

ASSESSING THE THERAPEUTIC EFFECTIVENESS  
OF AN OPERANT GROUP REINFORCEMENT  
PARADIGM IN CONJUNCTION WITH  
DIRECTIVE, NON-DIRECTIVE  
AND NON-THERAPIST  
CONDITIONS

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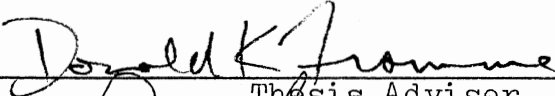
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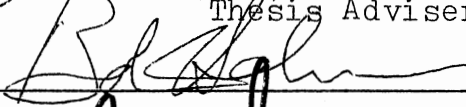
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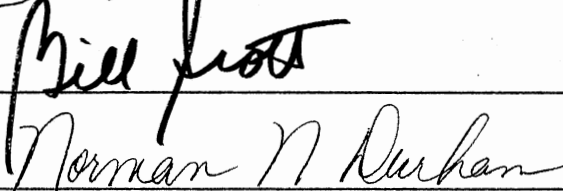


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## CHAPTER I

### LITERATURE REVIEW

#### The Conditioning of Verbal Responses in Psychotherapy - A Behavioral Approach

Traditionally, verbal psychotherapy has seldom been conceptualized as a process of verbal conditioning. Carl Rogers (1951, 1957), for example, argued that in order to be effective, the therapist must respond, apparently nonselectively, to the client's utterances with empathy and warmth. However, Truax (1971) analyzed a single long term successful case handled by Rogers and found that a small set of verbal response classes were selectively reinforced by Rogers' empathic interventions. Specifically, he found that five classes of client verbalizations were selectively reinforced. Four of these five increased over time in therapy and three other classes, not selectively reinforced, did not increase. As a result of such studies by Truax and others, there has been an increasing interest in verbal reinforcement techniques applied in therapeutic interactions.



The efficacy of verbal conditioning in non-therapeutic situations has been demonstrated in many studies beginning with the work of Greenspoon (1954) who asked his subjects to "say all the words you can think of" and then reinforced only nouns with the utterance "um hmm". The "um hmm" served as a generalized reinforcer to strengthen the target response. In subsequent studies a great variety of response classes have been targeted for reinforcement: from very specific types of verbalizations, such as words denoting persons, to broader units like expressions of feelings or attitudes. Response classes relevant to verbal psychotherapy have been conditioned in quasi-therapeutic settings. These response classes include self-references (Rogers, 1960; Dicken and Fordham, 1967; Phelan, Tang, and Hekmat, 1967; Kennedy and Zimmer, 1968; Powell, 1968; Myrick, 1969; and Ince, 1970), affect words or statements (Ullmann, Krasner, and Collins, 1961; Ullmann, Krasner, and Gelfand, 1963; and Williams and Blanton, 1968), affective self-references (Salzinger and Pisoni, 1960; Merbaum and Southwell, 1963; Hoffnung, 1969; and Hekmat, 1971), and independence and affection statements (Moos, 1963).

Several studies have successfully used reinforcement techniques in a therapeutic group setting (e.g. Kruger, 1971; Liberman, 1970, 1971; Hauserman, Zweback,

and Plotkin, 1972; and Zwebach, 1976). Zwebach (1976) found, as did others, that the content of verbalizations in group therapy could be controlled through use of concrete reinforcement. Although most such studies have used a therapist as the reinforcing agent, this is not an essential feature. For example, Fromme, Whisenant, Susky, and Tedesco (1974), found that by using remote-controlled, mechanical feedback as an operant reinforcement, they could maintain indirect control of the group process, while dispensing with the therapist. Most operant group studies have concentrated on relatively simple verbal behaviors such as verbal initiations (Hastorf, 1965; Hauserman, Zwebach, and Plotkin, 1972), expressions of concern (Lieberman, 1970, 1971), order of speaking (Levin and Shapiro, 1962), giving opinions (Oakes, 1962), and personal or group references (Dinoff, Harner, Kuspiewski, Rickard, and Timmons, 1960). But Fromme et al. sought to replicate more closely the therapeutic group process by conceptualizing the desired responses in terms of a limited set of verbalizations. They relied heavily upon Yalom (1970) and Truax and Carkhuff (1967), in the selection of these verbal response classes. Yalom suggested that in order for group therapy to be a corrective emotional experience, the group members must express their feelings toward the others in the group as these feelings arise ("here and

now"). Further, he found it was necessary that group members provide feedback and consensual validation for each other so that they could test the appropriateness of their behavior. Finally, Yalom stated that group members had to attempt to understand each other's actions and feelings ("empathy").

Truax and Carkhuff amassed much support for the contention that interactions characterized by empathy, nonpossessive warmth, and genuineness are the most significant factors related to client improvement in both individual and group psychotherapy. With these factors in mind, Fromme et al. (1974) sought to use the techniques of verbal conditioning in a group setting to enhance the interpersonal interaction process. Five observable classes of verbal responses were selected that could be easily and reliably judged. These included "here and now" expressions of feeling, giving and asking for feedback, and the use of two categories of empathy statements. Four person groups of college students were instructed to engage in interpersonal interaction according to these five categories. These instructions were considerably detailed, and a summary of the response categories was listed on an index card in front of each subject as well. Whenever a subject said something that corresponded to one of the

reinforceable categories his counter was advanced one digit. The counter made an audible click so the other group members could learn vicariously what was expected from them. If three minutes elapsed in which no one in the group got a click, all four red lights momentarily flashed on. If one member fell behind the person having accumulated the greatest total of reinforceable responses, then the light of that person who was behind was turned on until he caught up. The groups were given the same instructions and were observed for the same period of time. A tally of the number of reinforceable responses was made during observation of the instructions-only control groups and compared with the data from the experimental (instructions plus reinforcement) groups. Results over one session for each group indicated as predicted that the experimental groups with the reinforcement apparatus present did emit significantly more of the desired responses: an average of 9.75 per person in a one hour session. In fact, the subjects in the control condition emitted scarcely any responses that would have been reinforceable, 0.85 per person. A test of the reliability of the response categories yielded an index of 93% interjudge agreement, suggesting that these categories were reliably judged. In a partial replication of this study, Fromme and Close

(1974) found similar results adding a warm-up procedure to the instructions. Groups with the feedback apparatus averaged 10.04 responses per person; groups without feedback averaged 2.58. The present study is an outgrowth of these two, and employs Fromme's operant group paradigm, with a few minor modifications (see Methodology section).

### Therapist Modality

The two kinds of therapist styles used in this study, role modeling (RM) and direct elicitation (DE), were selected for experimental comparison on the basis of investigations by Danskin and Robinson (1954), Porter (1943), and Gordon (1957), which indicated that they reflected a basic split among schools of psychotherapy. Although several studies had been undertaken to determine differences of therapeutic outcome stemming from directive and non-directive approaches, there appeared to be a lack of agreement in operationally defining these techniques. For this reason, Gordon (1957) argued for the importance of standardization and clarification of important therapist variables. The present study attempted this through the use of clearly defined operationalized therapist variables.

To date, the closest approximations to the

definitions of therapist style used in the present study are found in Gordon's (1957) article. He discusses "Leading" and "Following" therapist styles. "Leading" is defined as asking questions and making suggestions. "Following" is defined as restating, reflecting, and clarifying. It should be noted, however, that his operationalization of these were not very clear or concise. Gordon found that the "Leading" approach was more effective in lifting hypnotized clients repressions. It is unclear what implications this may have for other forms of psychotherapy.

There have been relatively few experimental findings about therapist style that relate to the present study, and they have suggested support for both directive and role modeling type therapist styles. Sermat (1973) found that a confederate communicating over a teletype machine to a subject could elicit more self-disclosing statements from the subject by asking direct questions than he could by disclosing himself to the subject. It should also be noted that self-disclosure by the confederate elicited more reciprocal self-disclosure in the subject than when the confederate did not self-disclose or ask questions.

In a group therapy setting of hospitalized patients, Abramczuk (1972) compared the effects on group interaction of the same therapist using a directive mode of

intervention for six months, and a non-directive mode for a subsequent six months. Abramczuk operationalized the directive approach loosely as consisting of active, authoritative and task-oriented therapist interventions; while the non-directive therapist style was described as passive and not task oriented. Although there was some fluctuation of membership, the group membership remained relatively constant over the twelve month period. Abramczuk found that under the directive style the patients become much more task oriented than under the non-directive condition. It is interesting that in the directive condition patients were more realistic in their discussions. This may have relevance for the present study, which was also a task-oriented group situation.

There is also evidence to support the therapeutic efficacy of the non-directive, role modeling approach. In a well-known article, Truax and Carkhuff (1967) have gathered a great deal of support for the contention that interactions characterized by empathy, nonpossessive warmth, and genuineness are the most significant factors related to client improvement in either individual or group psychotherapy. Oden (1974) made an impassioned argument for the value of empathy in psychotherapy. He believed a layman who is significantly empathic in interpersonal interaction would probably be a much better

therapist than a professional clinician who didn't interact empathically. It is likely then that in the present study Oden would predict a better therapeutic outcome from the role-modeling therapist conditions, since the role-modeling therapists would be using empathy, while the direct elicitation therapists would not. Waskow (1967) reported that therapists who selectively reinforce client's content expressions, as opposed to feeling expressions, through the use of "mirroring" statements produced significant increase in the client's expression of content statements. "Mirroring" was defined as an attempt by the therapist to "mirror some aspect of what the subject had said, in her own words". This content response didn't fall within the response categories reinforced in the present study, but it is important to note that Waskow found that mirroring a feeling response did not increase its occurrence. This finding would seem not to be very clearly supportive of the efficacy of the role-modeling therapist style used in present study since the role-modeling therapist in present study does, among other things, mirror group member's feeling responses in an attempt to increase their frequency.

Of course, it was possible there would be no significant differences in outcome between the two



modalities used in the present study. Strupp (1957) found no important differences in therapeutic outcome in analyzing a case study comparing Roger's client-centered, empathic approach, and Wolberg's psychoanalytically oriented approach. However, while the client-centered approach is fairly analogous to the role modeling approach in the present study, it is recognized that a psychoanalytical therapeutic approach leaves much to be desired as an analogue for the direct elicitation modality of this study.

Finally, Rice (1973) determined that therapist's style was not a significant factor during the first few sessions and only became a factor after several sessions with the client. Since the present study utilized only one session per group, this could be an important limitation.

### The Present Study

The purpose of the current study was twofold:

1. To partially replicate the Fromme, Whisenant, Susky, and Tedesco (1974) study; and
2. To further investigate what appears to be a major psychotherapeutic issue, i.e., directive vs. non-directive therapeutic styles. Previous studies in the area have been shown to be problematic in two major

areas: (a) difficulty in effectively operationalizing these two styles, and (b) difficulty in adequately controlling for the impact of the therapist style on the subjects in terms of quality and quantity of therapist's interventions. The present study attempted to deal with these problems by clearly and unambiguously operationalizing the concepts of directive and non-directive therapist styles and by controlling for the quality and quantity of therapist interventions. For the purpose of current study, these two types of therapist modalities were labeled as direct elicitation (DE) and role modeling (RM). The RM therapist style is conceptually very similar to the Rogerian non-directive therapist style, and although the DE therapist style has no direct analogue in the literature, it has the advantage of both being conceptually similar to many directive styles of therapies and being methodologically very useful. As operationally defined in the present study, the two therapeutic modes have no overlap in terms of self-disclosure and directiveness/non-directiveness. The RM therapist is self-disclosing and completely non-directive, while the DE therapist is non self-disclosing and is completely directive.

## CHAPTER II

### METHOD

#### Subjects

Subjects were 36 male and 36 female undergraduate students enrolled in introductory level psychology courses at Oklahoma State University. They received extra course credit for participation in a "human relations" experiment.

#### Response Categories

As in previous research using the "operant group" paradigm (Fromme et al., 1974), each group was instructed to talk with each other for fifty minutes, using certain categories of statements designed to help them interact in "the here and now" (see Instructions section for full details). There were four of these categories and they were operationally defined as follows:

1. Feeling: Subject labels his own current affective state produced by interaction with other group members.

2. Empathy: Any attempt, successful or not, to

clarify the nature or source of another group member's current affective state.

3. Behavioral Observations: Subject tells another group member how he perceives his current behavior or body language.

4. Seeking Feedback: Subject seeks information regarding his own current behavior.

The Empathy 2 category used in the Fromme, Whisenant, Susky, and Tedesco (1974) study has been deleted here. After careful consideration it was decided that this category was not adequately reflective of empathy, but was instead an elicitation of Feeling category.

In the contextual sequence of interactions, only those statements that added new or additional information about ongoing processes or accompanying affective states were defined as scoreable.

Video tapes of two operant group sessions conducted during pilot work were used for a preliminary estimate of interjudge agreement on the presence or absence of the categories. Categorical distinctions were not made since the four categories were treated interchangeably throughout the experiment. Scoring units were defined as any non-interrupted complete thought or statement. The few instances of disagreement

between judges as to what constituted a scoreable unit were resolved in conference. Two judges then independently scored 693 units. Of this total, 181 were determined reinforceable. This total was compared with the record of statements actually reinforced by the experimenter. One hundred and seventy-five reinforcements were actually administered, of which five were later judged erroneous. The experimenter missed giving reinforcements in 15 cases for a ratio of 20 errors in 693 judgments, or a 97% level of interjudge agreement. This compared with a 96% level of agreement found in Fromme et al. (1974), using a similar procedure. It should be noted that missed reinforcements have the effect of introducing an intermittent schedule and were therefore not considered particularly serious.

#### Apparatus

Each group was seated with a male and female on either side of a rectangular table with the one-way mirror of an observation room at one end of the table. The experimenters were stationed behind the mirror in the observation room. Therapists sat at the end of the table opposite the mirror. Each group's conversation was monitored by the experimenters via remote speakers. Subjects were informed of these observations. The experimenters used a four channel relay control panel,

with push buttons operating digital counters, to record those instances where the experimenter judged that a group member's statement fit one of the reinforceable categories.

In the reinforcement conditions, a digital counter placed in front of each subject was also advanced simultaneously with the counters on the experimenter's control panel. This produced a click which was audible to all subjects. A red light attached to each subject's counter was also used to provide two types of discriminative cues: (a) all four lights were automatically flashed on by an interval timer whenever three minutes elapsed with no reinforcements being given the group, and (b) each light was individually switched on whenever any subject fell ten or more counts behind the subject with the highest count. Subjects were informed that when all four lights flashed on they were to change the topic since this was a signal that their conversation was not conducive to improving interpersonal communication. They were also informed that when one light was switched on in front of a person that either that person needed assistance in using the categories, or someone else in the group was dominating the conversation. (See Instructions section for full details). It was thought that this latter procedure, together with the

counters, would enhance the subject's motivation by encouraging a moderate amount of task-oriented competitiveness.

### Instructions

In order to clarify the task and to maximize motivation, the subjects in all conditions were given detailed instructions and a warm-up procedure. The warm-up procedure required each group member to use one of the categories in a "trial run" until the experimenter was sure the category was well understood by the subject. This procedure was similar to those used by Close (1974) and Duvall (1974).

Prior to the reinforced groups, subjects were given general instructions, a warm-up procedure, and instructions explaining the meaning and functions of the feedback apparatus.

A verbatim transcript of all instructions and the warm-up procedure can be found in Appendix B.

### Therapists

In both the DE therapist conditions and the RM conditions, the therapists intervened with four categories of responses per session, eight responses in each category, for a total of 32 interventions per fifty minute session. They were instructed to space the

interventions evenly throughout the session. The therapists' interventions were limited because of the results in the Fromme et al. (1974) study in which the therapist who was most successful in eliciting the desired responses intervened the fewest times, an average of 49 interventions per session. Each therapist kept a record of the number and category of his or her interventions on a check sheet during the sessions. (See Appendixes C and D). In the RM therapist conditions, the therapists intervened using the same four categories of responses that the subjects were asked to use: (a) feeling, (b) empathy, (c) behavioral observations, and (d) seeking feedback. In the DE therapist conditions, the therapists used the following four categories of interventions:

1. Feeling Request: The therapist requests a subject to describe what he is currently feeling.
2. Empathy Request: The therapist requests a subject to identify what he thinks another group member is currently feeling.
3. Behavioral Observation Request: The therapist requests a subject to describe his perception of another group member's current behavior.
4. Seeking Feedback Request: The therapist requests a subject to seek information concerning how some other group member perceives his behavior in the group.



## Dependent Variables

In addition to the number of reinforceable responses per condition, the present study utilized three other dependent variables. At the end of each session, each subject was given a ten item Elms Empathy Scale, a thirty item Jourard Self-Disclosure Index, and a four item group cohesion measure (see Appendixes E, F, and G).

## The Present Study

The present study centered around two major areas of interest. First, it was hoped that it would be a successful replication of the Fromme et al. (1974) study which found that groups receiving reinforcement produced significantly more of the desired verbal responses than those that did not receive reinforcement; and that therapists and reinforcement effects were both approximately equal in potency and were additive. Secondly, the current study hoped to determine which of the two therapist styles, RM or DE, would be most effective. Since the literature is ambiguous concerning the relative effectiveness of directive versus non-directive therapist styles, the experimenter did not hypothesize that either of the two styles (RM or DE) would produce better results.

It was hoped that the effectiveness of the various experimental conditions would be further reflected in

the three additional dependent variables mentioned above: the Jourard Self-Disclosure Questionnaire, the Elm's Empathy Scale, and the Group Cohesion Measure. Specifically, it was hypothesized that the reinforced groups would show significantly greater scores in self-disclosure, empathy, and group cohesiveness than the non-reinforced groups. Also, it was hypothesized that therapist led groups would likewise show significantly greater scores in these three areas than groups without a therapist. Of course, it was unclear which of the therapist conditions would produce better results in these areas.

## CHAPTER III

### RESULTS

To test for significant differences in the number of desired verbalizations emitted between the reinforced groups and the non-reinforced groups, a three by two completely randomized factorial design was employed. This same design was also used to test for significant differences in the production of desired verbalizations between the three therapist conditions: role modeling (RM), direct elicitation (DE), and no facilitator (NF).

The hypothesis that reinforced groups would emit significantly more of the desired therapeutic responses than the non-reinforced groups was confirmed with an  $F$  value of 25.35 ( $p < .0001$ ). Significant differences in the prediction of the desired responses were also found between groups in the three therapist conditions: RM, DE, and NF. This was confirmed with an  $F$  value of 33.54 ( $p < .0001$ ). Clearly then, the hypothesis that therapist presence would make a significant impact was confirmed. The  $F$  value for the interaction of the therapist condition by reinforcement condition was elevated, but not

significant:  $F=2.73$  ( $p<.07$ ). Results of the analysis are summarized in Table I.

TABLE I  
ANALYSIS OF VARIANCE OF EFFECT  
OF THE REINFORCEMENT AND  
THERAPIST CONDITIONS

Source	SS	df	MS	F	p
Therapist Condition	2522.53	2	1261.26	33.54	<.0001
Reinforcement Condition	953.39	1	953.39	25.35	<.0001
Interactions	205.03	2	102.51	2.73	<.07
Residual	2482.17	66	37.61	-	-
TOTAL	6163.11	71	86.80	-	-

Examination of Table II further clarifies these results. Table II indicates the average number of responses per person in each of the six experimental conditions.

It is evident from Table II that the groups with a therapist produced approximately three times as many

reinforceable responses as the groups without a therapist. A two-tailed  $t$  test was calculated and significance was confirmed ( $t=7.47$ ,  $p<.05$ ).

TABLE II

MEAN FREQUENCY OF REINFORCEABLE  
RESPONSES PER SUBJECT PER  
EXPERIMENTAL CONDITION

	R	NR	
RM	16	13	14.5
DE	26	14.8	20.4
NF	9.8	2.2	6.0
	17.3	10.0	

with therapist  
17.5

without therapist  
6.0

Also, the groups utilizing the reinforcement paradigm produced almost twice as many reinforceable responses as the groups that did not utilize the paradigm.

As mentioned earlier, an  $F$  value of 25.35 ( $p < .0001$ ) was obtained.

Further examination reveals that the DE therapist groups produced about 1.5 times as many reinforceable responses as the RM therapist groups; and the RM therapist groups produced more than twice as many responses as the NF (no facilitator) groups. To test for significance between the RM and DE therapist conditions, a two-tailed  $t$  test was undertaken and found to be significant ( $t=3.33$ ,  $p < .05$ ). Likewise, statistical significance between the RM condition and the NF condition was obtained using the same procedure ( $t=4.8$ ,  $p < .05$ ).

Table II also allows the reader to examine the DE and RM therapist modalities interacting with the presence and absence of the reinforcement paradigm. The DE and RM therapist modes in the non-reinforced (NR) condition were found to be approximately equal in effectiveness. Also, there appears to be an additive effect of the DE mode in combination with the reinforcement paradigm. However, there appears to be virtually no differences in therapeutic effectiveness between the RM reinforced condition and the RM non-reinforced condition.

At first, by examination of only the mean of the three groups in the RM-R condition (16), it might be

speculated that the RM therapist style is somehow not compatible with the reinforcement paradigm; however, this may be a misleading picture. Table III reveals clear differences between the results produced by the male therapist when contrasted with the female therapist under the RM-R condition.

TABLE III

EXAMINATION OF INDIVIDUAL THERAPIST IMPACT  
ON MEAN FREQUENCY OF REINFORCEABLE  
RESPONSES PER SUBJECT IN THE  
RM-R AND RM-NR CONDITIONS

		R	NR
RM	Male therapist	27.8	12.2
	Female therapist <sub>1</sub>	9.5	12.8
	Female therapist <sub>2</sub>	10.7	14
		16	13

By looking at the three group means within condition RM-R, one sees that one group, led by the male therapist,

averaged 27.8 responses per member while the two other groups, led by females, averaged only 9.5 and 10.7 responses per member. Furthermore, both female therapist groups produced an identical 3.3 reinforceable responses per member less in the RM-R condition than in the RM-NR condition. This is an interesting finding and will be discussed further in the next chapter. Even though these individual therapist effects are present in the RM-R condition, they are absent in the other conditions of the experiment. To rule out overall individual therapist effects, a three by two by two randomized block factorial analysis of variance was carried out. No significant individual therapist effects were found, but a significant therapist condition x reinforcement effect was obtained using this approach ( $F=4.50$ ,  $p<.038$ ). (See Appendix H, Table VIII, for analysis of variance table.) So, even though no significant individual therapist effects were found, the magnitude of the reinforcement x therapist condition interaction effect (in both the earlier analysis and the present one) was undoubtedly the result of the clear therapist sex differences obtained in the RM-R condition.

A three by two completely randomized factorial design was employed to test for significant post differences in the Jourard measure of self-disclosure,



the Elm's Empathy Scale, and a group cohesion measure under the various experimental conditions. No significant effects were found with any of these measures. Therefore, the hypothesis that the reinforced groups would show significantly greater scores in self-disclosure, empathy, and cohesion, than the non-reinforced groups in post testing was not upheld. Also, the hypothesis that therapist led groups would likewise show significantly greater scores in these three measures than the non-therapist led groups in post testing was not confirmed.

## CHAPTER IV

### DISCUSSION

The present study has clearly been a successful replication of the Fromme et al. (1974) study, but has only partially answered the question as to whether a directive or a non-directive therapist style is the more effective. It has also raised a new issue: does the sex of the therapist have unique impact on therapeutic outcome under certain conditions? If so, how and why?

Results obtained from the Fromme et al. (1974) study and the present study are remarkably similar. (See Table IV, Appendix H, for a summary of the Fromme et al. findings). In the present study, therapist led groups produced approximately three times as many reinforceable responses as unled groups. This finding is very similar to those obtained by Fromme et al. (1974). Also, reinforced groups in the present study produced almost twice as many reinforceable responses as the unreinforced groups. This is also similar to findings obtained by Fromme et al. (1974). These findings appear to make a solid case for the efficacy of the operant

group paradigm when used with college student populations, and further to confirm the value of a separate contribution by therapists beyond the effects of reinforcement.

Additionally, the present study found an additive effect when the direct elicitation therapist mode was combined with the reinforcement paradigm. This replicates the Fromme et al. (1974) finding that the therapist and reinforcement conditions combined for an additive effect on group output of desired affective verbalizations. However, there was apparently no such additive effect in the reinforced role modeling condition of the present experiment although these findings appear to be confounded by the individual therapist effects mentioned below. Perhaps this implies that the therapists in the Fromme et al. (1974) study were really directive in their therapeutic style, although this information cannot be retroactively obtained.

Although the direct elicitation therapist style proved to be somewhat more effective than the role modeling style overall, this difference is attributable only to the differential effectiveness of the two styles in the reinforced condition. The two styles produced a similar quantity of reinforced responses in the non-reinforced conditions. At first, looking only at the mean (16) of the three groups in the reinforced role

modeling condition, one might speculate that the role-modeling therapist style is somehow not as compatible with the reinforcement paradigm as is the direct elicitation style. However, by looking at the results for individual therapists within the reinforced role modeling condition, we find a tremendous difference in productivity of reinforceable responses between the male therapist and the two female therapists. The male therapist was just as effective as were all three therapists in the reinforced direct elicitation condition, but the subjects in the female therapists conditions produced remarkably few reinforceable responses in this reinforced role modeling condition (see Appendix H, Table V). So, clearly the reason the role modeling therapist style was found to be somewhat inferior to the direct elicitation style was the large disparity in productivity of subjects between the male and female therapists groups in the RM-R condition of the experiment. There was very little variation in production of reinforceable responses between individual therapists in the three other therapist conditions (see Appendix H, Table V). So what could account for this unexpected finding? Of course, random error might be the explanation, but since the differences are so large and consistent across the female therapists, this seems unlikely.

The following tentative explanation is offered. Perhaps subjects tended to ignore the female therapists as role models when the reinforcement apparatus was present, but did not do so with a male as role model. This could be attributable to a general societal attitude that males are seen as stronger role models in leadership positions than females. Since the female therapists did as well as the male therapists in the non-reinforced condition, perhaps when there was nothing else to guide the subjects they seriously paid attention to the females as role models. But, as mentioned above, when the reinforcement apparatus was present subjects may have discounted the female therapists. This discounting of the therapist could have substantially reduced the subjects production of reinforceable responses. Whatever the reasons for this anomalous finding, replication would seem essential.

Another question to be asked is: why did all post testing fail to attain statistical significance? There are several possible explanations for this. It is possible that the Elm's Empathy Scale and the group cohesion measure were not sensitive enough to have detected real changes. This same criticism might also be made of the Jourard Self-Disclosure Questionnaire, although Smallwood (1975) did find that hospitalized

schizophrenics did show significant increases in openness as measured by this instrument. So, perhaps the college students used as subjects in the present study were already fairly open going into the experiment and had less room for improvement than the more pathological subjects in Smallwood's study. This would be an interesting area of replication and further exploration. Also, one session may not have been enough time for significant changes in the areas measured by the tests to have occurred; indeed, the increased openness of Smallwood's schizophrenics was registered after five sessions.

Finally, there are two other interesting observations that deserve comment. By looking at Appendix H, Tables VI and VII, the reader can see that the groups with the highest output of reinforceable responses appear to have much less intragroup variability than those with lesser output. It may be that at the higher levels of group productivity of reinforceable responses, the reinforcement apparatus serves to reduce inter-subject output differences. Perhaps the red lights play an important role here, or it is possible that group members were role modeling each other. It may also be that when group output is so high, the group is so cohesive and cooperative that every group member is virtually equally involved. This is clearly an area for further

investigation. A second interesting observation is that it was the experimenter's impression that the role modeling and direct elicitation groups appeared to take on a somewhat different character. It seemed as if the direct elicitation groups peaked early in the session and lost momentum toward the end of the session. If these observations are indeed accurate, then it is possible the role modeling groups might surpass the direct elicitation groups in production of desired responses if more than one session were held.

## CHAPTER V

### CONCLUSIONS

The present study has further confirmed the efficacy of Fromme's operant group paradigm. It seems unquestionable at this point that this paradigm is effective in eliciting therapeutic verbalizations from college student populations. Only one study has attempted to use this paradigm with other populations; Smallwood (1975) found it to be effective with psychiatric in-patients. Future research should continue to test the value of Fromme's paradigm with various populations.

The current study also clearly supports the value of having a therapist present in a group therapy situation. As Fromme et al. (1974) found, therapists make a significant impact on group productivity. At a time when the value of therapists is being widely investigated, the present study empirically demonstrates the importance of a therapists contribution to therapeutic productivity in a therapeutic analogue paradigm.

Future research might use the operant group



paradigm to continue to investigate the therapeutic usefulness of different therapeutic modes. Although the comparative value of directive versus non-directive therapist styles remains an open question, this issue is certainly worthy of continued investigation, perhaps by operationally defining the therapist styles differently than was done in the present study. Also, the different therapist styles should be tested with different subject populations to see if one style works more effectively with certain categories of subjects than other styles. For instance, would timid and passive participants respond better to a non-directive therapist style? Likewise, would outgoing and assertive participants respond better to a directive therapist style? What about sex differences of the participants? Would one sex respond better to a particular therapist style?

Since the present study found differential therapist sex effects in the reinforced role modeling condition, future research should attempt to replicate these results, especially since these results were unexpected.

Another important area of future research should be the comparative effect of directive versus non-directive therapist styles over several sessions. As discussed in Chapter IV, these results might look very different than those based on only one session, and since most group therapy takes place over a number of sessions, this

area of research seems essential.

Still, another interesting area of future investigation might focus on what appears to be a decrease in variability of intragroup scores in the higher output groups in the present study. This convergence effect could be related to any number of behavioral and therapeutic factors worthy of further investigation.

Also, the present study appears to have potential for the training of therapists. The three therapists in the study reported that they learned to control their therapeutic interventions much more effectively than they previously had been able to do, that they gained much insight into their natural tendencies while in a therapeutic role, and that their sense of therapeutic timing improved while participating in the study.

Finally, the experimenter recognizes the present paradigm is an analogue to therapy and that the subjects in the study were not seeking psychotherapy. Even so, all participants were voluntary and knew that they were going to be required to interact with others in a fairly intimate manner in order to improve their interpersonal skills. This would seem quite analogous to many therapeutic group situations. It is felt that the limitations on generalizability of the present study are more than compensated for by its experimental rigor.

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## APPENDIX A

### REINFORCEABLE RESPONSES

1. Feeling: An expression of feeling. For example:
  - "I feel nervous."
  - "I am excited."
  - "You made me angry."
  - "I'm glad you're in the group."
  - "You're attractive to me."
  
2. Empathy: Clarify for another group member what you think he feels. For example:
  - "You're feeling threatened."
  - "You look nervous."
  - "Are you bored?"
  - "You're feeling good."
  
3. Behavioral Observations: Commenting on another group member's body language or behavior. The comment must be made to that member.  
For example:
  - "You seem to be avoiding eye contact with me."
  - "You always smile when someone asks you a question."
  - "You haven't said much in the group."
  - "You seem to be acting very self-conscious."
  
4. Seeking Feedback: Asking another group member to describe your behavior, appearance, or how he feels about you.  
For example:
  - "Do I make you feel uncomfortable?"
  - "Do you like me?"
  - "Do I seem angry to you?"
  - "What do you think of me?"



## APPENDIX B

### INSTRUCTIONS

#### Instructions for all Groups

The purpose of this experiment is to help you learn a method of communicating with each other on a personal basis, and to help us to better understand the nature of communication. This method involves sharing your feelings and observations about each other arising from the current situation, the "here and now"--here in this room and now during these fifty minutes that you are together.

In order to help you more clearly understand what we are looking for, we have devised four categories of statements which are helpful in promoting open personal communications. (At this time the experimenter points to the cards in front of each subject.) These are types of statements which have been shown to be effective in helping people get to know each other on a more personal basis, and we are asking you to use these categories with each other during the next fifty minutes. I will read them aloud and you can follow along with me.

1. Feeling: This is any expression of your own feelings. Expressing feelings helps other people to know when to continue doing things you like and to discontinue doing things that annoy you. Some examples of feeling statements are:

"I feel nervous"  
"I am excited"  
"You made me angry"  
"I'm glad you're in the group"  
"You're attractive to me"

2. Empathy: This is clarifying for another group member what you think he feels; in other words, putting yourself in someone else's shoes. Giving someone else your empathy shows that you care enough to take the time to understand. Some examples of this are:

"It must be hard for you to say that"  
"Are you feeling embarrassed?"  
"You seem so happy"  
"You must feel uncomfortable"  
"You seem bored"

3. Behavioral Observations: This is commenting on another group member's body language or behavior. Pointing out observations about a person's behavior clarifies for that person behaviors which he may or may not wish to continue. Examples of this are:

"You seem to be avoiding eye contact with me"  
"You always smile when someone asks you a question"  
"You haven't said much in the group"  
"You seem to be acting very self-conscious"

4. Seeking Feedback: This is asking another group

member to describe your behavior, appearance, or how he feels about you. Many misconceptions between people could be avoided if they would check out what another person thinks or feels about them. Some examples of this type of question are:

"Do I make you feel uncomfortable?"

"Do you like me?"

"Do I seem angry to you?"

"What do you think of me?"

The examples on the sheet in front of you are only a few samples of the kinds of statements that can be made in each category, and please don't limit yourself to these statements but use them as a guide. It would be possible to say nearly anything just to fit the categories, or to limit yourself only to the examples, but this isn't what we want. Each new statement should add new information. These categories become meaningful only when they are genuine, so really put yourself into this as much as possible.

You can see that all these categories refer to the current situation: the interaction that will take place among you in this room. While you may have some very real feelings about other people or situations outside this group, this is not what we're looking for. Also, I realize it is impossible to use these categories at all times, but I hope you will use them as frequently as possible.

What I am asking you to do is interact with each other using these categories as much as possible during the next fifty minutes. I will monitor the group through the one-way mirror and the microphone. What you say will not be recorded and will be kept confidential.

#### Instructions for Reinforced Groups

Whenever someone makes a statement fitting any one of these categories, and is not merely a repeat of someone else's statement, I will activate the counter in front of that person. It makes a loud click which will let you know that you are in fact using these categories in your interaction. The counter registers your total and if anyone falls ten points behind the leader, the red light on his counter will be turned on. This will be a sign that either this person may need assistance, or that someone is dominating the conversation. If no one gets a click for three minutes, all lights will flash on; and they will do so every three-minute period until a click is registered. This will be a sign that the group as a whole is not using the categories and that you should change the nature of your interaction.

Finally, I realize that the apparatus makes for an artificial situation, but it's the least distracting, nondisruptive way we have found to give you information concerning your interactions while those interactions

are taking place.

#### Warm-Up Procedure

To make sure you understand these categories, I am going to give you a warm-up exercise. To get you used to communicating directly with each other, I would like the two of you on this side of the table and the two of you over here to look into each other's eyes for ten seconds when I say "begin". Ready, begin.

(ten seconds elapses)

Now I'm going to ask each of you to use one of the response categories to see if you understand them.

"John, can you give a feeling response?" "I was nervous when I was driving up here." "That's a feeling but it is not in the here-and-now. If you had said 'I'm nervous', you would have been correct."

"\_\_\_\_\_, would you give an empathy response to someone in the group?"

"\_\_\_\_\_, would you give a behavioral observation to someone in the group?"

"\_\_\_\_\_, would you seek feedback from someone in the group?"

Previous participants have found this experience enjoyable, but if you feel you must leave the group, please feel free to do so. We will stop at \_\_\_\_\_

APPENDIX C

THERAPIST INTERVENTION GUIDE: RM

Feeling

--	--	--	--	--	--	--	--	--	--

I'm glad you're in the group.

I like your \_\_\_\_\_

I feel \_\_\_\_\_ I am \_\_\_\_\_

Embarrassed	Happy	Frightened
Threatened	Excited	Glad
Anxious	Proud	Depressed
Good	Nervous	Confident

Empathy

--	--	--	--	--	--	--	--	--	--

You feel \_\_\_\_\_ You are \_\_\_\_\_

It feels \_\_\_\_\_ You look \_\_\_\_\_

You seem to feel \_\_\_\_\_

Are you \_\_\_? You're acting \_\_\_

Behavioral  
Observation

--	--	--	--	--	--	--	--	--	--

Any feedback not concerning emotions.

You seem to be \_\_\_\_\_ Avoiding eye contact.

Do you realize you're \_\_\_\_\_? Tired. Aggressive.

Seeking  
Feedback

--	--	--	--	--	--	--	--	--	--

Emotion or behavior or appearance.

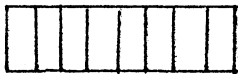


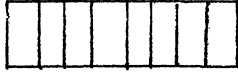
Do I seem \_\_\_\_\_ to you?

What do you think of me?

How do I strike you?

APPENDIX D

THERAPIST INTERVENTION GUIDE: DE

Eliciting Feeling		What are you <u>experiencing</u> right now?
		Could you bring that into the present? How are you <u>feeling</u> now?
		Where are you now?
Eliciting Empathy		Can you <u>put</u> yourself in Jim's shoes?
		How would you <u>feel</u> if the group pressured you?
		What do you think Jane is experiencing?
Elicitation of Behavioral Observation		What's Jim <u>doing</u> right now?
		What is Mary <u>saying</u> ?
		How would you describe Joe's body language?
Elicitation of Request for Feedback		Could you ask Jane how you're affecting her?
		Why don't you ask Fred to tell you what he <u>thinks</u> of you?
		Would you ask Jane if she <u>likes</u> you?

APPENDIX E

JOURARD SELF-DISCLOSURE QUESTIONNAIRE

Mark the appropriate rating on your card by filling in the appropriate number.

Rating

- 0 would tell this group of people nothing about this aspect of me or would lie or misrepresent myself
- 1 would talk in general terms about this item to this group
- 2 would talk in full and complete detail about this item to this group

1. What I think and feel about religion; my personal religious views. \_\_\_\_\_
2. My views on the present government--the president, government, policies, etc. \_\_\_\_\_
3. My personal views on sexual morality - how I feel that I and others ought to behave in sexual matters. \_\_\_\_\_
4. The things that I regard as desirable for a man to be - what I look for in a man. \_\_\_\_\_
5. My favorite reading matter. \_\_\_\_\_
6. The style of house, and the kinds of furnishings that I like best. \_\_\_\_\_
7. The kind of part, or social gathering that I like best, and the kind that would bore me, or that I wouldn't enjoy. \_\_\_\_\_
8. My favorite ways of spending spare time, e.g., hunting, reading, cards, sports events, parties, dancing, etc. \_\_\_\_\_



9. What I would appreciate most for a present. \_\_\_\_\_
10. What I find to be the worst pressures and strains in my work. \_\_\_\_\_
11. What I feel are my shortcomings and handicaps that prevent me from getting further ahead in my work. \_\_\_\_\_
12. What I feel are my special strong points and qualifications for my work. \_\_\_\_\_
13. My ambitions and goals in my work. \_\_\_\_\_
14. How I feel about the choice of career that I have made - whether or not I'm satisfied with it. \_\_\_\_\_
15. Whether or not I owe money; if so, how much. \_\_\_\_\_
16. The aspects of my personality that I dislike, worry about, that I regard as a handicap to me. \_\_\_\_\_
17. What feelings, if any, that I have trouble expressing or controlling. \_\_\_\_\_
18. The facts of my present sex life - including knowledge of how I get sexual gratification; any problems that I might have; with whom I have relations, if anybody. \_\_\_\_\_
19. Whether or not I feel that I am attractive to the opposite sex; my problems, if any, about getting favorable attention from the opposite sex. \_\_\_\_\_
20. Things in the past or present that I feel ashamed and guilty about. \_\_\_\_\_
21. The kinds of things that make me just furious. \_\_\_\_\_
22. What it takes to get me feeling real depressed or blue. \_\_\_\_\_
23. What it takes to get me real worried, anxious, and afraid. \_\_\_\_\_
24. What it takes to hurt my feelings deeply. \_\_\_\_\_
25. The kinds of things that make me especially proud of myself, elated, full of self-esteem or self-respect. \_\_\_\_\_

26. My feelings about the appearance of my face -  
things I don't like, and things I might like about  
my face and head - eyes, nose, hair, teeth,  
etc. \_\_\_\_\_
27. How I wish I looked: my ideals for overall appear-  
ance. \_\_\_\_\_
28. Whether or not I now have any health problems -  
e.g., trouble with sleep, digestion, female com-  
plaints, heart condition, allergies, headaches,  
piles, etc. \_\_\_\_\_
29. Whether or not I have any long-range worries or  
concerns about my health, e.g., cancer, ulcers,  
heart trouble. \_\_\_\_\_
30. My feelings about my adequacy in sexual behavior -  
whether or not I feel able to perform adequately in  
sex relationships. \_\_\_\_\_

APPENDIX F

ELM'S EMPATHY SCALE

Fill in the appropriate letter for each item.

1. When I read an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.

extremely true      moderately true      neutral      moderately false      extremely false

A                      B                      C                      D                      E

2. When I see strangers, I almost never try to imagine what they are thinking.

A                      B                      C                      D                      E

3. I like to imagine myself as being various different types of persons.

A                      B                      C                      D                      E

4. I usually feel that I know exactly what mood my friends are in, even when nothing is said in words.

A                      B                      C                      D                      E

5. I find it hard to imagine how a poor southern negro feels about white people.

A                      B                      C                      D                      E

6. It's hard for me to act as if I'm a different kind of person than I really am.

A                      B                      C                      D                      E

7. After acting in a play myself, or seeing a play or movie, I have felt partly as though I were one of the characters.

A                    B                    C                    D                    E

8. When I disagree with a person, I do not try to feel in my own mind the reason why the person holds an opinion different from mine.

A                    B                    C                    D                    E

9. I often try to guess what people are thinking, before they tell me.

A                    B                    C                    D                    E

10. A person can't really know what is going on inside someone else's head.

A                    B                    C                    D                    E

APPENDIX G

GROUP COHESION MEASURE

On the four five point scales below rate the way you see the group.

	extremely	moderately	neutral	moderately	extremely	
1. attractive	A	B	C	D	E	unattractive
2. like to continue contact with group	A	B	C	D	E	not like to continue contact with group
3. meaningful	A	B	C	D	E	not meaningful
4. enjoyable	A	B	C	D	E	not enjoyable

APPENDIX H

TABLES IV-VIII

TABLE IV

MEAN FREQUENCY OF REINFORCEABLE RESPONSES  
 PER SUBJECT PER GROUP, FROMME,  
 WHISENANT, SUSKY, AND  
 TEDESCO (1974)

---

	No therapist	Therapist	
Without reinforcement	.8	12.8	6.8
With reinforcement	9.8	23.3	16.5
	5.3	18.1	

---

TABLE V

GROUP TOTALS OF REINFORCEABLE RESPONSES  
LISTED WITH SEX OF THERAPIST

	R	NR		
RM	Male therapist	111	Male therapist	49
	Female therapist <sub>1</sub>	38	Female therapist <sub>1</sub>	51
	Female therapist <sub>2</sub>	43	Female therapist <sub>2</sub>	56
	$\bar{X} = 64$		$\bar{X} = 52$	
DE	Male therapist	100	Male therapist	63
	Female therapist <sub>1</sub>	96	Female therapist <sub>1</sub>	57
	Female therapist <sub>2</sub>	116	Female therapist <sub>2</sub>	57
	$\bar{X} = 104$		$\bar{X} = 59$	
NF	No therapist <sub>1</sub>	35	No therapist <sub>1</sub>	20
	No therapist <sub>2</sub>	60	No therapist <sub>2</sub>	4
	No therapist <sub>3</sub>	22	No therapist <sub>3</sub>	2
	$\bar{X} = 39$		$\bar{X} = 8.7$	

TABLE VI

INDIVIDUAL AND GROUP REINFORCEABLE RESPONSES  
 TOTALS WITH LISTING OF EACH SUBJECT'S  
 SEX: REINFORCED GROUPS

RM	DE	NF
Group #1	Group #4	Group #7
1. 33 M	1. 19 M	1. 12 F
2. 23 F	2. 29 F	2. 11 M
3. 25 F	3. 26 F	3. 4 F
4. 30 M	4. 26 M	4. 8 M
Total - 111	Total - 100	Total - 35
Group #2	Group #5	Group #8
1. 7 F	1. 27 M	1. 14 M
2. 14 M	2. 30 F	2. 17 F
3. 9 F	3. 33 F	3. 10 F
4. 8 M	4. 26 M	4. 19 M
Total - 38	Total - 116	Total - 60



TABLE VI (continued)

RM	DE	NF
Group #3	Group #6	Group #9
1. 7 F	1. 26 M	1. 7 M
2. 11 M	2. 20 F	2. 5 F
3. 16 F	3. 21 M	3. 8 F
4. 9 M	4. 29 F	4. 2 M
Total - 43	Total - 96	Total - 22

TABLE VII

INDIVIDUAL AND GROUP REINFORCEABLE RESPONSE  
 TOTALS WITH LISTING OF EACH SUBJECT'S  
 SEX: NON-REINFORCED GROUPS

RM	DE	NF
Group #10	Group #13	Group #16
1. 11 F	1. 13 F	1. 4 M
2. 19 M	2. 11 M	2. 2 F
3. 16 F	3. 22 F	3. 8 F
4. 5 M	4. 11 M	4. 6 M
Total - 51	Total - 57	Total - 20
Group #11	Group #14	Group #17
1. 16 F	1. 8 M	1. 1 M
2. 25 M	2. 26 F	2. 0 F
3. 5 M	3. 10 M	3. 2 F
4. 10 F	4. 19 F	4. 1 M
Total - 56	Total - 63	Total - 4

TABLE VII (continued)

RM	DE	NF
Group #12	Group #15	Group #18
1. 7 F	1. 9 F	1. 2 F
2. 24 M	2. 17 M	2. 0 M
3. 14 F	3. 11 F	3. 0 M
4. 4 M	4. 20 M	4. 0 F
Total - 49	Total - 57	Total - 2

TABLE VIII

ANALYSIS OF VARIANCE OF EFFECT OF  
THE INDIVIDUAL THERAPIST,  
REINFORCEMENT, AND  
THERAPIST MODE  
CONDITIONS

Source	SS	df	MS	F	p
Individual Therapist Condition	209.63	2	104.81	2.31	<.110
Reinforcement Condition	609.19	1	609.19	13.42	<.001
Therapist Mode Condition	414.19	1	414.19	9.12	<.005
Therapist Mode x Reinforcement Interaction	204.19	1	204.19	4.50	<.038
Residual	1906.63	42	45.40	-	-
TOTAL	3343.81	47	71.14	-	-

VITA

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