

GROUP MODIFICATION OF AFFECTIVE AND  
SELF-DISCLOSING VERBALIZATIONS IN  
A PSYCHIATRIC POPULATION

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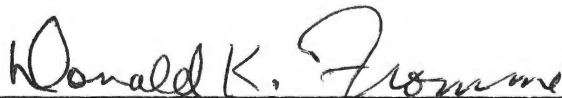
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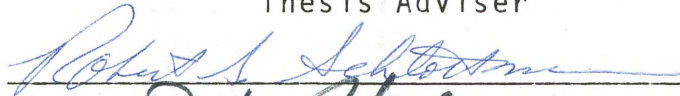
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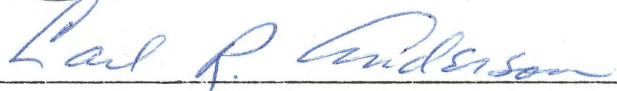
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## CHAPTER I

### INTRODUCTION

The trait of letting others know how one feels, that is revealing oneself to others, has long been seen as positive (e.g., Fromm, 1941; Langs, 1973; Maslow, 1971; Rogers, 1961). Jourard is the most current advocate of what he terms "self-disclosure." To Jourard, most of man's problems stem from simple lack of letting others know what we feel and what we want. It is Jourard's contention that the free-association method of psychoanalysis is merely a method of self-disclosure. Patients disclose everything to another person, even things which they do not admit to themselves. The process allows the person "to be." In Jourard's words

He (Freud) made the momentous discovery that neurotic people of his time were struggling like mad to avoid 'being,' to avoid being known, and to avoid 'becoming.' He learned that his patients, when they were given the opportunity to 'be' would disclose that they had all manner of horrendous thoughts and feelings which they did not dare disclose to themselves, much less express in the presence of another person. Freud learned to permit his patients to be, through permitting them to disclose themselves utterly to another human (Jourard, 1964, pg. 29-30).

Ryan (1970) would also defend this view. In his publication Clinical Interpretation of the Firo-B, Ryan cites one profile as being distinctly neurotic. The Firo-B gives

six scores, three of which are labeled as "expressed" by the individual and three of which are "wanted" by the individual. The three areas of expressed and wanted scores are inclusion, control and affection. The 0/9 0/9 0/9 profile is termed "full-blown neurotic." This profile gives zeros as the expressed score, meaning just that, that the person is showing an interpersonal stance expressing that he does not wish inclusion, control by others or affection (getting intimate). However, the nines are the extreme of the zeros and state that what the individual "wants" is to be included, to be controlled and to become intimate. The problem is stated quite simply as a person who does not express to others what he wants. In other words, this type of person is not self-disclosing, they are giving the world an exactly opposite picture of how they want others to react to them. This results in frustration and a complete lack of fulfillment where others are concerned. The important point is: this is a person who wants a great deal from others interpersonally, but shows the world a mask which says, I want nothing from you.

Carl Rogers also believes that people wear masks to hide their true selves from others, that people are afraid to show what they really are. He states that genuineness and transparency is the way to becoming a well-adjusted, happier human being. The dropping of masks, openness and honesty about self and feelings are seen as the key to a

well-adjusted life. Rogers states that in all relationships the existential choice is:

'Do I dare to communicate the full degree of congruence which I feel? Do I dare match my experience, and my awareness of that experience, with my communication? Do I dare to communicate myself as I am or must my communication be somewhat less than or different than this?' The sharpness of this issue lies in the often vividly foreseen possibility of threat or rejection. To communicate one's full awareness of the relevant experience is a risk in interpersonal relationships. It seems to me that it is the taking or not taking of this risk which determines whether a given relationship becomes more and more mutually therapeutic or whether it leads in a disintegrative direction (Rogers, 1961, pg. 345).

The literature contains a number of articles which show that others believe self-disclosure to be a beneficial trait in therapy and interpersonal relationships (for instance, Yalom, 1970; Sullivan, 1953). The modification of such self-disclosures in the form of various affective verbalizations by use of operant techniques has been shown to be effective in a college population (Fromme & Close, 1974; Fromme, Whisenant, Susky & Tedesco, 1974). Fromme's technique utilized lights and digital counters to reinforce five categories of affective verbalizations. Groups of four subjects were seated around a table which contained the apparatus. If subjects made the correct verbalizations, they were reinforced by the counter registering a cumulative number and the click it made while registering. Lights were utilized to inform subjects that they were not expressing the correct verbalizations. This technique will be explained further in the Review of the

Literature. The Literature Review is aimed at support of several assumptions:

- 1) That conditioning of verbal behavior is possible.
- 2) That conditioning of verbal behavior may be accomplished by a variety of techniques and combination of techniques.
- 3) That individuals may benefit from proper conditioning of their verbal behavior.
- 4) That self-disclosure is emotionally healthy.
- 5) That a group setting is a useful way to facilitate changes in individual's behaviors.
- 6) That operant conditioning in a group setting can be used to facilitate change in individuals.

This study is based on these assumptions. The purpose of this study was to explore the possible benefits of Fromme's technique of modifying behavior in a psychiatric population. If therapeutic change was obtained through operant techniques aimed at self-disclosure, the benefits to patient populations is self-evident and the thesis that self-disclosure is healthy psychologically and that lack of self-disclosure leads to maladaptive behavior would be supported.

## CHAPTER II

### REVIEW OF THE LITERATURE

#### Conditioning of Verbal Behavior

The conditioning of verbal behavior has a long history. Greenspoon (1954, 1955) attempted the reinforcement of plural nouns. Taffel (1955) reinforced pronouns by reinforcing all sentences by subjects which began with I or we. In a variation of Taffel's technique, Sarason (1955) reinforced a class of verbs rather than a type of pronouns in a sentence. Binder, McConnell and Sjöholm (1957) used two sets of verbs, one "mildly hostile" and the other "neutral." Randomly matched pairs of these verbs were typed on white cards with three pronouns, "she", "he", and "they" in capital letters. The subjects were instructed to make up sentences with one of the pronouns as the first word and one of the verbs as the second word in the sentence. Krasner (1958) instructed subjects to tell a story with at least four characters in it, a mother, a father, a child, and an animal. The category of "mother" and all nouns and pronouns referring to the mother figure were reinforced. A similar technique was utilized by Mock (1957).

The reinforcing verbalization most widely used by examiners is the "mmm-hmm" sound. Even the possibility of differences in examiner interpretation of how the sound should be emitted was controlled by Hildum and Brown (1956). A trained linguist was used as the examiner. He verbalized the sound in a neutrally toned, rising inflection. Greenspoon (1955) went so far as to give the phonetic construction of the "mmm-hmm" based on Pike's American English Intonation.

Gestural cues include head nodding, head shaking, and smiling. Mock (1957) used a combination of head nodding and "mmm-hmm" with one experimental group. Krasner (1959) used a smile in addition to a head nod and "mmm-hmm". Ekman (1958) used a combined nonverbal reinforcement consisting of a head nod, a smile and a slight movement forward.

Mechanical cues have also been used to reinforce verbal behavior. Light flashes were used by Ball (1952), Greenspoon (1954), Nuthman (1957), Sidowski (1954), and Taffel (1955). A buzzer was used by Ball (1952) and Greenspoon (1954) while McNair (1957) utilized a bell tone to reinforce verbal behavior.

Greenspoon (1954, 1955) found that using "mmm-hmm" as a reinforcer resulted in an increase in the frequency of plural responses, and "huh-uh" resulted in a decrease of the frequency of such responses. When used to reinforce nonplural responses, both stimuli tended to increase the frequency of such responses. The stimulus "mmm-hmm" had the same effect on both plural and nonplural responses, but

the stimulus "huh-uh" had different effects on the two type responses. The red light and the tone both resulted in significant increases in the mean frequency of both response classes. Thus Greenspoon got a conditioning effect with his two verbal and his two nonverbal stimuli. Every subject in Verplanck's (1955) study increased in rate of verbalizing statements of opinion when the examiner reinforced by either paraphrasing or agreeing with his statement.

Ullman, Krasner, and Collins (1961) used a verbal conditioning situation to investigate hypotheses relevant to psychotherapeutic interactions. Neuropsychiatric patients who were receiving group therapy participated in four storrtelling sessions during which emotional words were reinforced by either a positive-personal manner, an impersonal-unstructured manner, or not reinforced at all. Ratings made by group therapists before and after the experimental storrtelling sessions indicated a significant gain in adequacy of interpersonal relationships in group therapy for the group receiving positive-personal reinforcement. There was no significant gain for the other two groups. The results support the hypothesis that one person can influence another person in a positive way and that this change in the subject's behavior may be demonstrated to be associated with specific behavior on the part of the experimenter.

Krasner (1958) in an excellent review of studies of the conditioning of verbal behavior concluded that the

majority of the studies report positive results with the use of generalized conditioned reinforcers such as "good" or "mmm-hmm".

Obviously, this review of the conditioning of verbal behavior is not extensive nor exhaustive. It is meant only to be a somewhat representative example of the conditioning of verbal behavior which could be tied to a therapeutic context. The review supports three assumptions important to this study. First, that conditioning of verbal behavior can be done. Second, that the conditioning may be done in a variety of ways. Specific to this study is the use of sounds, lights and other visual stimuli. The third assumption is that the conditioning of verbal behavior may lead to gains in the adequacy of an individual's interpersonal relationships. The specific importance of this assumption will be specified in the following pages. Its importance lies in the theory that both feedback about behavior and self-disclosure is emotionally healthy. Further, that problem resolution occurs when a person discloses himself to others.

### Self-disclosure

Jourard (1964) believes that self-disclosure is the key to healthy personality. It is his contention that Man's lack of honesty about his wants and desires leads to maladaptive behavior. The psychoanalytic viewpoint agrees, in principle, with this very idea. The unresolved conflicts



so often spoken of in analytic theory remain unresolved because of lack of disclosure or awareness of underlying feeling. Thus, the psychoanalytic techniques of free-association and dream analysis help to bring to light these conflicts which the individual cannot or will not disclose, sometimes even to himself (Jourard, 1964). Anxiety reactions are defined by Cameron (1963) as resulting from fixation, defective ego boundaries, and repression. Fixation occurs because of lack of working through of conflicts during infancy, childhood or adolescence. Repression of conflicts, impulses, fantasies, and frustrations is another part of anxiety reactions. Repression occurs because the conscious ego cannot accept the items being repressed (Cameron, 1963). This may be due to the lack of acceptance of these items by peers, parents, or significant others. In other words, others teach one to not self-disclose about emotions and feelings. Repression, then, may exemplify the maximal lack of self-disclosure, that is, not even being able to communicate one's feelings or emotions to oneself.

Carl Rogers also expounds the viewpoint that self-disclosure is healthy. The act of "becoming a person" is seen by Rogers as being one of shedding masks and being one's true self. This involves openness and honesty toward others about oneself and about feelings, needs, and emotions (Rogers, 1961). Maslow's theory of self-actualization is a further delineation of this theory. The road to self-actualization and personal growth is based on the fulfill-

ment of needs, both basic and higher, which Maslow describes in his need hierarchy. The fulfillment of needs rests on persons letting these needs be known, that is, expressing to others what one wishes (Goble, 1970; Maslow, 1970).

Sullivan (1953) contended that personality is almost entirely the product of interaction with other significant human beings. He believed that psychiatric treatment should be directed toward the correction of interpersonal distortions, thus enabling persons to lead a better life with more satisfactory interpersonal relationships. Psychiatric cure is the "expanding of the self to such final effect that the patient as known to himself is much the same person as the patient behaving to others" (Sullivan, 1940).

The theories of Jourard, Rogers and Sullivan lend support to the idea that self-disclosure is emotionally healthy. Yalom's (1970) views are consistent with this idea but also support the assumption that group settings are useful for facilitating change. Of particular interest are Yalom and his associates' studies exploring group psychotherapy processes. These studies support the contention that self-disclosure and feedback are extremely important factors for an individual's changes from maladaptive interpersonal behavior to more adaptive interpersonal behaviors.

Yalom (1970) believes that curative factors in group psychotherapy fall into ten natural categories. Three of these factors are the imparting of information, the development of socializing skills, and universality. The first two

involve the encouragement of self-disclosure and giving and receiving of feedback, especially about maladaptive behaviors. Universality refers to the commonality of people's problems. Yalom cites the use of a particular technique in reference to universality. He has everyone in the group write their "top secret" on a piece of paper, anonymously. He finds that there are only about three common themes: 1) conviction of basic inadequacy, 2) a deep sense of interpersonal alienation, and 3) some sexual secret, often a concern about homosexual inclinations. The point is that people might not have fear or anxiety over their "dark secret" if it were shared with others. The themes are so common that they would find that others feel the same way or have similar fears and anxieties. Thus, the dark secret they hold inside would not make them different from others, would not hold the fear of discovery of the secret as a horrible thing to happen. Instead, the person would find that what they consider a great failing is actually a common experience and not to be so dreaded or feared after all.

In keeping with this theme of self-disclosure and the expression of feelings and emotions, Yalom (1970) investigated critical incidents in psychotherapy which helped people. In a study of twenty successful therapy patients, he found three common incidents which patients stated were the most helpful single events in therapy. These were:

- 1) the expression of strong negative affect to others,
- 2) the expression of strong positive affect to others, and

3) an incident, usually involving self-disclosure, which plunged them into deeper involvement with their group.

Corsini and Rosenberg (1955) abstracted curative factors from 300 pre 1955 group therapy articles. They abstracted the factors into nine major categories which have considerable overlap with the factors cited by Yalom (1970). Of these nine, three are specific to self-disclosure and feedback. The category of universalization coincides with Yalom's concept of universality which refers to learning that others have similar attitudes, feelings, and thoughts. The category of interaction coincides with "interpersonal learning" and "cohesiveness" which involves revealing oneself to others plus giving and receiving feedback. Ventilation is identical to "catharsis" which involves the expression of feelings which are both positive and negative.

Yalom, Tinklenberg, and Gilula (1970) reported that patients using a Q-sort rank these factors highly. Of the twelve curative factors cited by Yalom, interpersonal learning is ranked first, catharsis is ranked second, and universality is seventh. Yalom makes the point that this is a forced task which means that the items ranked lower are not necessarily unimportant but rather less important relative to the others.

It is Yalom's belief that the group provides a social microcosm which allows a corrective emotional experience and the trying out of new behaviors. It is essential to this that group members express their feelings toward the

others in the group as these feelings arise. It is also necessary that group members provide feedback and consensual validation so that they can test the appropriateness of their behavior. It seems necessary that group members also attempt to understand each other's actions and feelings. Without this, group interactions could quickly turn into a game and thus not provide the necessary, safe cues for open expression.

A study by Shimkunas (1972) tested the hypothesis that schizophrenics behave in a bizarre manner to avoid intense interpersonal relationships. The results showed that schizophrenics were markedly delusional and autistic in response to a demand that they reveal their personal feelings and experiences about several emotion-laden topics. In direct contrast, nonpsychotic psychiatric patients met task demands by intimately disclosing their feelings. Bateson, Jackson, Haley and Weakland, 1956) in their theory of schizophrenia state that communicational "double-binds" are a primary factor in the development of the disorder. Within this communication theory, Watzlawick, Beavin and Jackson (1967) believe that schizophrenic communication is designed to avoid communication. Therefore, the finding of Shimkunas (1972) is consistent with their theories. The major point here is that persons manifesting severe overt psychoses would be difficult subjects (if not impossible) for conditioning self-disclosures and feedback. However, persons whose psychoses are in remission and non-psychotic

patients would be appropriate. These studies (Shimkunas, 1972; Bateson et al.; Bateson et al., 1956; and Watzlawick et al., 1967) also support the contention that emotional disturbances are connected to lack of self-disclosure and/or improper feedback.

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. Yalom (1970) has emphasized that group members need to express their feelings toward others in the group as they arise ("here and now"), and to provide feedback for each other as they test the appropriateness of their behavior.

There has been some debate, however, whether or not psychotherapy helps at all, at least the traditional types. Eysenck (1952) surveyed reports on the improvement of neurotic patients after psychotherapy, and the results compared with estimates of recovery without benefit of therapy. The figures failed to support the hypothesis that psychotherapy facilitates recovery from neurotic disorder.

Kiesler (1966) disagrees with Eysenck both in the methodology of the studies cited and the idea that therapy is not successful. He states that the two-thirds spontaneous remission rate quoted by Eysenck is unreliable and possibly a myth. He further states that the implications

of Eysenck's study goes against the clinical experiences of many psychotherapists.

In a different vein, Poser (1966) compared the efficacy of a group of untrained college students with professionals in group psychotherapy with schizophrenic patients. He found that the two groups were similarly effective.

In light of the conflicting evidence about psychotherapy, and yet the good evidence for group psychotherapy, what seems to be needed is an approach other than traditional therapy. It is the contention of this study that an operant conditioning approach using group settings is a viable way to solve this dilemma. Particularly, the use of operant techniques to reinforce self-disclosure and feedback appear to be of primary benefit according to the previous evidence cited.

### Operant Conditioning

Reynolds (1968) in his book, A Primer of Operant Conditioning, gives the following definition:

Operant conditioning is an experimental science of behavior. Strictly speaking, the term operant conditioning refers to a process in which the frequency of occurrence of a bit of behavior is modified by the consequences of the behavior... Operant conditioning is concerned with the relationship between the behavior of organisms and their environment. Research in operant conditioning gathers knowledge about behavior from the experimental study of the effects on behavior of systematic changes in the surrounding environment. Operant conditioning attempts to understand behavior by gaining knowledge of the factors that modify behavior. (Reynolds, 1968, pp. 1-2).

The fact that operant techniques are used in therapy both directly and indirectly is attested to by several studies of the phenomena. Truax (1966), for instance, analyzed a successful therapy case of Carl Rogers' to determine if selective reinforcement was done by the therapist. He found that the therapist used empathy and warmth to selectively reinforce certain response classes.

Green and Marlatt (1972) studied the effects of instructions and modeling upon affective and descriptive verbalization. The subjects were assigned to groups which either were instructed to talk about ideas on specific topics, instructed to discuss personal feelings within the specific topics, or a no-instructions group. Half of the subjects also listened to a model discussing his feelings within identical topical areas and half did not receive a model. The most general finding of the study was that both instructional and modeling procedures could be used to significantly increase the occurrence of verbal statements which differ in terms of response specificity.

Williams and Blanton (1968) told subjects that they were referred for psychotherapy and divided them randomly into three groups. The first group was verbally reinforced for making "feeling" statements. The second group was reinforced when making statements which did not concern feelings. The third group was given traditional psychotherapy. They found that groups one and three increased the number of feeling statements made and that group two



had a decrease in the number of feeling statements. This means that verbal reinforcement was at least as effective as traditional psychotherapy in eliciting feeling statements from non-psychotic subjects.

Liberman (1970) studied the use of operant conditioning in comparison with traditional psychotherapy in the development of group cohesiveness and symptomatic improvement. Two matched therapy groups were used with one therapist trained to use techniques of social reinforcement and the other therapist used a more conventional, intuitive, group-centered approach. The results indicated that the patients in the experimental group (social reinforcement) showed significantly more cohesiveness and earlier symptomatic improvement than those in the more traditional group. The findings support the utility of a reinforcement or learning approach to the understanding and practice of group psychotherapy.

Fromme et al. (1974) sought to use the techniques of verbal conditioning in a group setting to enhance the interpersonal interaction process. Five categories of verbal responses were selected that could be easily and reliably judged. These included "here and now" expression of affect, giving and asking for feedback about the effects of a person's behavior, and the use of empathetic statements. Four-person groups of college students were instructed to engage in interpersonal interaction according to these five categories. These instructions were con-

siderably detailed, and a summary of the response categories was listed on an index card in front of each subject. In the experimental condition a digital counter and red light were also in front of each subject. 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 that the other group members could learn vicariously what was expected of them. If three minutes elapsed in which no one in the group got a click, all four red lights momentarily flashed on. If one group member fell behind the person having the highest number of counts by ten, the light of the person who was behind was turned on until he caught up. The groups were given the same instructions and observed for the same period of time. A tally of the number of reinforceable responses was made during observation of the control groups and compared with the data from the experimental groups.

Results over one session for each group indicated as predicted that the experimental groups with the feedback apparatus did emit significantly more of the categorizeable responses, an average of 9.75 per person. 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 per cent interjudge agreement, suggesting that these categories can be 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.

Fromme et al. cited Wolf (1961) as suggesting that clients frequently became overdependent on their therapists, and that Salzberg (1961) found an inverse relation between group interaction and therapist verbalization. It has been found that compared with unled group sessions, led group sessions show less warmth, more tension, and more depression (Harrow, Astrachen, Becker, Miller & Schwartz, 1967). It is hypothesized that by using remote controlled, mechanical feedback, an operant group can dispense with an active therapist and still the therapist can maintain indirect control of the group process. This method may avoid Slavson's (1964) criticism that disruptive acting out is likely to occur in unled groups while at the same time eliminating possible negative therapist effects.

### CHAPTER III

#### STATEMENT OF THE PROBLEM

It has been well documented by Fromme et al. (1974) and Duval (1974) that affective verbalizations can be effectively reinforced and increased in college subjects. In light of Jourard's (1964) theory of self-disclosure, if a person can learn to self-disclose, alleviation of problematic or maladaptive behavior should occur. Theoretically, other authors agree with this premise (Cameron, 1963; Rogers, 1961; Ryan, 1970; Yalom, 1970; Sullivan, 1953). If an operant group procedure such as Fromme describes can effectively be used to elicit affective verbalizations and hence teach self-disclosure, the benefits to patients and therapists are obvious. If this method can be shown to be effective with a psychiatric population, it could be used in place of longer term, traditional therapies while utilizing the advantages of a group setting.

One major purpose of this study was to determine if Fromme's procedure could be effectively used to teach self-disclosure to a psychiatric population. The second major purpose of the study was to determine the effects of the method on the group, that is, to determine whether or not the procedure had therapeutic benefit for the subjects.

Under the first major purpose of this study, the first hypothesis was that a psychiatric population could be conditioned using operant techniques to make certain affective and self-disclosing verbalizations (Fromme et al., 1974). More specifically, the experimental group should make significantly more affective and self-disclosing verbalizations in the final session than the control group. Additionally, the number of reinforceable verbalizations in the final session should be significantly greater than in the baseline session for the experimental group but not for the control group. The technique had been used in a college population and supported the above hypothesis with college subjects (Duval, 1974; Fromme, et al., 1974). Therefore, it was felt that a study of the hypothesis in a psychiatric population was justified.

The second hypothesis concerned the generalization of effects. The hypothesis was that subjects in the experimental groups would generalize the effects of that group to a new group of subjects. Specifically, when a member of an experimental group is placed in a group with three new subjects, the mean reinforceable responses should be significantly greater than the mean responses of the baseline sessions. This hypothesis was tested by comparing the mean reinforceable responses of the three new subjects in the generalization groups with the mean reinforceable responses of the original baseline sessions. Duval (1974) found that Fromme's technique generalized to new groups when used in a

college population. Therefore, a purpose of this study was to determine if the effects generalized in a psychiatric population.

The second major purpose was to determine whether Fromme's technique would have therapeutic benefits when used in a psychiatric population. This involved the use of four measures with four corresponding hypothesis (numbers 1, 3, 4 and 5), each one concerned with one of the measures.

Hypothesis 1, as stated previously, was also used as a test of therapeutic benefit. The rationale for use of the affective and self-disclosing verbalizations (Hypothesis 1) as a measure of therapeutic benefit originates in the theories of Jourard (1964), Rogers (1961), Sullivan (1940), and Yalom (1970). These authors have endorsed within different theoretical frameworks the idea that feedback and self-disclosure are emotionally healthy. Based on this theory, the conditioning of an individual to make affective and self-disclosing statements should also be beneficial. More specifically, Yalom (1970) cited research to support the belief that self-disclosure and feedback were of therapeutic benefit. Thus, modifying an individual's behavior so that he makes significantly more affective and self-disclosing verbalizations should have some therapeutic benefit.

The third hypothesis was that the experimental group would be significantly more self-disclosing than controls as measured by the Modified Jourard Self-Disclosure Questionnaire. Specifically, (Hypothesis 3) that the mean post

self-disclosure score for experimental subjects should be significantly greater than the post score for controls and significantly greater than the pre experiment scores. The use of this questionnaire to indicate therapeutic benefit is directly supported by Jourard (1964) and indirectly supported by Rogers (1961), Sullivan (1940) and Yalom (1970). As with the first hypothesis, the third hypothesis is based on the theory and research which supports self-disclosure as adaptive and therapeutic. If the experimental group made significantly higher scores post experiment, support would be given to the hypothesis that the technique was therapeutic.

The fourth hypothesis utilized the Semantic Differential. Rogers (1961) has theorized that discrepancies between Real and Ideal Self lead to maladaptive behavior and emotional disturbance. The Semantic Differential was chosen to measure Real and Ideal Self differences and correlations as, a method of testing Rogers' theory and measuring therapeutic change. If mean differences and correlations between Real and Ideal Self changed significantly, support would be given to the Rogerian viewpoint and inferences about therapeutic change could be made. Specifically, if Real and Ideal Self were significantly different pre experiment and are not significantly different post experiment, therapeutic change would have occurred according to Rogers. The existence of Real and Ideal Self discrepancies in a psychiatric population would lend support to Roger's theory.

Correlations between Real and Ideal Self provided a measure of consistency in the observations and another method of measuring Real and Ideal Self changes. Therefore, Hypothesis 4 was that the experimental group's mean differences between Real and Ideal Self, as measured by the Semantic Differential would be significantly less post-experiment while the control group's mean differences would not be significantly less.

The fifth hypothesis involved possible significant changes in the Mooney Problem Check List. This measure was the most direct method of measuring therapeutic change. It was hypothesized that experimental subjects would check significantly fewer total problems on the Mooney Problem Check List after the experimental treatment than prior to the treatment. It was also hypothesized that experimental subjects would check significantly fewer problems than controls post experiment. The Mooney Problem Check List was chosen because it was a simple and reliable method of measuring problems and a more direct and practical method of evaluating therapeutic benefit.

The inference that therapeutic benefit would occur if Fromme's technique was successfully used was evaluated in terms of the four hypotheses (numbers 1, 3, 4 & 5) and the measures associated with them. The measures ranged from a more direct test of experimental manipulation of behavior (number of reinforceable verbalizations) to a more direct test of therapeutic benefit (the Mooney Problem Check List).



Evaluation of therapeutic benefit involved interpretation of the results of all four measures individually and in combination.

## CHAPTER IV

### METHODOLOGY

#### Subjects

Subjects for this study consisted of 24 non-psychotic adult inpatients at Nebraska Psychiatric Institute. Participation in the study was voluntary and subjects were informed of this fact and their right to withdraw at any time. Subjects were randomly assigned to six groups of four subjects each. Experimental and control treatments were then assigned randomly to the groups so that three experimental and three control groups were formed. Subjects were matched as closely as possible by age, sex, and coming from different psychiatric wards. Twelve males and twelve females ranging in age from 18 to 36 years of age participated in the groups. Diagnosis consisted of neurosis, personality disorders and schizophrenia in remission. Subjects were matched across groups as closely as possible by diagnosis, however, complete matching was not possible. The experimental group consisted of six personality disorders (two passive-aggressive, two schizoid, one sociopathic and one hysterical); five schizophrenics in remission and one depressive neurotic. The control group consisted of five personality disorders (two schizoid, one passive-aggressive,

one sociopathic and one hysterical), four schizophrenics in remission and two neurotics (one depressive and one anxiety). No overtly psychotic individuals were used in the study. Diagnoses were made by staff in accordance with D.S.M.-II (1968).

### Response Categories

On the basis of the Fromme et al. studies, feeling, feedback, and empathy statements were divided into five categories, operationally defined as follows:

1. Feeling: The labeling of a subject's own internal subjective affective state produced by interaction with other group members.
2. Giving Feedback: The describing or labeling of one's own perception of another group member's current behavior.
3. Seeking Feedback: The seeking of information regarding one's own current behavior.
4. Empathy I: Any attempt by the subject, successful or not, to clarify the nature or source of another group member's current affective state.
5. Empathy II: The seeking of information from another group member regarding his current affective state.

In the contextual sequence of interactions, only those statements which added new or additional information about

ongoing processes or accompanying affective states in each session were reinforced.

### Apparatus and Procedures

Subjects were seated in a semicircular arrangement around a small table, facing a one-way mirror of an observation room. Each experimental group's conversation was tape recorded and simultaneously monitored by the experimenter via the mirror and headphones. Subjects were informed concerning this procedure. A control panel operating digital counters and a multiple event recorder was used to record instances where the experimenter judged that a group member's statement fitted one of the reinforceable response categories. When reinforcement was applied, a digital counter placed in front of each subject was advanced, producing an audible click. A red light attached to each subject's counter was used to provide two additional discriminative cues to subjects in feedback sessions: (1) Lights on all four counters were flashed whenever three minutes elapsed in which no reinforceable responses were made; (2) A subject's light was switched on whenever he fell ten or more responses behind the subject with the highest count and remained on until he caught up.

Each group, experimental and control, met a total of five 45 minute sessions across two and one half weeks, two sessions per week. The first session was a baseline session where reinforcement was not given to either group. In that session detailed instructions were given to each group (Appendix B). During the next four sessions, the

experimental group was reinforced as described earlier for making affective verbalizations. The control groups met to try and carry out the instructions given in the baseline session. The experimenter monitored the control groups but did not intervene in any way.

In the baseline session and following the last session, each group was given three measures. The first was a modification of Jourard's (1964) self-disclosure questionnaire, and the second was a variation of the Semantic Differential (Osgood, Succi, and Tannenbaum, 1957) as modified by Helm (1974, personal communication). The Semantic Differential was filled out by each subject for: (1) what he felt his real self was and (2) what his ideal self was. The third measure used was the Mooney Problem Check List.

The effects of generalization were studied by randomly selecting one member of each experimental group and placing him in one baseline session with a new group. The number of reinforceable responses of the generalization groups was then compared to the baseline sessions of the three experimental and three control groups to determine whether generalization had occurred via the experimental group member. This procedure also allowed partial evaluation of the possible longer term effects of the experimental group sessions. The generalization groups met one week after the final experimental and control sessions.

### Instructions

Subjects were given detailed instructions (Appendix B) prior to sessions one and two suggesting the desirability of sharing one's feelings, being empathetic, and providing feedback. Definitions of each of the response categories were explained and examples given. The general task was explained as "getting to know one another on a personal basis," and subjects were requested to express themselves by making use of the response categories. They also were informed of being monitored and observed.

In the second session, where feedback was provided, an explanation of the meaning and function of the feedback apparatus was given. After these initial sessions, subjects were given brief instructions reminding them of their task.

### Measures and Statistical Analysis

Affective and Self-Disclosing Verbalizations. The operant conditioning technique used in this study was developed by Fromme with pilot studies done in a college population (Fromme and Close, 1974; Fromme, Whisenant, Susky and Tedesco, 1974). Digital counters and lights were used to reinforce selected verbalizations which corresponded to categorical statements involving feedback and self-disclosure. The actual technique has been discussed previously in the Review of the Literature and Methodology (Apparatus and Procedures). Utilization of the results of the technique as a measure of therapeutic benefit has its basis in the

theories of Jourard (1964), Rogers (1961), Sullivan (1940), and Yalom (1970). Theory and research indicate that giving and receiving feedback and self-disclosure are both adaptive and therapeutic. Thus, although the technique per se is a test of the experimental manipulation of behavior, successful results of the technique infer therapeutic benefit according to the literature. More directly, the hypothesis of therapeutic benefit will be given some support if the technique teaches experimental subjects to make significantly more affective verbalizations than controls across sessions and in the final session. Therefore, results showing that experimental subjects make significantly more verbalizations in the final session than in the baseline session and compared with controls will support hypotheses within the two major purposes of the study. First, support will be given to the hypothesis that Fromme's technique can be successfully used in a psychiatric population. Second, some support will be given to the hypothesis that therapeutic benefit will occur with use of the procedure. A two-way fixed effects analysis of variance (Hays, 1963) was used to test the hypothesis that experimental subjects would make more reinforceable verbalizations than controls. An  $F$  test for simple main effects was computed according to procedures outlined in Kirk (1968). The test for simple main effects was computed to analyze the results of the technique across sessions by group.

The second hypothesis related to the affective and self-disclosing verbalizations concerned the generalization of the effects to new groups. A study by Duval (1974) established that these effects will generalize when using college subjects. For the technique to be of optimum benefit, long term effects are needed. If generalization to new groups occurred after the experimental treatment, longer term benefits could be inferred and beneficial results might occur with new subjects without the experimental procedure. Direct testing of the generalization hypothesis involved the following:

- 1) A randomly chosen experimental subject from each experimental group was placed in a group with three new subjects.
- 2) The new groups were given the same instructions as the experimental and control groups in the baseline sessions. The new groups met only one time.
- 3) The mean reinforceable verbalizations of the three new subjects in each generalization group were compared to the mean responses of the experimental and control groups in their baseline sessions.

A one-tailed t test was computed according to procedures in Hays (1963). The mean reinforceable responses of the generalization groups were compared to:

- 1) the baseline sessions of experimental groups,



- 2) the baseline sessions of control groups and
- 3) the mean reinforceable responses of the combined experimental and control groups' baseline sessions.

Modified Self-Disclosure Questionnaire. Jourard (1964)

devised a self-disclosure questionnaire for judging the amount a person would disclose to others. A modified version of this scale was used in the present study. Jourard's items were used, but only one-half of the original items were utilized. The term "people in this group" was the basis for rating the questions in the scale instead of Jourard's use of mother, father, male friend, female friend, and spouse. Jourard's findings indicate that self-disclosure is a measurable quantity and is valid. Use of the modification described here was of an exploratory nature, however, due to the lack of pilot work. The fact that the original questionnaire cited by Jourard has validity does give the modified version face validity.

Subjects were asked to fill out the thirty item scale (Appendix E) in accordance with one of the following categories and utilizing the term described above:

- A. Would tell people nothing about this aspect of me.
- B. Would talk in general terms about this item.
- C. Would talk in full and complete detail about this item to these people.
- D. Would lie or misrepresent myself to these people about this particular item.

A self-disclosure score was then computed according to the following rating scale:

Answered with A: a zero rating was given.

Answered with B: a score of one was given.

Answered with C: a score of two was given.

Answered with D: a score of zero was given.

Thus, a self-disclosure score was given by figuring the total of an individual's ratings. The score ranged from zero to sixty in magnitude. The measure was given at the baseline session and at the end of the final session and a comparison was made. The third hypothesis was tested in that analysis. The hypothesis stated that experimental subjects would be significantly more self-disclosing after the final session than controls as measured by the Modified Jourard Self-Disclosure Questionnaire. This hypothesis had its basis in Jourard's (1964) theory that self-disclosure is therapeutic. However, it was indirectly supported by Rogers' (1961) theories and Yalom (1970). Particularly Yalom has endorsed the idea that lack of self-disclosure sometimes leads to problems. The view is also consistent with Ryan (1970) and Maslow (1971).

A two way fixed analysis of variance was used (Hays, 1963) to determine whether or not experimental subjects were significantly more self-disclosing (1) after the final session compared to the baseline session and (2) than the control groups' final session.

The Semantic Differential. The Semantic Differential was originated by Osgood et al. (1957) as a measurement for research purposes. Semantic differentiation is defined by the authors as "the successive allocation of a concept to a point in the multidimensional semantic space by selection from among a set of given scaled semantic alternatives." This means that the difference in the meaning between two concepts is a function of the differences in their respective allocations within the same space. A Likert-type scale is used to separate the two concepts, and the individual is asked to check the space between which he feels is applicable to the particular task.

Three factors have been identified by Osgood et al. (1957) through research and factor analysis studies. The evaluative factor accounts for approximately half to three-quarters of the extractable variance and is concerned with the attitudinal variable in human thinking. Potency is the second dimension used and usually accounts for approximately half as much variance as the evaluative factor. This factor is concerned with power and the things associated with it. The activity factor is the third dimension approximately equal to the potency factor in magnitude and concerned with quickness, excitement, warmth, agitation and so forth. In addition, the factor of aggressiveness was used in this measure. The only concepts loading on this factor are the aggressive-nonaggressive dimensionality.

Test-retest reliability data from self-ratings has been obtained by Tannenbaum (1953) and the coefficients ranged from .87 to .93, with a mean  $r$  of .91. Osgood et al. (1957) give tables of reliability data from other studies which confirm these coefficients.

The Semantic Differential is not a standard test, but an instrument which can be made up to fit individual research needs. The measure to be used in this study is a modified semantic differential measure developed by Helm (1974, personal communication). The measure (Appendix C) uses the evaluative, potency, and activity factors cited by Osgood et al. (1957) but in addition will be used to measure other factors derived by Helm. A list of these factors and the concepts used to measure them is listed in Appendix D. In addition, Helm's indices were evaluated and compared pre and post in this study. These factors are:

Motive: Defined as an affect factor plus the evaluative factor (Appendix D).

Capability: Defined as activity plus potency.

Frustration: Defined as motive minus capability.

Subjects filled out two Semantic Differentials after the baseline session and two after the final session. They were asked to fill out one for their real self and one for their ideal self.

The Semantic Differential was used as a measure of therapeutic benefit according to Rogers' (1961) self theory. Large discrepancies between Real and Ideal Self was causal

factors in maladjustment and emotional disturbance in Rogers' theory. The Semantic Differential appeared to be a good measure for Real and Ideal Self because of the factors which could be extracted from it and its relative ease to fill out. Mean differences and correlations between Real and Ideal Self were computed. The Pearson Product Moment Correlation was used to obtain correlations. A t test for correlated means was computed according to procedures outlined in Hays (1963). The t test was used to compare Real and Ideal Self for significant differences by the factors on the Semantic Differential. This analysis was done to test the hypothesis (Hypothesis 4) that experimental subjects would differ significantly from controls in Real-Ideal Self discrepancies. This hypothesis was a more direct test of therapeutic benefit according to Self Theory than the previous two hypotheses.

The Mooney Problem Check List. The Mooney Problem Check List (Mooney, 1950) was developed to help individuals express their personal problems. It is not a psychological test, but rather a method for individuals to communicate their difficulties in a precise, economical fashion. The Problem Check List is self-administered with all directions on the cover page.

The check list is constructed so that problem areas run horizontally across the page, in groupings of six items (Appendix H). A complete listing of the areas covered, with the number of items in each, may be found in Appendix G. A total of 288 items across nine areas comprises the Check

List. Individuals read through the items in the list and underline the problems which are of concern to them. They then go back and circle the problems of most concern and write a summary in their own words. Both a numerical score for each problem category and a total number of problems is obtained in this manner.

The Adult Form was developed by using late adolescents and adults principally of non-student status. Items were developed from problem surveys, suggestions from experienced counselors, a review of adult problem literature, write-in statements by students on the College Form and problem items accumulated in the development of the other forms of the check list series. The criteria for selection of items were as follows:

- 1) Categories should cover the range of problems collected.
- 2) The number of items selected should be few enough for convenience in administration and summarization.
- 3) Areas should be pragmatic to suggest practical programs of action.
- 4) The areas should present a homogeneity of problem content.

One of the suggested uses of the Check List is research. Of particular interest is the suggested utilization for measuring changes in the frequency or pattern of problems after a planned problem-reduction program has been carried on.

Since the Mooney Problem Check List is not a test, it poses problems in making statements about reliability and validity. Studies (Gordon 1949, Gordon and Mooney, 1941) show that the Problem Check List exhibits sufficient stability for a group to warrant general program planning on the basis of survey results. The problem check list is not a test designed to predict patterns, and therefore an index of validity would be somewhat meaningless. More meaningful is the support of the Problem Check List's basic assumptions as a survey instrument. The assumptions are:

- 1) The majority of individuals will respond to the items.
- 2) Individuals will accept the task with a constructive attitude.
- 3) Most people will find that it covers reasonably well their range of problems.
- 4) Professionals will find it to be useful.
- 5) Researchers will find it to be useful.

Studies (Gordon and Mooney, 1949, Congdon, 1943, Houston and Marzolf, 1944) support these assumptions.

The fifth hypothesis was tested using the Mooney. The hypothesis was: The experimental group will have significantly fewer problems than controls after the experimental treatment as measured by the Mooney Problem Check List.

The rationale for utilizing the Mooney Problem Check List was the need for some direct measure of therapeutic effect, if it existed. Thus, the Mooney Problem Check

List had the advantages of easy administration, direct numerical scoring, and an easy comparison of pre and post problems. If the experimental condition was therapeutic, an overall inference could be made from the Problem Check List as to its effects.

Each individual was given the Mooney Problem Check List during the baseline session and after the fifth session and asked to complete it. A one-tailed  $t$  test was computed according to procedures in Hays (1963). Comparisons were made of the pre and post mean total problems for experimental and control subjects to determine if either group checked significantly fewer problems after the final session.



## CHAPTER V

### RESULTS

#### Reliability

Reliability was computed in two ways: (1) Interrater agreement, that is, how often the two raters agreed on whether or not a response fit one of the reinforceable categories, and (2) Reinforcement agreement, that is, how many times these reinforceable responses were actually reinforced. The two raters agreed that a response was reinforceable 91 percent of the time (410/450 responses). Reinforceable responses were found to have been reinforced 86 percent of the time (418/483 responses).

#### Comparison of the Experimental and Control Group Effects on Reinforceable Responses

The mean reinforceable affective and self-disclosing verbalizations for each session are listed in Table I. Table II contains the mean reinforceable verbalizations for the experimental and control groups across sessions. A two-way fixed effects model analysis of variance was used to compare the groups by reinforceable verbalizations. An F test for simple main effects was computed to make further comparisons across sessions and treatments. The ANOVA summary table appears as Table III.

TABLE I  
 MEAN REINFORCEABLE AFFECTIVE AND SELF-DISCLOSING  
 VERBALIZATIONS PER GROUP SESSION

	Sessions				
	1	2	3	4	5
Experimental Group 1	5.0	7.5	11.0	12.75	15.25
Control Group 1	4.6	4.5	6.6	4.6	7.5
Experimental Group 2	7.0	6.75	8.5	11.5	16.25
Control Group 2	1.0	0.25	3.0	2.5	3.0
Experimental Group 3	2.0	2.25	7.0	10.0	12.25
Control Group 3	0.5	6.5	2.5	4.0	7.75

TABLE II  
MEANS AND STANDARD DEVIATIONS OF REINFORCEABLE AFFECTIVE AND  
SELF-DISCLOSING VERBALIZATIONS BY GROUPS ACROSS SESSIONS

	<sup>1</sup>		<sup>2</sup>		<sup>3</sup>		<sup>4</sup>		<sup>5</sup>	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Experimental	4.67	2.247	5.5	2.598	7.92	4.63	11.42	2.197	14.58	3.563
Control	4.03	3.346	4.17	2.789	4.08	2.402	4.08	1.81	6.08	2.661

TABLE III  
ANOVA SUMMARY TABLE FOR COMPARISON OF THE EXPERIMENTAL  
AND CONTROL GROUPS BY REINFORCEABLE  
VERBALIZATIONS

Source	df	F
<u>Sessions</u>	4	*18.177
Sessions by experimental group	4	*29.76
Sessions by control group	4	1.22
<u>Treatments (Exp. X Cont.)</u>		*78.959
Treatments at Session 1	1	0.024
Treatments at Session 2	1	0.219
Treatments at Session 3	1	*19.726
Treatments at Session 4	1	*47.015
Treatments at Session 5	1	*63.164
<u>Interaction</u>	4	*12.798
W. Cell Error	110	
Total	119	

\*  $p \leq .01$

The experimental group had a mean of 4.667 reinforceable verbalizations in the baseline session compared with 4.033 for controls. The mean reinforceable verbalizations for the final session were 14.583 for experimental subjects and 6.083 for controls. The analysis of variance determined that sessions differed significantly in reinforceable responses ( $F = 18.177$ ,  $df = 4, 110$ ;  $p < .01$ ). The test for simple main effects determined that the experimental subjects had significantly more reinforceable responses than controls across sessions ( $F = 29.76$ ,  $df = 4, 110$ ;  $p < .01$ ). The analysis of variance also determined that treatments (experimental vs control) were significantly different ( $F = 78.959$ ,  $df = 1, 110$ ;  $p < .01$ ). The test for simple main effects found that experimental subjects made significantly more reinforceable responses than controls in Sessions 3, 4 and 5 ( $F = 19.726, 47.015$  and  $63.164$ ;  $df = 1, 110$ ;  $p < .01$ ). This is in accordance with the interaction effect being significant ( $F = 12.798$ ,  $df = 4, 110$ ;  $p < .01$ ). These findings support the first hypothesis that the group receiving Fromme's technique would make significantly more affective and self-disclosing verbalizations than the control group. In addition, it showed that the experimental group made significantly more reinforceable responses after only two sessions involving the experimental procedure.

### Generalization of Effects

The results of the generalization sessions are listed in Table IV. The mean reinforceable responses of the generalization group was computed using only the new subjects and extracting the experimental subjects' responses. A one-tailed  $t$  test was computed for each of three comparisons. First, the generalization group mean (7.247) was compared with the experimental group's mean reinforceable responses in their baseline session (4.667). The generalization group made significantly more reinforceable responses than the experimental group's baseline session ( $t = 2.849$ ,  $df = 18$ ,  $p < .01$ ). Second, the generalization group was compared with the control group's mean (4.003). Again, the generalization group made significantly more reinforceable responses than controls ( $t = 2.564$ ,  $df = 19$ ,  $p < .01$ ). Third, the generalization group was compared to the mean for both the experimental and control groups combined (4.35). The generalization group made significantly more reinforceable responses than the experimentals and controls ( $t = 2.863$ ,  $df = 31$ ,  $p < .01$ ). This finding supports the second hypothesis that the effects of the experimental group will generalize to a new group involving an experimental subject and three new subjects.

### Pre and Post Self-Disclosure

Table V contains the mean self-disclosure score for both the experimental and control groups pre and post

TABLE IV  
A COMPARISON OF THE GENERALIZATION SESSIONS WITH  
BASELINE SESSIONS BY REINFORCEABLE  
VERBALIZATIONS

	Mean Reinforceable Responses	df	t
Generalization Groups	7.247		
Experimental Groups	4.667	19	*2.849
Control Groups	4.033	19	*2.563
Experimental and Control Groups	4.35	31	*2.863

\*  $p < .01$

TABLE V  
MEAN PRE AND POST SELF-DISCLOSURE SCORE  
AND STANDARD DEVIATIONS

	Pre		Post	
	Mean	S.D.	Mean	S.D.
Experimental Group	38.5	8.8	47.58	5.69
Control Group	33.92	7.6	38.83	11.6



experiment. A two-way fixed effects analysis of variance was used to compare the scores (Table VI). The possible range of scores was 0-60. The experimental group had a pre-experiment self-disclosure mean score of 38.5 while the mean score for controls was 33.92. The post experiment mean scores were 47.58 for experimental subjects and 38.83 for controls. The analysis of variance determined that post self-disclosure scores were significantly greater than pre scores ( $F = 7.0937$ ,  $df = 1, 44$ ;  $p < .025$ ). The experimental group had significantly higher self-disclosure scores than controls ( $F = 6.434$ ,  $df = 1, 44$ ;  $p < .025$ ). Interaction effect was not found to be significant ( $F = 0.629$ ,  $df = 1, 44$ ). This means that the experimental group had significantly higher scores post experiment than pre and that the experimental group had significantly higher self-disclosure scores than controls in the final session. This supports the third hypothesis which predicted these results exactly.

#### Mean Scores, Differences and Correlations on the Semantic Differential

The mean scores of the experimental and control groups on each factor of the Semantic Differential are listed in Tables VII and VIII. The possible range of scores for each factor are: 4-28 for Potency, Evaluation, Activity and Affect; 1-7 for Aggressiveness; 8-56 for Motive and Capability; and 0-56 for Frustration. As can be seen from the mean scores, there was little variation between Real and Ideal Self for the pre and post conditions across groups.

TABLE VI  
ANOVA SUMMARY TABLE FOR COMPARISON OF THE EXPERIMENTAL  
AND CONTROL GROUP BY PRE AND POST  
SELF-DISCLOSURE SCORES

Source	df	f
Pre/Post Sessions	1	*7.0937
Treatments	1	*6.434
Interaction	1	0.629
Error	44	
Total	47	

\*  $p < .025$

TABLE VII  
EXPERIMENTAL GROUP MEANS AND STANDARD DEVIATIONS FOR  
FACTORS ON THE SEMANTIC DIFFERENTIAL

	Pre				Post			
	Real Mean	Self S.D.	Ideal Mean	Self S.D.	Real Mean	Self S.D.	Ideal Mean	Self S.D.
Potency	15.75	1.92	18.75	4.23	16.76	2.41	18.89	3.89
Evaluation	21.50	3.04	26.50	1.12	21.50	3.04	26.50	1.12
Activity	16.50	6.22	20.50	4.5	16.90	6.11	20.30	4.63
Aggressiveness	5.50	1.12	6.00	0.71	5.30	1.09	6.20	0.92
Affect	23.75	3.34	26.75	1.48	23.17	3.51	26.50	1.38
Motive	47.75	2.59	52.75	1.78	47.17	2.60	51.62	1.59
Capability	32.25	6.02	39.25	4.14	31.75	5.87	40.31	4.61
Frustration	15.50	6.38	13.50	4.03	14.70	5.75	13.67	4.22

TABLE VIII  
CONTROL GROUP MEANS AND STANDARD DEVIATIONS FOR  
FACTORS ON THE SEMANTIC DIFFERENTIAL

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Potency	17.25	1.92	17.50	2.06	17.17	1.82	17.98	1.99
Evaluation	17.75	2.05	22.50	6.22	16.87	1.98	21.69	4.75
Activity	19.25	3.11	17.50	4.55	20.18	2.97	17.61	4.33
Aggressiveness	4.50	2.29	4.50	1.66	4.88	2.01	4.67	1.35
Affect	21.25	1.92	23.75	2.77	20.77	1.99	23.67	2.64
Motive	38.75	4.99	46.25	6.77	39.21	4.71	45.12	6.19
Capability	36.50	3.90	47.00	4.66	37.43	3.67	46.85	4.61
Frustration	12.89	3.11	11.62	3.43	12.93	3.25	11.15	3.17

---

A t test for correlated means was computed to compare the Real and Ideal Self means, pre and post, for experimental and control subjects (Table IX). The experimental subjects' Ideal Self score was significantly higher than Real Self scores both pre and post in the area of Motive ( $t = 2.970, 2.725; df = 11; p < .01$ ). The difference between Real and Ideal Self was significant for control subjects in Capability ( $t = 1.906; df = 11, p < .05$ ) in the pre condition and not in the post condition. Affect was not significantly different in the pre condition for controls but Ideal Self was significantly higher in the post condition ( $t = 1.970; df = 11; p < .05$ ).

The mean scores were quite similar for experimental and control subjects. It appears that the experimental group sees their Ideal Self as good, honest, benefical and kind. They also see their Ideal Self as more aggressive pre and post (6.0 and 6.20 out of a possible 7.0). In general, both groups had higher scores on Ideal Self than on Real Self in the pre and post conditions with the exception of the Frustration factor. These scores were lower for the Ideal Self. However, the differences were quite small. The correlations between Real and Ideal Self pre and post are quite high for both groups (Tables X and XI). Correlations ranged from .866 to .977 on all factors except one. The correlation for Frustration was approximately .6 for both groups. The results of this measure do not support the fourth hypothesis that experimental subjects will differ

TABLE IX

t-VALUES FOR MEAN REAL AND IDEAL SELF DIFFERENCES FOR THE  
EXPERIMENTAL AND CONTROL GROUPS PRE AND POST

	Experimental		Control	
	Pre	Post	Pre	Post
Potency	1.279	0.952	0.522	1.461
Evaluation	1.706	1.706	0.932	1.005
Activity	1.016	0.878	-0.658	-0.949
Aggressiveness	1.000	1.643	0.00	-0.182
Affect	1.279	1.399	1.732	*1.970
Motive	**2.970	**2.725	1.572	1.251
Capability	1.234	1.505	*1.906	1.729
Frustration	-0.362	-0.188	-0.183	-0.277

df = 11

\*  $p < .05$

\*\*  $p < .01$

TABLE X  
PRE AND POST REAL vs IDEAL SELF CORRELATIONS IN THE  
EXPERIMENTAL GROUP BY FACTORS ON THE  
SEMANTIC DIFFERENTIAL

	Pre Correlation Real vs Ideal Self	Post Correlation Real vs Ideal Self
Potency	.956	.961
Evaluation	.984	.971
Activity	.874	.878
Aggressiveness	.977	.965
Affect	.968	.961
Motive	.966	.995
Capability	.924	.919
Frustration	.659	.661

TABLE XI  
PRE AND POST REAL vs IDEAL SELF CORRELATIONS IN THE  
CONTROL GROUP BY FACTORS ON THE  
SEMANTIC DIFFERENTIAL

	Pre Correlation Real vs Ideal Self	Post Correlation Real vs Ideal Self
Potency	.997	.989
Evaluation	.866	.868
Activity	.914	.921
Aggressiveness	.879	.881
Affect	.988	.986
Motive	.929	.918
Capability	.987	.977
Frustration	.591	.612



significantly from controls in real and Ideal Self Discrepancies. Some support was lent to Rogerian Self theory by the high correlations of Real and Ideal Self but is not in accordance with the theory of maladjustment.

#### Mean Total Problems from the Mooney Problem Check List

The mean total problem as measured by the Mooney Problem Check List appear in Table XII. The experimental group had a mean of 87.35 problems checked in the pre experimental session and 85.181 problems check after the final session. The range of problems on the Mooney Problem Check List is 0-288. A one-tailed  $t$  test was used to compare total problems pre and post for both groups. Neither experimental subjects or controls checked significantly fewer total problems pre and post ( $t = 0.232, 0.127$ ;  $df = 22$ ;  $p \geq 0.4$ ). No support was given to the fifth hypothesis that experimental subjects would have significantly fewer problems than controls after the final session as measured by the Mooney Problem Check List.

TABLE XII

A PRE AND POST COMPARISON OF MEAN TOTAL PROBLEMS  
FROM THE MOONEY PROBLEM CHECK LIST

	Pre		Post		df	<u>t</u>
	Mean	S.D.	Mean	S.D.		
Experimental Group	87.35	29.86	85.81	28.77	22	0.1232
Control Group	90.11	31.38	89.46	32.11	22	0.127

## CHAPTER VI

### DISCUSSION

An important implication from this study had nothing to do with the actual final results directly but may have been an indirect factor. Initially, there existed a great deal of resistance to volunteering for the study by the patients. The study was introduced to the patients at morning team meetings of patients and staff, general questions were asked by the patients, and the experimenter stated that he would talk to patients individually later in the day. No pressure was put on the patients to volunteer. The group sessions were described as a new method of psychotherapy which was not controversial but was slightly different. It was supported by staff members as a good method of treatment for patients. Patients were also told that it had been done before in pilot studies and had beneficial effects. Nevertheless, the experimenter found it extremely difficult to obtain volunteers for the initial groups. After initial groups were started, patients appeared suddenly eager to volunteer for the study. At least two inferences might be made from this experience. First, since non-psychotic inpatients were used, that reluctance toward getting better may well be a factor in a patient's

being hospitalized. Second, that the experiment most likely involved more highly motivated patients. This second inference probably does not undermine the results of the study in any significant way since this is probably true of most voluntary psychotherapy. A third possible conclusion of patients' reluctance is that a psychiatric population may be quite cautious. Therefore, until other patients had experienced the group, it may have been seen as quite threatening. It is an interesting occurrence which probably should be explored in depth by further studies.

The first purpose of this study was to determine whether or not Fromme's technique could be effectively used to teach self-disclosure to a psychiatric population. Two hypotheses were formulated to test this question. The first hypothesis was given solid support in the study. The group receiving Fromme's procedure made significantly more affective and self-disclosing verbalizations than controls in the final session. Additionally, the experimental group made significantly more reinforceable verbalizations in sessions three and four than controls. This fact lends support to the efficacy of the technique since it began to make significant differences in the second experimental session (third actual session, since the first was a baseline for both groups). These findings are in accordance with the pilot studies done with a college population (Duval, 1974; Fromme et al., 1974). The importance of this finding encompasses several inferences. First, the

technique may be beneficial as a therapeutic tool in and of itself. If used across more sessions in a longer term format, it is possible that it could become a beneficial group psychotherapy technique. Yalom's (1970) statements about what makes therapy beneficial could be incorporated into Fromme's technique. Specifically, the exchange of information about oneself, socializing skills, and universality. Each of these factors could be selectively reinforced using Fromme's operant technique. Teaching self-disclosure and feedback are cited as therapeutic by both Jourard (1968) and Rogers (1961). Therefore, the possibility of the technique becoming a separate method of group psychotherapy has some support.

The second inference of importance is that the technique might be used as a preliminary procedure for traditional group psychotherapy or as an adjunctive method. The technique might be used to precede traditional therapy as a method of training subjects to self-disclose and talk about their problems. As an adjunctive method, it could be used in a hospital setting along with traditional groups to condition specific behaviors or as a socialization method to help staff.

The second hypothesis tested involved generalization of the experimental effects. Generalization did occur, with the generalization group making significantly more reinforceable responses than experimental and control subjects in the baseline sessions. This finding supports the

pilot work of Duval (1974) in a college population. It infers that the effects of the experimental group generalized to the new group via the experimental subjects. Therefore, the effect of the experimental technique did not exist only in the experimental sessions. The fact that the effects had at least a short-term lasting effect was important regarding the techniques use as a therapeutic procedure.

Reinforceable responses might have been higher for both experimental and control subjects across sessions except for a tendency by both groups to talk about the past. In light of many current types of psychotherapy (e.g., Psychoanalysis, Psychoanalytically oriented psychotherapy and other Freudian models), the tendency to discuss past events probably has been reinforced by previous therapists. The experimental groups appeared quite reluctant to switch to the "here and now" when the lights in front of them were turned on. Another possible reason for discussing the past may have involved the patients' response sets to new situations. It may have been their way of dealing with a new and possibly threatening situation, particularly since it was a leaderless group.

The somewhat broad range of diagnostic categories represented in the groups supports the use of the technique with a variety of patients. It was felt that overtly psychotic patients would not be appropriate for the groups but psychosis in remission would be appropriate. The matching of subjects across groups was close enough to support the

inference that Fromme's technique could be utilized with most non-psychotic patients. The fact that several disorders are represented (e.g., schizophrenia in remission, personality disorders and neuroses) infers that most non-overtly psychotic patients might benefit from the procedure. It might well be a viable treatment for schizophrenics in remission given Bateson, et al. (1956) and Watzlawick et al., (1967) theories of schizophrenia. That is, it might be beneficial in training these patients to communicate if there is an absence of proper training. If theories about feedback, self-disclosure and communication being causal factors are true, then this procedure would lend itself well to correcting those difficulties and remitting the disorder.

The second purpose of this study was to determine if Fromme's technique would have therapeutic benefit when used in a psychiatric population. Four hypotheses (numbers 1, 3, 4 and 5) were made regarding therapeutic change in accordance with the measures chosen to determine change. The first therapeutic change hypothesis (Hypothesis 1) was the same as the hypothesis used to test Fromme's technique. That is, the experimental group will make significantly more affective and self-disclosing verbalizations than the control group. The rationale for its use as a measure was presented in the Methodology chapter. In review, it was felt that the theories and research presented by Jourard, Rogers and Yalom lent support to its use as a therapeutic measure. These theories state that it is adaptive and

emotionally healthy to self-disclose, give and receive feedback and in general, to exchange information with others. Therefore, if subjects become more self-disclosing, that is, make more affective and self-disclosing statements after the procedure, it infers therapeutic value or change. While it is true that this measure involves manipulation of verbal behavior directly and only indirectly supports therapeutic change, it lends some support to use of the procedure as a therapeutic instrument. However, the technique's benefits must be directly evaluated in conjunction with results of the other measures. It might be justifiably argued that making self-disclosing statements is not adaptive 100 percent of the time. It may be specifically argued, however, that the trait is beneficial in a psychotherapy context. Therefore, one may conclude that this hypothesis being supported infers partial and perhaps indirect therapeutic benefit.

The third hypothesis stated that the experimental group would be significantly more self-disclosing than controls after the final session. This was measured by the Modified Jourard Self-Disclosure Questionnaire. Experimental subjects did have significantly higher self-disclosure scores after the final session. This directly supports therapeutic benefit according to Jourard's (1968) theory of adjustment and emotional disturbance. Rogers (1959, 1961), Ryan (1970) and Sullivan (1940) make theoretical statements which support this finding inferring



therapeutic benefit. Ryan directly claims in his work with the FIRO-B that expressing what you want is emotionally healthy. Thus, self-disclosure would fit into this framework. The above authors have stated that feedback and self-disclosure appear to be significant factors in maladjustment. Thus, the finding that Fromme's technique was effective in making patients significantly more self-disclosing implies therapeutic benefit.

The fourth hypothesis involved the use of the Semantic Differential. The hypothesis tested was: The experimental group's mean differences between Real and Ideal Self measured by the Semantic Differential would be significantly less post experiment while the controls would not. This hypothesis was not supported by the results of the study. Some significant differences were found between Real and Ideal Self, but the differences were not consistent across groups. The differences may have been due to chance. In any case, the Rogerian theory of Real and Ideal Self discrepancies leading to maladjustment was not supported by this study. It is possible that the Semantic Differential was not the right instrument to measure these discrepancies if they exist. The high correlations and moderate to high mean scores of factors provide a measure of consistency across groups. It appears that the groups were closely matched as measured by factors on the Semantic Differential and were consistent in their trends. Overall, the means appear higher than one might expect from Roger's theory and

the mean differences less. One might expect low scores on the factors for Real Self as a measure of maladjustment. However, since no norms are available for the measure, one cannot be sure what the higher scores mean. One reason for the high correlations could be a "fake good" response set as is sometimes seen on the Minnesota Multiphasic Personality Inventory. The trend may have been toward denial and repression in psychoanalytic terms. That is, patients may have been willing to admit to many problems (as measured by the Mooney), but not blame it on internal problems or themselves per se. Another possible way of explaining the high correlations is the theory of cognitive dissonance. Festinger (1957) defined cognitive dissonance as a discrepancy between perception and expectation. Cognitive dissonance has been assumed to motivate defense mechanisms and behavior in general. Based on this theory, Real and Ideal Self would vary together and not be too different. That is, as Real Self was seen to be lower on some measure, the individual would lower his Ideal Self also to lessen cognitive dissonance. In light of the results, further research is needed to make any concrete conclusions about these correlations and/or Real and Ideal Self discrepancies.

The fifth hypothesis was: The experimental group will have significantly fewer problems than controls after the experimental treatment as measured by the Mooney Problem Check List. No support was given to this hypothesis by the results of this study. Since subjects were psychiatric

patients whose lives were involved in many other events, the results are not discouraging. The setting did not lend itself to control of environmental or other influences which may have been factors. If a longer time period was utilized, different results might have occurred. The Mooney was the most direct method of testing therapeutic benefit in the study. If total problems had changed significantly, it would have lent much support to the question of therapeutic benefit. Since it did not support therapeutic benefit, the question of beneficial change is only partially supported.

The question of therapeutic benefit is only partially answered by the results of this study. The two less direct measures (affective and self-disclosing verbalizations and Modified Self-Disclosure Questionnaire) support the inference that therapeutic benefit will result if Fromme's technique is utilized in a psychiatric population. The more direct measures (Semantic Differential and Mooney) do not support the inference. Although not an objective measure, the subjective reports of staff need to be considered within this discussion of therapeutic benefit. Staff members (who did not know which groups patients were in) reported to the experimenter that experimental subjects were getting easier to deal with since being in the groups. One staff member reported that several patients (who were in experimental groups) said that the groups were the best thing they had been involved in for therapy. This is consistent with patients' statements during the groups to

other group members. Several patients reported that they felt the groups to be therapeutic. Realizing that these reports are subjective, the reports have relevance in a practical sense and lend some support to therapeutic benefit. In summation, the question of therapeutic benefit cannot be completely answered at this time. However, it does appear that some benefit was gained and partial support was given for therapeutic change.

The subjective impressions of the experimenter may have had implications for the experimental technique. First, the feeling of not having control of the groups was difficult to cope with during the sessions. Although the groups were monitored through a one-way mirror, this experience was quite different from being in the room with the patients. The fear that events might get out of control was never supported and may have only been the experimenter's apprehension and not actually realistic. Second, patients reported in the sessions and afterwards that they enjoyed the absence of a therapist. This was consistent with the Harrow, et al. (1967) finding that unled group sessions show more warmth, less tension and less depression. Patients reported that absence of a therapist allowed them more control over the situation. The last subjective implication is that Slavson's (1964) criticism that unled groups may lead to disruptive acting out was not supported in this study. In fact, subjectively, there appeared to be

control of that very possibility by the group members. Whenever a group member became angry or agitated, the other group members appeared to try rectifying the situation.

The results of this study appear to be quite encouraging for future research. First, more research is needed with Fromme's technique. It appears that study of its effects over a longer term would be helpful in evaluating its utility as a therapeutic procedure. Conversely, since the technique resulted in significant changes after only two sessions, its effects as a short-term, preliminary and/or adjunctive method needs further evaluation. Additionally, the generalization of its effects needs a more controlled and precise study in a psychiatric population. A repeat of the same study done in the above suggested ways might support the findings of this study and perhaps uncover other implications.

Further research is also needed to answer the question of whether or not the technique has definite therapeutic benefit. Replication of the study would be one method of answering this question. However, use of different measures might well be a better method. One possible measure which could be used in a longer term replication would be the Minnesota Multiphasic Personality Inventory. Its use would be complicated, but a clinical evaluation could be obtained from it. Another possible measure would be clinical judgments from staff members. A checklist of symptoms or behaviors could be utilized pre and post or

across sessions. A checklist of this type may well exist and be normed on a psychiatric population. Careful evaluation of a measure to be used should be done and a proven, reliable measure used to answer this question.

As mentioned previously, research with Jourard's self-disclosure model, Rogerian Real and Ideal Self discrepancies and the correlations found in this study may be interesting and informative. The implications of the findings in this study that deal with these factors are currently unclear. It is possible that further research could clarify the issues.

In summary, it appears that several important conclusions can be made from this study. First, that the technique of modifying affective and self-disclosing verbalizations as developed by Fromme et al. (1974) is useful for a psychiatric population. The two hypotheses concerning this question were supported. The technique produced significantly more reinforceable verbalizations in the final session. Additionally, the technique produced significant differences beginning with the third session (second feedback session). It was also found that the effects of the experimental groups generalized to new groups. The question of therapeutic benefit was only partially supported. Its support came from two less direct methods of measuring therapeutic change. Subjects in the experimental groups made more affective and self-disclosing statements which theoretically would lead to

therapeutic benefit. Second, experimental subjects became significantly more self-disclosing than controls as measured by the Modified Jourard Self-Disclosure Questionnaire. No support was given to therapeutic benefit by results on the Semantic Differential nor was Rogerian therapy supported. No support was given to therapeutic benefit by the Mooney Problem Check List. Some support was given to therapeutic benefit by subjective reports of staff and patients. Overall, the question of therapeutic benefit gained only partial support and remains unclear. The final conclusion is that future studies are needed with the technique for its evaluation as a therapeutic benefit gained only partial support and remains unclear. The final conclusion is that future studies are needed with the technique for its evaluation as a therapeutic procedure and to determine its most beneficial usage.

## REFERENCES

- Ball, R. S. Reinforcement conditioning of verbal behavior by verbal and nonverbal stimuli in a situation resembling a clinical interview. Unpublished doctoral dissertation, Indiana University, 1952.
- Bateson, G., Jackson, D., Haley, J. and Weakland, J. Toward a theory of schizophrenia. Behavioral Science, 1956, 4, 251.
- Bergin, A. E. and Garfield, S. L. (Eds.) Handbook of psychotherapy and behavior change. New York: John Wiley & Sons, Inc., 1971.
- Binder, A., McConnell, D., and Sjöholm, N.A. Verbal conditioning as a function of experimenter characteristics. Journal of Abnormal and Social Psychology, 1957, 55, 309-314.
- Cameron, Norman Personality development and psychopathology: a dynamic approach. Boston: Houghton Mifflin Co., 1963.
- Corsini, R. and Rosenberg, B. Mechanisms of group psychotherapy: processes and dynamics. Journal of Abnormal and Social Psychology, 1955, 51, 406-411.
- Diagnostic and Statistical Manual of Mental Disorders (2nd Ed.) American Psychiatric Association: Washington, D.C., 1968.
- Duvall, R. D. Generalization of affective verbalizations in operant groups. Unpublished master's thesis, Oklahoma State University, 1974.
- Ekman, P. A comparison of verbal and nonverbal behavior as reinforcing stimuli of opinion responses. Unpublished doctoral dissertation, Adelphi College, 1958.
- Eysenck, J. F. The effects of psychotherapy: an evaluation. Journal of Consulting Psychology, 1952, 96, 319-324.
- Festinger, L. A theory of cognitive dissonance. Evanston, Illinois: Row, Peterson, 1957.



- Freud, S. The complete introductory lectures on psychoanalysis. New York: W. W. Norton, 1966.
- Fromm, E. Escape from freedom. New York: Holt, Rinehart & Winston, 1941.
- Fromme, D. K. and Close, S., Firo-B comparison and group modification of affective verbalizations. British Journal of Social and Clinical Psychology, 1974, (in press).
- Fromme, D. K., Whisenant, W., Susky, H., and Tedesco, J. F. Group modification of affective verbalizations. Journal of Consulting and Clinical Psychology, 1974, 42, 866-871.
- Goble, F. G. The third force. New York: Simon & Shuster, 1970.
- Gordon, L. V. The reflection of problem changes by the mooney problem check list. Educational Psychological Measures, 1949, 9, 749-752.
- Gordon, L. V. and Mooney, R. L. Mooney problem check list, adult form and manual. New York: The Psychological Corp., 1950.
- Gordon, L. V. and Mooney, R. L. A note on the organization of the problem check list. Educational Research Bulletin, 1949, 28, 212-214.
- Green, A. H. and Marlatt, G. A. Effects of instructions and modeling upon affective and descriptive verbalization. Journal of Abnormal Psychology, 1972, 80, 189-196.
- Greenspoon, J. The effect of two nonverbal stimuli on the frequency of members of two verbal response classes. American Psychologist, 1954, 9, 384.
- Greenspoon, J. The reinforcing effect of two spoken sounds on the frequency of two responses. American Journal of Psychology, 1955, 68, 409-416.
- Harrow, M., Astrachen, B. M., Becker, R. E., Miller, J.C., and Schwartz, A. H. Influence of the psychotherapist on the emotional climate in group therapy. Human Relations, 1967, 20, 49-64.
- Hildum, D. C. and Brown, R. W. Verbal reinforcements and interviewer bias. Journal of Abnormal and Social Psychology, 1956, 53, 108-111.

- Houston, V. M. and Marzolf, S. S. Faculty use of the problem check list. Journal of Higher Education, 1944, 15, 325-328.
- Jourard, S. M. Disclosing man to himself. New York: Van Nostrand Reinhold Co., 1968.
- Jourard, S. M. The transparent self. New York: Van Nostrand Reinhold Co., 1964.
- Kiesler, D. J. Some myths of psychotherapy research and the search for a paradigm. Psychology Bulletin, 1966, 64, 114-120.
- Kirk, Roger Experimental design: procedures for the behavioral sciences. Belmont, California: Brooks/Cole, 1968.
- Krasner, L. A technique of investigating the relationships between behavior cues of examiner and verbal behavior of patient. Journal of Consulting Psychology, 1959, 55, 145-156.
- Krasner, Leonard Studies of the conditioning of verbal behavior. Psychological Bulletin, 1958, 55, 149-169.
- Langs, Robert The technique of psychoanalytic psychotherapy (Vol. 1). New York: Jason Aronson, Inc., 1973.
- Liberman, Robert A behavioral approach to group dynamics. Behavior Therapy, 1970, 1, 141-175.
- Maslow, A. H. The further reaches of human nature. New York: Viking Press, 1971.
- McNair, D. M. Reinforcement of verbal behavior. Journal of Experimental Psychology, 1957, 53, 40-46.
- Mock, J. F. The influence of verbal and behavioral cues of a listener on the verbal productions of the speaker. Unpublished doctoral dissertation, University of Kentucky, 1957.
- Nuthman, Anne M. Conditioning of a response class on a personality test. Journal of Abnormal and Social Psychology, 1957, 54, 19-23.
- Osgood, C. E., Suci, G. J., and Tannenbaum, P. H. The measurement of meaning. Urbana, Ill.: University of Illinois Press, 1957.

- Poser, E. G. The effect of therapist's training on group therapeutic outcome. Journal of Consulting Psychology, 1966, 30, 283-289.
- Reynolds, G. S. A primer of operant conditioning. Glenview, Ill.: Scott, Foresman & Co., 1968.
- Rogers, C. R. Client-centered therapy. Boston: Houghton Mifflin, 1951.
- Rogers, Carl R. On becoming a person. Boston: Houghton Mifflin, 1961.
- Rogers, C. R. A theory of therapy, personality, and interpersonal relationships, as developed in the client-centered framework. In S. Koch (Ed.) Psychology: a study of a science (Vol. 3). New York: McGraw-Hill, 1959, 184-256.
- Ryan, Leo R. Clinical interpretation of the Firo-B. Palo Alto, California: Consulting Psychologists Press, Inc., 1970.
- Salzberg, H. C. Manipulation of verbal behavior in a group psychotherapeutic setting. Psychological Reports, 1961, 9, 183-186.
- Sarason, I. G. Interrelations among individual difference variable, behavior in psychotherapy, and verbal conditioning. Paper read at Western Psychological Association, Eugene, Oregon, May, 1957.
- Shimkunas, A. M. Demand of intimate self-disclosure and pathological verbalizations in schizophrenia. Journal of Abnormal Psychology, 1972, 80, 197-205.
- Sidowski, J. B. Influence of awareness of reinforcement on verbal conditioning. Journal of Experimental Psychology, 1954, 48, 355-360.
- Slavson, S. R. A textbook in analytic group therapy. New York: International Universities Press, 1964.
- Sullivan, H. S. Conceptions of modern psychiatry. New York: W. W. Norton, 1953.
- Sullivan, H. S. The interpersonal theory of psychiatry. New York: W. W. Norton, 1953.
- Taffel, C. Anxiety and the conditioning of verbal behavior. Journal of Abnormal and Social Psychology, 1955, 51, 496-501.

- Truax, C. B. and Carkhuff, R. R. Toward effective counseling and psychotherapy. Chicago: Aldine Publ. Co., 1967.
- Ullman, L. P., Krasner, L., Collins, B. J. Modification of behavior through verbal conditioning. Journal of Abnormal and Social Psychology, 1961, 62, 128-132.
- Verplanck, W. S. The control of the content of conversation: reinforcement of statements of opinion. Journal of Abnormal and Social Psychology, 1955, 51, 668-676.
- Watzlawick, P., Beavin, J., and Jackson, D. Pragmatics of human communication. New York: W. W. Norton & Co., 1967.
- Williams, R. I. and Blanton R. L. Verbal conditioning in a psychotherapy situation. Behavior Research and Therapy, 1968, 6, 97-103.
- Wolf, A. Group psychotherapy with adults: the alternate meeting. Paper read at APGA Conference, New York, January 27, 1961.
- Yalom, I. D. The theory and practice of group psychotherapy. New York: Basic Books, 1970.
- Yalom, I. D., Tinklenberg, J., and Giluln, M. Curative factors in group therapy. Unpublished study cited in Yalom, I. D., The theory and practice of group psychotherapy. New York: Basic Books, 1970.

## APPENDIXES

## APPENDIX A

### BASIC INSTRUCTION CARDS

1. Any verbal expression of your current feelings resulting from interaction with the group.
2. Statements to another group member regarding your perception of his behavior.
3. Seeking information regarding your own behavior.
4. Attempting to clarify the expressed feelings of another person.
5. Seeking information from another group member regarding his feelings.

HERE and NOW

## APPENDIX B

### INSTRUCTIONS

These group sessions are designed to help you get to know one another on a personal basis. One way of doing this is to share your feelings with each other regarding the current situation. If a person's behavior pleases or displeases you, the best way to get him to continue or stop is by telling him how you feel about his behavior. When doing this, it will be best if you stay in the "here and now," that is, speak to him regarding the current situation, not the past. Empathy and understanding given to a person is a natural way to become close to someone.

There are many superficial communications which we all engage in. However, I have here (showing the cards) some specific statements of what I have been talking about. They are ways of interacting which have been shown to be effective in establishing and keeping close relationships. They are:

1. Any verbal expression of your current feelings resulting from interaction with the group.
2. Statements to another group member regarding your perception of his behavior.

3. Seeking information regarding your own behavior.
4. Attempting to clarify the expressed feelings of another person.
5. Seeking information from another group member regarding his feelings.

You can see that all these categories involve the current situation. They are also about feelings and not ideas. I am asking you to interact with each other for 45 minutes using these categories.

I will monitor the group through the one-way mirror and the microphone. What you say will be recorded but will be kept confidential.

#### Feedback Sessions

Whenever someone makes a statement which fits into one of the categories, I will activate the counter in front of him. It will make a loud click which will let you know that you are in fact using these categories in your interaction. The counter will register your total and if anyone falls too far behind, the red light in front of him will be turned on and will remain on until he catches up. If no one gets a click for three minutes, all lights will flash on. This will be a sign that the group is not using the categories and should change the nature of the interactions.



## APPENDIX C

### THE SEMANTIC DIFFERENTIAL

Hard	_____	_____	_____	_____	_____	_____	_____	Soft
Cautious	_____	_____	_____	_____	_____	_____	_____	Rash
Friendly	_____	_____	_____	_____	_____	_____	_____	Unfriendly
Bad	_____	_____	_____	_____	_____	_____	_____	Good
Active	_____	_____	_____	_____	_____	_____	_____	Passive
Dishonest	_____	_____	_____	_____	_____	_____	_____	Honest
Progressive	_____	_____	_____	_____	_____	_____	_____	Regressive
Pleasant	_____	_____	_____	_____	_____	_____	_____	Unpleasant
Stable	_____	_____	_____	_____	_____	_____	_____	Changeable
Weak	_____	_____	_____	_____	_____	_____	_____	Strong
Calm	_____	_____	_____	_____	_____	_____	_____	Excitable
Harmful	_____	_____	_____	_____	_____	_____	_____	Beneficial
Insincere	_____	_____	_____	_____	_____	_____	_____	Sincere
Kind	_____	_____	_____	_____	_____	_____	_____	Cruel
Competitive	_____	_____	_____	_____	_____	_____	_____	Cooperative
Severe	_____	_____	_____	_____	_____	_____	_____	Lenient
Exploitative	_____	_____	_____	_____	_____	_____	_____	Accomodative
Trustworthy	_____	_____	_____	_____	_____	_____	_____	Untrustworthy
Uninhibited	_____	_____	_____	_____	_____	_____	_____	Inhibited
Nonaggressive	_____	_____	_____	_____	_____	_____	_____	Aggressive

## APPENDIX D

### FACTORS UTILIZED IN THE SEMANTIC DIFFERENTIAL

<u>Factor</u>	<u>Scale concept used</u>
Potency	Hard-soft cautious-rash weak-strong severe-lenient
Evaluation	good-bad honest-dishonest beneficial-harmful kind-cruel
Activity	active-passive progressive-regressive stable-changeable calm-excitable
Aggressiveness	aggressiveness-nonaggressive
Affect	friendly-unfriendly pleasant-unpleasant sincere-insincere trustworth-untrustworthy
-----	
Motive	Affect factor + evaluative factor
Capability	Activity factor + potency factor
Frustration	Motive - capability factor

## APPENDIX E

### SELF-DISCLOSURE QUESTIONNAIRE

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 that I might like about my face and head - eyes, nose, hair, teeth, etc.
27. How I wish I looked: my ideals for overall appearance.
28. Whether or not I now have any health problems - e.g., trouble with sleep, digestion, female complaints, 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~~

RATING SCALE FOR SELF-DISCLOSURE QUESTIONNAIRE

<u>Item</u>	<u>Rating</u>
A. Would tell these people nothing about this aspect of me.	0
B. Would talk in general terms about this item.	1
C. Would talk in full and complete detail about this item to these people	2
D. Would lie or misrepresent myself to these people about this particular item.	0

## APPENDIX G

### A COMPLETE LISTING OF THE PROBLEM AREAS OF THE MOONEY PROBLEM CHECK LIST

1. Health (H)	36 items
2. Economic Security (ES)	36 items
3. Self Improvement (SI)	36 items
4. Personality (P)	72 items
5. Home and Family (HF)	36 items
6. Courtship (C)	18 items
7. Sex (S)	18 items
8. Religion (R)	18 items
9. Occupation (O)	18 items

VITA<sup>2</sup>

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