tables 12, 13). This would seem to indicate that the pair's interest and responsibility in the task would not have contributed to any unsystematic effects on the experimental methods or conditions.

TABLE 11

Analysis of Variance for Subjects' Perceived Assistance (of Partner) in the Communication Task

Source	d.f.	MS	F
Subject Condition (S)	3	1.88	2.94*
Sender or Receiver (C)	1	1.62	2.53
Method (M)	1	.22	.34
S x C	3	.83	1.30
S x M	3	.49	.77
C x M	1	2.03	3.17
S x C x M	3	.61	.95
Error	64	.64	

* p .05

TABLE 12

Analysis of Variance for Partners' Feelings of Personal Responsibility for the Task

Source	d.f.	MS	F
Subject Condition (S)	3	.32	.38
Sender and Receiver (C)	1	1.25	1.48
Method (M)	1	.20	.24
S x C	3	.32	.38
S x M	3	.33	.38
C x M	1	.00	.00
S x C x M	3	1.73	2.06
Error	64	.84	

TABLE 13

Analysis of Variance for Subjects' Interest in the Communication Task

Source	d.f.	MS	F
Subject Condition (S)	3	2.30	1.85
Sender and Receiver (C)	1	.00	.00
Method (M)	1	.2	.02
S x C	3	1.1	.89
S x M	3	1.63	1.31
C x M	1	3.2	2.58
S x C x M	3	.7	.56
Error	64	1.24	

CHAPTER IV

DISCUSSION

The basic assumption underlying the present study was that Ss utilising Rogers' rule in communication would communicate more effectively than Ss practicing two-way communication. Also, that as degree of similarity or mutuality (whether actual or experimentally induced) increased so would the accuracy of communication. Neither of these expectations was supported by the results. The Rogers' rule method did not improve communication on the task. Although the Rogers' rule condition required a slightly longer period of time (p .10), there was no difference in this condition and the two-way method. The questionnaire strongly indicated that the contrived friends and contrived opposites were effectively manipulated as part of the Ss conditions. Also, true friends were more knowledgeable of one another than all other Ss conditions. A source of variance seems to have been introduced in all Ss conditions except true friends. That is, there was considerable interaction between the method and Ss conditions. This interaction may have confounded the accuracy of the results but, as stated before, it would be difficult to ascertain whether or not the experimental

setting influenced the responses on the item concerning degree of knowing the other person.

Since true friends under Rogers' rule stated significantly more confidence than true friends under two-way, it is reasonable to assume that Rogers' rule is more likely to "tap" or elicit feelings of acceptance and/or similarity--if they are there in the first place.

There was considerable intra-cell variance which could probably be greatly lessened by increasing the N size. This belief is based on the fact that all differences were in the expected direction, but the variance within each cell did not allow any of these differences to become apparent. It is also reasonable to assume that the communication task is not applicable to testing the effectiveness of Rogers' rule in communication.

The most essential variable for this type of communication task may not be the degree of acceptance or similarity. Possibly where a communication task actually requires that a pair understand one anothers' feeling and thoughts would be more applicable. For example before a pair of Ss communicate with one another, have them independently fill out a questionnaire concerning a topic that would cause some emotional involvement. After the pair have answered the questionnaire seperately, then, they might discuss with one another how each feels about this particular topic (communication would be either two-way or Rogers' rule). The criterion for successful or effective communication would be responding to the questionnaire (given before the pair communicated) as did his partner. This type

of communicative task would appear to be more suited to testing the hypothesis that communication is more effective when acceptance or mutuality is present in the communication setting. The task used in the present study would probably be more suitable in assessing communication based on common norms shared by the people communicating. Triandis (1960) showed that persons with attribute similarity (similarity in the dimensions used by persons when examining events in their environment) communicate more effectively. That is, people who use the same adjectives, etc. to describe what they see in the world will be more effective in communicating than persons who do not share a common way of examining events in their environment. In other words, persons who shared similar modes of analyzing a geometric pattern could communicate effectively regardless of the degree of acceptance or mutuality that they possessed.

In conclusion, the reason there was a lack of significant differences in accuracy for the various conditions may be fourfold: (1) Rogers' rule does not after all, aid communication, (2) insufficient N size, (3) confounding of knowledge factor, and (4) inadequacy of this task to assess the independent variables. Further research should vary the task to measure the particular type of communication desired. Studies should be designed to assess the relative significance of common norms and mutual acceptance in the role of communication.

CHAPTER V

SUMMARY

Various approaches have developed for the study of interpersonal communication. However, little research has been concerned with the effectiveness of communication, that is, the accuracy of the receiver's understanding of the sender's message. The present study was aimed at investigating the effectiveness of communication as a function of two variables: level of interpersonal acceptance and amount of feedback which the sender obtains from the receiver.

Forty pairs of male Ss were obtained through introductory psychology classes at the University of Richmond. Each pair of Ss had as their task to communicate a geometric pattern consisting of six equally sized rectangles. Only one member of the pair could see the pattern, and he had to communicate it verbally to a receiver. The two methods of communication were two-way communication and communication based on a rule stated by Carl Rogers, a further refinement of two-way communication. Four levels of interpersonal acceptance or mutuality were employed: true friends, contrived friends, contrived opposites, and a control group. The time required for the task, confidence of the pair in their degree of accuracy, and actual

accuracy were utilized to gather information concerning the effectiveness of communication and also Ss reactions, via a post-meeting questionnaire, to the task and each other.

The results did not support the hypotheses that effectiveness would increase with the level of interpersonal acceptance or with the method providing increasing amounts of feedback to the sender of the message from the receiver. There was a tendency for Rogers' rule to require more time than two-way communication. Since interaction between Ss and method was manifested for the item concerning knowledge of the other person, possibly, accuracy was confounded. The questionnaire indicated that the manipulation of the level of interpersonal mutuality was successful.

For further research on effectiveness of communication it was suggested that the specific task should be varied to measure the particular type of communication employed. It is not felt that a task such as the one used in this study is appropriate to assessing communication of feelings or acceptance.

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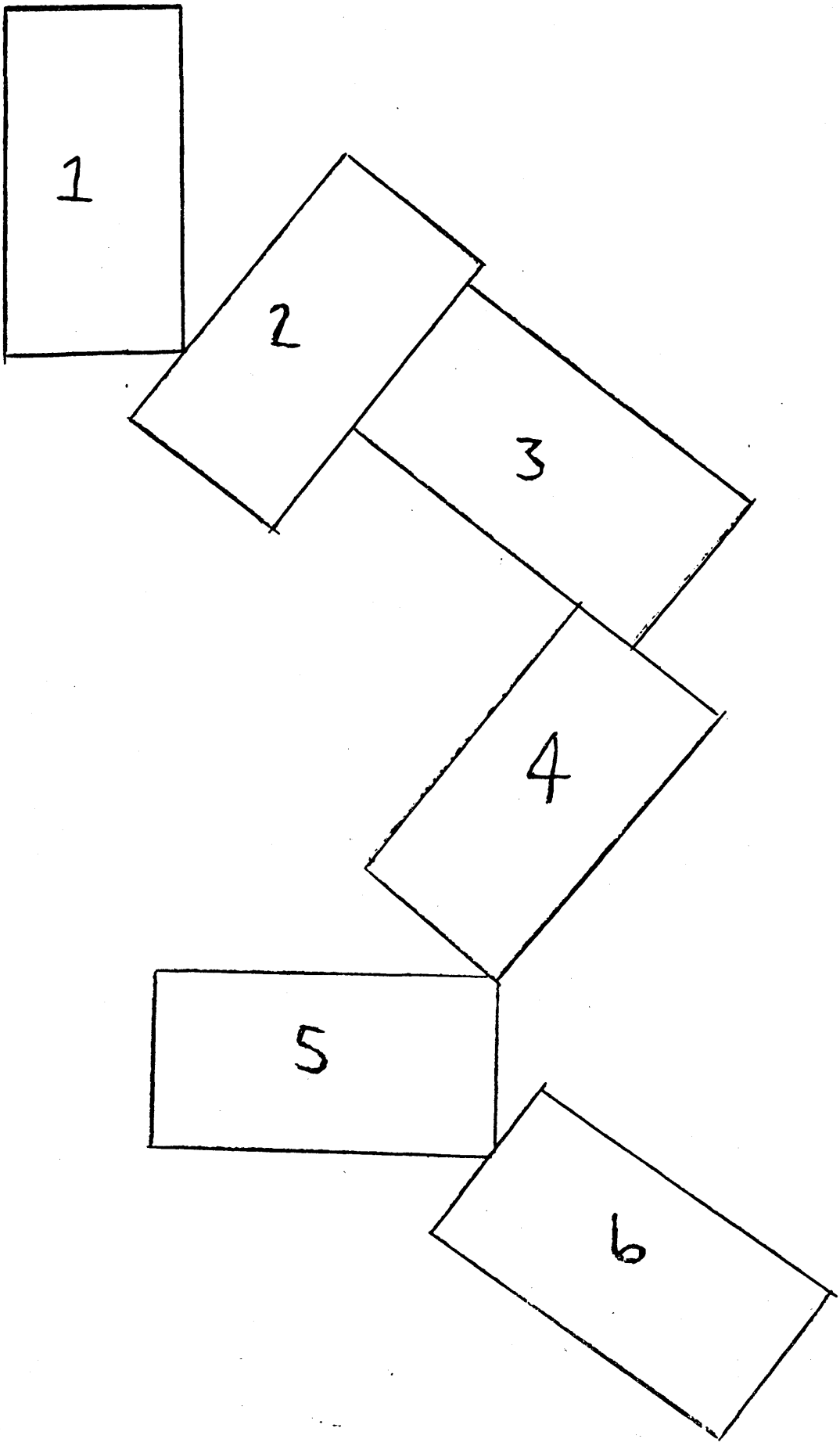
A P P E N D I X A

OSCHETRIC PATTERN FOR COMMUNICATION TASK


1
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6

A P P E N D I X B

QUESTIONNAIRE FOR THE EVALUATION OF EXPERIMENTAL MANIPULATION FOR ALL SUBJECTS

Your Name _____

INTERPERSONAL REACTION SCALE

1. Estimation of Accuracy: How many of the 6 rectangles do you think (if you were the receiver) got correct? (if you were the sender, how many do you think the receiver got correct?)--(check one).

_____ 0	_____ 3	_____ 6
_____ 1	_____ 4	
_____ 2	_____ 5	

2. Intelligence (check one)

_____ I believe that this person is very much above average in intelligence.
_____ I believe that this person is above average in intelligence.
_____ I believe that this person is slightly above average in intelligence.
_____ I believe that this person is average in intelligence.
_____ I believe that this person is slightly below average in intelligence.
_____ I believe that this person is below average in intelligence.
_____ I believe that this person is very much below average in intelligence.

3. Adjustment (check one)

_____ I believe that this person is extremely maladjusted.
_____ I believe that this person is maladjusted.
_____ I believe that this person is maladjusted to a slight degree.
_____ I believe that this person is neither particularly maladjusted nor particularly well adjusted.
_____ I believe that this person is well adjusted to a slight degree.
_____ I believe that this person is extremely well adjusted.

4. Personal Feelings (check one)

_____ I feel that I would probably like this person very much.
_____ I feel that I would probably like this person.
_____ I feel that I would probably like this person to a slight detree.
_____ I feel that I would probably neither particularly like nor particularly dislike this person.
_____ I feel that I would probably dislike this person to a slight degree.
_____ I feel that I would probably dislike this person.
_____ I feel that I would probably dislike this person very much.

5. Working Together in an Experiment of This Type in the Future (check one)

_____ I believe that I would very much dislike working with this person in an experiment again.
_____ I believe that I would dislike working with this person in an experiment again.
_____ I believe that I would dislike working with this person in an experiment, again, to a slight degree.
_____ I believe that I would neither particularly dislike nor particularly enjoy working with this person in an experiment, again.
_____ I believe that I would enjoy working with this person in an experiment, again, to a slight degree.
_____ I believe that I would enjoy working with this person in an experiment again.
_____ I believe that I would very much enjoy working with this person in an experiment again.

6. Knowledge of Other Person (check one)

_____ I feel that I know this person very well
_____ I feel that I know this person quite well.
_____ I feel that I know this person fairly well.
_____ I feel that I know this person only casually well.
_____ Although I have seen this person often, we have had little opportunity to get to know each other.
_____ Although I have seen this person before, we are practically strangers to one another.
_____ I have never seen this person before today's meeting.

7. Assistance in the Communication Task

_____ I feel that this person was no help at all in the communication task.
_____ I feel that this person was practically no help in the communication task.
_____ I feel that this person was more of a hindrance than a help in the communication task.
_____ I feel that this person was neither a hindrance nor a help in the communication task.
_____ I feel that this person helped slightly in the communication task.
_____ I feel that this person helped considerably in the communication task.
_____ I feel that this person was extremely helpful in the communication task.

8. Personal Satisfaction (check one)

_____ I felt completely satisfied with the amount and type of my participation during the task period.
_____ I felt quite satisfied with the amount and type of my participation during the task period.
_____ I felt moderately satisfied with the amount and type of my participation during the task period.
_____ I felt neither very satisfied nor very dissatisfied with the amount and type of my participation during the task period.
_____ I felt moderately dissatisfied with the amount and type of participation during the task period.
_____ I felt quite dissatisfied with the amount and type of my participation during the task period.
_____ I felt completely dissatisfied with the amount and type of participation during the task period.

9. Personal Responsibility (check one)

_____ I felt absolutely no responsibility for the end product of the task.
_____ I felt almost no responsibility for the end product of the task.
_____ I felt moderately irresponsible for the end product of the task.
_____ I felt neither responsible nor irresponsible for the end product of the task.
_____ I felt moderately responsible for the end product of the task.
_____ I felt quite responsible for the end product of the task.
_____ I felt completely responsible for the end product of the task.

10. Interest in Communication Task (check one)

_____ I feel that this task is extremely interesting.
_____ I feel that this task is quite interesting.
_____ I feel that this task is moderately interesting.
_____ I feel that this task is neither very interesting nor very dull or boring.
_____ I feel that this task is moderately dull or boring.
_____ I feel that this task is quite dull or boring.
_____ I feel that this task is extremely dull or boring.

11. Check two (2) adjectives among the list below that best describes the feelings you experienced during the communication task.

____ Rewarding	____ Cooperative	____ Sluggish
____ Confusing	____ Playful	____ Complex
____ Frustrating	____ Stupid	____ Enjoyable
____ Anxious	____ Interesting	____ Simple
____ Clear	____ Competitive	____ Tiring

A P P E N D I X C

QUESTIONNAIRE FOR THE EVALUATION OF EXPERIMENTAL MANIPULATION FOR TRUE FRIENDS

Your Name _____

INTERPERSONAL INFORMATION SCALE

1. Length of time that this person and I have known each other:

_____ Over 6 years.
_____ Over 4 years.
_____ Over 2 years.
_____ About 2 years.
_____ About 1-2 years.
_____ Less than 1 year.
_____ Less than 6 months.

2. Degree of Friendship

_____ This person is my closest friend.
_____ This person is probably my closest friend.
_____ This person is among my closest friends.
_____ This person is not a close friend, but we are friends nevertheless.
_____ This person is a casual friend.
_____ This person and I may become better friends, but the relationship at the present seems to be based on common interests.
_____ This person is not necessarily my friend, but we often do things together.

3. Communication

_____ This person and I hardly communicate with each other at all.
_____ This person and I communicate with each other with much difficulty.
_____ This person and I communicate with each other with some difficulty.
_____ This person and I neither communicate well nor poorly with each other.
_____ This person and I communicate with each other fairly well.
_____ This person and I communicate with each other quite well.
_____ This person and I communicate with each other extremely well.

4. Activities

_____ This person and I do most things together.
_____ This person and I do many things together.
_____ This person and I do some things together.
_____ This person and I only do things together with others.
_____ This person and I seldom do things together.
_____ This person and I almost never do things together.
_____ This person and I never do things together.

5. Mutuality

_____ This person and I do not feel the same way about anything.
_____ This person and I almost never feel the same way about things.
_____ This person and I seldom feel the same way about things.
_____ This person and I feel the same way about some things but very different about other things.
_____ This person and I feel the same way about many things.
_____ This person and I feel the same way about most things.
_____ This person and I feel the same way about practically everything.

6. Degree of Mutual Understanding

_____ I believe that we understand each other's feelings exceptionally well.
_____ I believe that we understand each other's feelings well.
_____ I believe that we understand each other's feelings fairly well.
_____ I believe that we understand each other's feelings neither very well nor very poorly.
_____ I believe that we have a tendency to misunderstand each other's feelings.
_____ I believe that we generally misunderstand each other's feelings.
_____ I believe that we do not understand each other's feelings at all.

VITA

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