

SOME INTERPERSONAL CONDITIONS  
OF EFFECTIVE PSYCHOTHERAPY

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## CHAPTER I

### INTRODUCTION

Speculation and research abound on the questions of what characteristics of the therapist make for successful psychotherapy and what procedures constitute the therapeutic process. Shafer and Lazarus (1952, p. 306) attempt to define the basic function of the therapist by writing that, "The therapeutic situation must revolve about and be dependent upon what the patient has to say. The success of the treatment depends upon understanding the patient, and understanding cannot be accomplished unless the patient talks. The technique of getting the patient to talk and to continue to talk must be the real core of treatment." The present study uses this statement as a premise and attempts to go on from that point to an inquiry into how this talking behavior is facilitated.

This research attempts partially to answer the questions posed by Krasner (1955). In his attempt to outline the major aspects of psychotherapy amenable to controlled experimentation he asks, "What aspect of the therapist's behavior can be isolated and used as a stimulus in the control of the patient's behavior? In essence, the question is, what are the basic irreducible elements of an interpersonal situation which must exist in order to term the situation a psychotherapeutic one?"

To these questions Krasner responds by writing,

First of all, we must start with the fact that the therapist is physically present with the patient. In all psychotherapies, the therapist, if only by his presence in the same room, indicated that he is interested in the patient and pays attention to the behavior of the patient. It sounds like the simplest and most axiomatic thing to say about psychotherapy, but it would seem reasonable to assume that the factor of the therapist listening, paying attention, showing some interest, is a basic and indispensable variable of the therapeutic situation. The therapist focuses more attention on those aspects of the patient's verbal emissions which his particular orientation calls for, but in any case he displays a generalized form of behavior cues which we may label as "attention." These behavior cues may consist of looking at the patient's face, smiling, writing, nodding of the head, picking up or putting down a pen, saying "mm hum" or, most common of all, using overt speech. It would certainly seem that these cues have some effect on the patient's behavior, more specifically his rate of verbalizing and the types of material he verbalizes.

It is to this question of the influence of the gross physical presence of the therapist, that the present study is addressed. We propose to introduce degrees of physical presence of an interviewer as an independent variable, to determine whether it has any effect on measurable aspects of a subject's talking behavior. It is felt that this is of importance because this supposition of therapist presence and attention constitutes an underlying, and often unexpressed premise of most of the research already done on the therapist, his personality, and his modes of functioning in the therapy situation. To some of this earlier literature we must now turn.

### Therapist personality

A number of studies bear on the personality of the therapist in relation to therapeutic competence. They attempt to demonstrate that personality factors affect the proficiency of the psychotherapist. Whitehorn and Betz (1954), used patient improvement rate as the criterion for rating

competence. These ratings were based on therapy with schizophrenic patients. All therapists achieving sixty-eight percent or better improvement rates were designated "A" therapists while those not attaining this level of improvement were designated "B" therapists. When a detailed analysis of case records was performed it was found that "A" therapists tended to select personality oriented rather than psychopathology oriented goals in treatment, that they had greater facility in grasping personal meanings and motivations of the patient's behavior, and that they expressed attitudes freely on problems and set limits. When the Strong Vocational Interest Inventory was administered it was found that therapists in the "A" group showed interest in the categories of Lawyer and CPA, while "B" group therapists had interests like those of Printer and Mathematical Physical Science Teacher. This would suggest that the therapist's interests play an important role in his competence in the therapeutic setting. It is further suggested that the differences in interest between the two groups of therapists significantly affected the interchange between the therapist and his patients.

Knupfer, Jackson, and Krieger (1957) examined the relationship between personality characteristics of forty psychiatric residents and ratings of competence. A rating of therapeutic competence was made on each resident by three supervisors. Subjects were divided into high and low on this rating and each subject gave a self-description by Q-sort. Some of the characteristics of those rated high in therapeutic competence were:

1. Expresses hostility directly.
2. Sarcastic and cynical.

3. Pushes limits. Sees what he can get away with.
4. Has a rapid personal tempo. Thinks and acts rapidly.
5. High Level of aspiration.
6. Seeks out opposite sex.
7. Able to sense other's feelings.
8. Able to convey personal feelings and thoughts.

Those who were rated low in therapeutic competence had the following characteristics:

1. Behaves in an indulgent and forgiving way.
2. Is suggestible. Overly responsive to other people's evaluation rather than his own.
3. Has a brittle ego defense. Small margin of intergration.

Parloff (1956) used two "expert" therapists who treated the same patients at different times. Based on colleagues' ratings of quality of social relationships established by these experts with their peers, and judges' ratings of relationship established between therapist and patients it was found that the therapist who was able to establish the better therapeutic relationships had also established the better social relationships. Moreover, the therapist who perceived a patient as approximating his Ideal Patient concept more closely created the better relationship with that patient.

It was found by Bandura (1956) that anxious therapists were rated as less competent than therapists who were low in anxiety. The results were interpreted as indicating that the presence of anxiety in the therapist, whether recognized or not, affects his ability to do successful psychotherapy and that insight into his anxieties alone is not sufficient.

Hiler (1958) studied whether therapists differ with respect

to the type of patients tending to remain in treatment or break off prematurely. He also investigated what characteristics of the therapists may be responsible for the differences in their patients' reaction to them. He found that:

1. Therapists in general differ in regard to the type of patients who continue or discontinue treatment with them.

2. Whether the therapist is a psychiatrist, clinical psychologist, or psychiatric social worker seems unrelated to the type of patients who continue or discontinue treatment.

3. Whether the therapist was male or female did make a difference. The female therapists tended to lose slightly more of the productive patients than did the male therapists.

4. Therapists rated as warm and friendly were able to keep in treatment a larger percentage of unproductive patients than therapists rated as least warm and friendly.

5. Therapists rated as most competent at analytically oriented therapy tended to lose fewer productive patients than therapists rated as least competent.

On the basis of a series of studies Snyder (1953) listed a number of therapist variables which seem to affect the patient-doctor relationship. Among these personality characteristics are self-insight, insight into others, adaptability, and emotional control.

Goldman-Eisler (1952) investigated individual differences between interviewers (three senior psychiatrists) and the effects of these differences on the interaction patterns of patient-interviewer. Each of her interviewers used his own pattern of interviewing. She found that each of the three psychiatrists had his own individual interaction pattern regardless of the type of patient he was interviewing (depressed versus active patients). It was further found that the three therapists influenced the interaction patterns of the same ten patients in different ways such that depressed patients talked more

with one therapist than with another, while these same therapists had opposite effects on talkative patients.

Luborsky, Holt, and Morrow (1950) found that of 247 psychiatrists in training, those who were rated as the better therapists established better relationships with their supervisors and their fellow residents.

In a follow-up study Luborsky (1952) noted that, of these same 247 psychiatrists, the therapists who were subsequently rated as most competent were the ones who had also established the better relationships with ward personnel and with research project staff. It was noted that the ratings of personal liking for the therapist by the research staff were better predictors of the doctor's competence as a therapist than were the other measures used.

In summary, a considerable body of literature exists to show that interviewer personality factors affect the process and outcome of psychotherapy. These studies do not reveal, however, any of the interpersonal communication processes whereby the subject is stimulated by the therapist's personality and responds accordingly. It is the purpose of the present study to partially study this dimension.

### Training and experience

The training and experience of the psychotherapist as it related to therapeutic efficiency has also attracted considerable research attention. Fiedler (1949, 1951) found that experts established better relationships than their nonexpert colleagues. Moreover the description of the relationships made by experts of one school more closely approximated those made by experts of other

schools than they resembled relationships as described by nonexperts of the same school. In each of the factor analyses performed on the descriptions in the later study, one factor or pair of correlated factors was found which clearly differentiated experts from nonexperts regardless of school. These factors were related to the therapist's ability to communicate with and understand the patient, and to his security and his emotional distance to the patient. No factors were found which clearly separate therapists of one school from those of another. Fiedler concluded from his data that the hypothesis of his series of investigations, that the nature of the therapeutic relationship is a function of expertness rather than school, was supported.

In another study of the same series Fiedler (1950) found that experienced therapists of markedly divergent orientations (psychoanalytic, non-directive, and Adlerian) were closer to one another in treatment operations than were the novices and the experts of a homogeneous theoretical persuasion.

Strupp (1955a), addressing himself to the question of the existence of systematic differences in technique attributable to professional affiliation and level of experience found:

1. The response profiles (using Bales' interaction process analysis, 1950) of the three professional groups of psychiatry, psychology, and psychiatric social work display a considerable degree of similarity.

2. Experienced psychiatrists and psychologists give:

- (a) a larger number of interpretive responses,
- (b) inexperienced psychiatrists show a preference for exploratory responses, and
- (c) experienced psychiatrists use more passive rejections.

In a study by Strupp (1955b) the effect of the therapist's personal analysis with reference to a series of patient communications

and to: (a) suicidal threats, (b) transference reactions, and (c) schizoid productions was examined. Therapeutic responses were secured from twenty-five psychiatrists, seven psychologists, and nine psychiatric social workers of varying degrees of professional experience, by presenting a series of twenty-seven patient statements extracted from actual therapeutic interviews. Within the limitations of the study it was found that personal analysis had a demonstrable effect on the therapist's verbal behavior. It was also shown that this effect was independent of the therapist's level of experience.

In a later study Strupp (1958) found that the clinical evaluations of psychiatrists were similar to those of psychologists of comparable experience despite marked intragroup differences. In some respects psychologists as a group appeared to be more passively expectant in their therapeutic approach than psychiatrists. Experienced therapists in both groups, however, tended to be warmer in their communications to the patient. A series of related experiments by Strupp has been reported by him in his chapter in *Beuhrach* (1962). In general, the results showed some differences between groups of differing professional affiliation, but these differences were not as great as the differences between experienced and nonexperienced therapists of the same profession, nor did the differences outweigh the similarities between practiced therapists of different orientations.

In an experiment by Lakin and Lebovitz (1958) seventeen psychotherapists of three different orientations free associated to the question, "As a psychotherapist, how would you think of this person?" when given only minimal identifying information of a patient.

Virtually all of the therapists, regardless of school affiliation, evaluated the patient similarly in terms of potential for recovery. Beyond this general agreement background factors unique to each orientation appeared to determine emphasis as well as mode of approach.

Ashby, Ford, and Guerney (1957) studied the effects on clients of a reflective and a leading type of psychotherapy. They summarized their results thusly:

1. The view that a leading and a reflective type of therapy produce different effects on clients was slightly supported.

2. The view that pretherapy characteristics of clients relate differentially to client reactions to therapy in reflective and leading types of therapy was partially supported.

3. The view that individual therapists create different effects on their clients independent of the type of therapy given was partially supported.

4. The view that selected therapist characteristics are related to the kinds of relationships established, the amount of defensive or guarded verbal behavior elicited from clients, and the amount of change in adjustment produced in clients was not supported.

5. The view that the interaction of the therapist as an individual and the type of therapy he is employing effects clients was partially supported.

Fey (1958) examined the extent to which differences in doctrine and in experience tend to be reflected in the behavior of psychotherapists. The primary data consisted of therapists' reports of their handling of issues often arising in treatment. The respondents were Rogerians, analysts, young eclectics, and older eclectics. Correlations among therapists indicated greatest homogeneity among the Rogerians, least among the analysts. Comparisons of the responses typical for each group suggested that the analysts and young eclectics resembled each other most while older eclectics and Rogerians were

least alike.

In a questionnaire survey of British psychoanalysts, Glover (1955) demonstrated that the practice of a relatively homogeneous group of therapists could by no means be considered equivalent.

In general, the studies on the effect of the interviewer's professional affiliation and training on patient's behavior have shown that the experienced interviewer of one discipline bears a greater similarity in his behavior to experienced interviewers of another discipline than he does to less experienced interviewers of his own discipline. This would suggest that experience itself yields to the interviewer some as yet undetermined characteristic that facilitates the interpersonal relationship. We are thus led to believe that the physical presence and attention of the interviewer is not the basic variable of psychotherapy as Krasner (1955) suggested, but rather an ancillary one.

#### Therapist appearance

Little research has been done in the area of the effect of the therapist's physical appearance upon the therapeutic relationship. One notable exception is the study by Robinson and Rohde (1946). In this study four interviewer groups were used: (a) Jewish appearing, (b) non-Jewish appearing, (c) Jewish appearing who introduced themselves with Jewish names, and (d) non-Jewish appearing who introduced themselves with non-Jewish names. The subjects were asked the following two questions: (a) "Do you think there are too many Jews holding government offices and jobs?" and (b) "Do you think the Jews have too much power?" The frequency of anti-Semitic responses on both questions

was greatest where the interviewer did not appear to be Jewish. As the Jewish identification increased there occurred a decrease in the frequency of anti-Semitic responses.

#### Relation of previous work to present study

We have thus far seen that the therapist's personality, experience, professional affiliation, and appearance can and may influence the behavior of the patient in therapy. These are aspects of the therapist which are at least partially out of his own control. There are two prime ways that have been used historically in psychotherapy to minimize the effect of these otherwise uncontrolled variables. In the Freudian psychoanalytic situation the therapist does not sit in view of the patient and thus provides less information to the patient about his personality and appearance. The same effect is achieved by Karpman in his use of written material. Karpman asks the patient, after a few preliminary interviews, to answer a series of questions taken from his own autobiography. These answers are submitted in writing and when they have been received the therapist prepares a typed memorandum for the patient. This exchange constitutes the major portion of the therapeutic situation. Incorporated in this therapy procedure is the use of bibliotherapy in which the patient's attention is further focused on written material rather than an interpersonal relationship.

In the light of Krasner's (1955) statement on the fundamental importance of a physically present, attentive, listening therapist it would appear that both Freud and Karpman have negated the basic foundation of psychotherapy, the interpersonal relationship.

There is research, however, that would tend to support the technique of encouraging physical and social distance between therapist and patient. Ellis (1948) studied the love relationships of female college students by personal interview followed by questionnaires filled out one year later by the same students. In general, the subjects exhibited less favorable (that is, less acceptable in our society) response patterns on the questionnaire than in the interview. Of the sixty-nine subjects, fifty-three gave on the whole less favorable questionnaire than interview responses, eight about the same, and only eight more favorable responses.

Further evidence tending to confirm Ellis' general findings was found in a study by Metzner and Mann (1952). Anonymous questionnaires, group administered, covering the area of satisfaction with job and supervisor were obtained from workers in a utility company. Personal interviews with 328 of these respondents were conducted at a later date, using two questions that were similar to the original wordings in the questionnaire, but not identical. Comparison of the results revealed a general tendency among workers to report less dissatisfaction in the personal interview. The change in procedure had a differentially greater effect on blue-collar workers than on white-collar workers. These differential effects supported the notion that the anonymity of the self-administered questionnaire permits greater expression of unsanctioned attitudes, since the blue-collar workers in general were found to be less satisfied with their work.

Lazarsfield and Franzen (1945) summarized their research on the differential effects of face-to-face interviewing versus questionnaire interviewing with the statement that, "These findings substantiate

several claims that are usually made for mail answers: (a) bias that comes from the respondent's desire to impress or conceal from the interviewer is eliminated, (b) answers to personal questions are more frequently given in an anonymous mail reply, and (c) a mail reply is filled out in leisure and thus produces a more thoughtful answer."

While pertinent to the present study in terms of the light it shed upon the effect of the presence of an interviewer on the quantity and quality of information yielded in an interview, the extent to which questionnaire research can be generalized to the psychotherapeutic situation is unknown. More closely approximating the actual therapy situation is Colby's (1960) research. In his study normal male subjects were asked to free associate for a series of half hour periods. During some of these periods a silent observer was present and in the remainder of the periods the subject was alone. Colby's data suggested that productivity was significantly increased by the presence of the silent, non-interacting observer.

Martin, Lundy, and Lewin (1960) placed their subjects into three experimental therapy situations. These situations were: (a) talking to a tape recorder, (b) talking to a therapist who would respond on a non-verbal level only, and (c) a regular therapeutic situation, nondirectively oriented. The degree of manifest (as measured by GSR) and reported anxiety was obtained as well as ratings concerning the patient's tendency to approach meaningful areas of discussion and amount of associated affect. Over a period of five half-hour sessions the "regular" group showed a tendency to approach more affectively laden content and to experience more anxiety during

the initial approach, but showed overall anxiety reduction. Thus, these experimenters concluded that meaningfulness of the material dealt with has a direct relationship to therapist involvement.

The present research proposes to investigate the interviewer variable, in terms of degree of physical presence with the interviewer, and shall utilize the patient's verbal behavior as the dependent variable. It has been suggested, from previous literature, that the mere presence of an interviewer would tend to increase productivity (Colby, 1960). This would be in accord with Krasner's (1955) notion, as cited earlier, that therapist physical presence and attention are the basic elements of psychotherapy. It is questionable, however, whether increase in verbal productivity reflects true self-revealing behavior as suggested by Martin, Lundy, and Lewin (1960), or rather just an increase in verbal productivity devoid of meaning. It has been noted above, for example, that questionnaire techniques in which the questioner is not present resulted in answers which at least superficially, would appear more self-revealing.

The hypotheses to be tested in this study may be summarized as follows:

1. The degree of presence of an interviewer will have a significant effect upon the amount of verbalization elicited from the subject, with greater presence yielding more verbal responsiveness on the part of the subject.

2. The degree of physical presence of an interviewer will have a significant effect on the amount of self-revealing verbal behavior the subject will yield. It is predicted that the greater the presence the more self-evaluating behavior will be forthcoming from the subject.

#### Measurement of verbal behavior

The most striking feature of recent research in psychotherapy.

is the variety of techniques now available for conducting such studies. Matarazzo has pioneered the methods by which the independent variable, therapist or interviewer behavior, can be controlled experimentally. In his research Matarazzo carefully structured the experimenter-therapist's reaction times, interruption or non-interruption behavior, duration of verbalizations, and frequency and duration of silences so as to study the effect that various patternings of therapist behavior, on a time dimension, have upon patient behavior in that same dimension. His use of Chapple's Interaction Chronograph provides a useful and objective tool for measuring behavior change in the therapy situation. For a more detailed report of Matarazzo's work the reader is referred to Matarazzo's chapter in Bachrach (1962).

Goldman-Eisler (1952) used much the same dependent variable as does Matarazzo. She found that interviewers with different action-silence patterns effected differentially the action-silence patterns of their subjects. Others who have used action-silence as the dependent variable in psychotherapy research have been MacLay and Osgood (1959) and Timmons, Rickard, and Taylor (1960).

Lorenz and Cobb (1952, 1953, 1954), as well as other researchers, have used grammatical distribution and word frequency of patient and normal groups, as a dependent variable. Comparison of patient with control language patterns indicated that there were statistically significant differences, which could be justified on the basis of pathology, between the normal controls and the patients.

Jaffe (1958) analyzed interview material by using what he called a Type-Token Ratio (TTR). The ratio was obtained by comparing the number of different words with the total number of words in blocks of fifty words. The value of such a method lies in its emphasis upon redundancy on the part of the interviewee which was considered a negative measure of the amount of new and different information that is being imparted in the fifty word interval. Thus, if a person were to say only one word over and over he would obtain a TTR of 1/50, whereas a person who never used the same word twice in a fifty word block would have a TTR of 50/50. This procedure avoided the difficulty that Kanfer (1959) faced while using as his data words per minute. In this case, if a subject rapidly repeated a single word his score, which was intended to denote rate of information flow, might be higher than somebody's who spoke slowly, to the point, and was quite self-revealing.

Larger elements than the single word have as well been used in content analyses of interview behavior. Lennard and Bernstein (1960) used propositions as their basic element. They used this unit making the assumption that a long statement (one containing many propositions) contained more information than a short statement (containing one or only a few propositions). Colby (1969) preferred the sentence, which he called "a single, minimum, free utterance" as the basic unit in his research.

Bales (1950) introduced a coding method which essentially broke down the dimension of cooperation-resistance into twelve separate categories corresponding to a like number of degrees of cooperativeness. Another method for categorization of verbal exchange

was that proposed by Coffey, Freedman, Leary, and Ossorio (1950) and elaborated by Freedman, Leary, Ossorio, and Coffey (1951). In this system there are sixteen scoring categories in which behavior may be represented. These categories were designed so as to give a graded representation of all possible aspects of interpersonal exchange.

Heyns (1948) presented another scheme for the study of verbal content in interpersonal interaction. Primarily concerned with group problem solving behavior he defined twelve separate categories such as "goal setting", "problem proposals", and "information seeking" to indicate all the possible activities the members of a problem solving group might engage in during their interaction with one another. An approach emphasizing the motivational component of interpersonal behavior was presented by Steinzor (1949). His final system consisted of two category sets. The major one is comprised of eighteen categories and one residual category. Categories such as "activate and originate", "structure and delimit", "diagnose by labeling", were focused on the intent of the actor, ignoring the motivational consequences of the act in the other members of the group.

Murray (1956) devised a method which encompassed nineteen categories for interviewee's content and ten for the interviewer. Porter (1943, 1943a) concerned himself with classification of the interviewer's responses. Concerned with client-centered therapy, his classification system emphasized the degree of responsibility which was assumed by the therapist. Snyder (1945) used a modification of Porter's categories to designate the techniques used by the interviewer

in a non-directive therapy setting. Some of his categories were "restating content", "clarifying feeling", "interpreting", "structuring", and "leading". Snyder was concerned, as well, with the client's responses and used a separate classification for these responses which included such behaviors as simple responses, planning, and insight. A classification system developed by Curran (1945) used as a measure of insight the relating of two previously unrelated problems by the client. Curran's classification system is of note in that he attempted to indicate not only that the interviewee was discussing a problem, but an attempt was also made to indicate the general nature of that problem.

Dollard and Mowrer (1947) created a codification system based on the theoretical tenets of learning theory. Their discomfort-relief quotient (D.R.Q.) was obtained by taking the ratio of the number of discomfort and relief words. These authors applied the D.R.Q. to larger units than words as well, such as sentences or "thought units". Raimy (1948) presented a similar system to the D.R.Q. with his positive-negative-ambivalent quotient (PNAVQ). It differs from Dollard and Mowrer's system only in that it concerns itself solely with the client's self-referring comments and not to everything he says as does the D.R.Q.

Fisher (1956) created a system similar to that of Murray (1956) in which his main concerns were with depth of interpretation and plausibility of interpretation. Weeks (1957) reported a study in which each client's responses were rated on a five point scale of expressed affect. Strupp (1957) presented a method of analysis of interview material with special emphasis on the activity of the

therapist. Each of the therapist's comments are viewed from five different vantage points: (a) the kind of technique employed by the therapist, (b) the amount of inference employed by the therapist in his comments to the patient, (c) the focus of the therapeutic interventions, (d) the degree of initiative assumed by the therapist, and (e) the warmth versus coldness in the attitude of the therapist. More comprehensive listing and description of coding schemes are summarized in an article by Strupp in Bachrach (1962), the Handbook of Social Psychology (Lindzey, 1954) and Auld and Murray (1955).

In general, the attempts to quantify verbal material have all attempted to cope with the two problems of reliability and validity in different ways. On the one hand we find the studies that disregard content and measure such aspects of verbal behavior as duration or frequency. This was usually done in the interest of reliability and in many instances lost the "what" of the verbal behavior in order to quantify the "how" of such behavior. While yielding interesting and valuable information, this approach yields little that is specific to the problems of psychotherapy. The contrasting approach evidenced in the cited research emphasizes the content of the verbal material, but often does this at the expense of reliability of coding. This is especially true when the researchers have a theoretical bias so as to sensitize them to particular aspects of the verbal behavior at the expense of other aspects. Thus, while a content approach as used in the cited studies is meaningful for psychotherapy, there remains room for a more quantifiable measure of content in

interviewer research. It is the purpose of this study to attempt to formulate such a measuring instrument.

## CHAPTER II

### PROCEDURE

The selection of the dependent variable becomes crucial when one is attempting to quantify verbal behavior. As noted above, there have been many attempts in the literature to create reliable and valid coding schemes for such a quantification. This experimenter felt, however, that a greater degree of objectivity in the scoring technique than is available in most of the mentioned systems would be of considerable value to such research as was attempted here. The first step in creating such a system is the determination of the coding unit. After attempts to use a number of different units it was found that the simple sentence offered a useful and reliable unit. The following rules were created for defining the unit as it is used in this study:

1. A simple sentence was to be treated as a single unit.
2. A compound sentence was to be broken down into its main clauses and each main clause was to be treated as a unit.
3. A complex sentence was to be treated like a simple sentence and thus was to be treated as one unit.
4. A compound-complex sentence was to be broken down into its main clauses and each main clause be considered one unit.
5. Interrogative and imperative sentences were not to be considered as units.

In our attempt to determine what would be the most valuable and yet reliable dimensions for coding the units the question was asked as to what verbal behavior the psychotherapist most values in the therapy situation. It was felt that therapists are usually interested in two aspects of the patient's verbalizations. The first of these may be designated as "self-descriptive", which has already received some attention in the studies of Lorenz and Cobb (1952, 1953, 1954) and Rainy (1948). It is usually considered to be therapeutically beneficial for a patient to be talking about himself, rather than of other people or generalized concepts. Second, when talking of himself, it is again thought to be most conducive to progress of the therapy situation if these self-referring statements reveal feelings or internal states, rather than reporting fact or description.

We thus arrived at the categorization of verbal behavior into three codable categories: (a) self-descriptive, (b) other-referring, and (c) self-evaluative behavior. The term evaluative used here is to be contrasted with descriptive. An evaluative statement is one which the listener cannot empirically verify. In fact, the usual meaning of truth or falsity cannot be ascribed to such a statement. It expresses an internal state such as feeling, attitude, or judgement. A descriptive statement is empirically verifiable. The listener can determine truth or falsity by examination of the world. Thus, if a person says, "I am ugly" this would be considered an evaluative statement as it is based on a personal standard (of beauty). The statement, "I am six feet tall" however, is a descriptive statement. It depends upon other than an individualistic standard and the truth of the statement may be determined by simply measuring the person.

Again a set of coding rules was established so as to standardize and objectify the coding procedure. These rules were as follows:

1. If the verbal unit yields information about the speaker, and if it appeared to be the intention of the speaker to yield such information about himself, the unit was to be coded as self-descriptive.
2. If the verbal unit yields information about someone or something other than the speaker, or if the unit yields information about the speaker only by coder inference, that unit was to be coded as other-referring.
3. If the verbal unit met the criteria for the self-descriptive category and in addition was evaluative in nature rather than descriptive, it was to be treated as self-evaluation and not as self-description.
4. If the verbal unit referred to someone else's evaluation, e.g., "He felt happy.", it was to be considered as an other-referring unit.

In essence, there were two main dimensions, self-referring and other-referring, with the self-referring dimension further broken down into the two categories of evaluative and descriptive. A somewhat more detailed description of the coding process may be seen in Appendix A.

### Subjects

Forty-five male University of Florida students in an introductory psychology course were used as subjects in this experiment. They were all volunteers under a system where the students in the course were required to participate in at least two experiments during the term. Thus, while volunteers, they could not be considered to be positively motivated towards participation in the experiment.

### Apparatus

A tape recorder was used to record all of the subject's comments. This was placed so as not to be in the subject's direct line of vision while sitting in his chair, but there was no effort made to conceal the machine and the microphone was in plain view on top of the desk.

### Method

Three interview methods were used and each subject was randomly assigned to one of the three method groups. All subjects were seen individually by the same interviewer. The relationship of this interviewer to the Psychology Department of the university, as well as other personal data, was not disclosed to the subject other than to the extent described below in the statement read to the subject on the nature and purpose of the experiment. The three interview conditions reflect three degrees of physical presence of the interviewer.

#### Maximum physical presence

The subjects in this group, after being seated in the interview room and the tape recorder turned on, were given the following instructions:

We are asking the subjects in different parts of the study to do different things. We are interested in studying various factors which affect the process of psychotherapy, and in one group, the group you are in, we want to study the effects of having you talk to a therapist who remains silent. So that, as the therapist in this situation, I will be listening carefully to what you have to say, but will respond by non-verbal means only. In other words, I will indicate that I understand what you are saying by nodding my head, but I will not be able to say anything out loud.

We would like for you to imagine that you are a client in psychotherapy. This may seem a little strange, but try to talk about the things that you would expect to in a regular therapy session. People ordinarily talk about past and present events in their lives, the important people in their lives, and what sorts of feelings these events or people aroused within themselves, that is, their personal emotional reaction to the people and occurrences. But in general, feel free to talk about whatever comes to mind. There may be times when nothing comes to mind, and that's OK too. You can just wait until something does, and then talk about that. In general, though, try to keep talking as much as you can.

Do you have any questions?

The subject was seated in the common interview position in relation to the interviewer, so that by turning approximately forty-five degrees he would be directly facing the interviewer. During the twelve minute period that was devoted to the subject's responding the experimenter was permitted no verbalizations. He did nod his head occasionally, but care was taken that no pattern was set up by the noddings as to reinforce certain response types and discourage others. Rather, the purpose of the nodding was solely to indicate to the subject that the interviewer was listening and attentive.

#### Intermediate physical presence

The interviewer, with this group, sat behind the subject and off to one side so that by turning approximately forty-five degrees the interviewer would be looking directly at the subject's back. This position was assumed only after the instructions were given. The instructions to this group of subjects were the same as those given to the maximum physical presence group with the substitution of the following first paragraph:

We are asking the subjects in different parts of the study to do different things. We are interested in studying various factors which affect the process of psychotherapy, and in one group, the group you are in, we want to study the effects of having you talk to a therapist who cannot be readily seen. So that, as the therapist in this situation, I will be seated behind you and will be listening carefully to what you have to say, but I will not respond verbally.

Again, the interviewer was permitted no verbalizations during the period while the subject was responding.

#### Minimum physical presence

As explained in this group's instructions, the interviewer left the room immediately after the orientation of the subject and did not return until after twelve minutes had elapsed. The members of this group received the standard instructions with the substitution of the following first paragraph:

We are asking the subjects in different parts of the study to do different things. We are interested in studying various factors which affect the process of psychotherapy, and in one group, the group you are in, we want to study the effects of not having a therapist in the room with you. So that as the therapist in this situation, I will leave the room and return after a period of time.

At the end of the twelve minute period the experimenter returned to the room. There was no attempt on the part of the experimenter to overhear the subject while the subject was alone in the room.

#### Coder reliability

In order to evaluate intercoder reliability independent codings of ten of the experimental interviews were obtained from two coders. Thus, for each coder there resulted ten sets of scores,

these sets composed of the number of self-evaluative, number of self-referring, and number of other-referring items for the ten subjects coded. These frequency scores were then converted into percentage scores so that the resulting correlation consisted essentially of percentage of subject A's responses being self-referring when coded by one coder as compared to the same subject's percentage of self-referring responses as coded by the other coder. When a Pearson Product-Moment correlation was performed on this converted data, using all of each coder's percentages for the ten subjects (thus yielding an N of thirty pairs of codings) a .96 correlation was obtained. When these coder pairings were analyzed by response (self-referring percentages coded by one coder as compared with self-referring percentages coded by the other, etc.) with a resulting N of ten pairings for each type of response, correlations ranging from .93 to .96 were obtained. Correlation was used instead of percentage agreement because the latter would have been less useful for comparison with other studies. Correlation figures are available for most other coding schemes while percentage agreement between coders has rarely been reported. A correlation on an item by item basis for four subjects was also done with independent codings by these same two coders. In this instance, the coders scored item by item and the resulting correlations were measures of how well the two coders agreed on how each item should be scored. The resulting N's for these correlations were thus the total number of codable units for each of the four subjects. These correlations ranged from .87 to .94.

For the final coding of the taped interviews, the coder

listened to the tapes and recorded the responses for each of the three response categories for each subject. A profile was thus attained for each subject in terms of the frequency in each response class for that individual. As an operational note, it was found that for normal speech rates the coder was able to code with few pauses to catch up. Thus, it was possible to code a twelve minute interview in fifteen to twenty minutes.

## CHAPTER III

### RESULTS

The distribution of the codable units attained from the forty-five subjects as distributed among their groups may be seen in Fig. 1. In order to perform an analysis of variance the raw frequency data was adjusted for individual differences in verbal

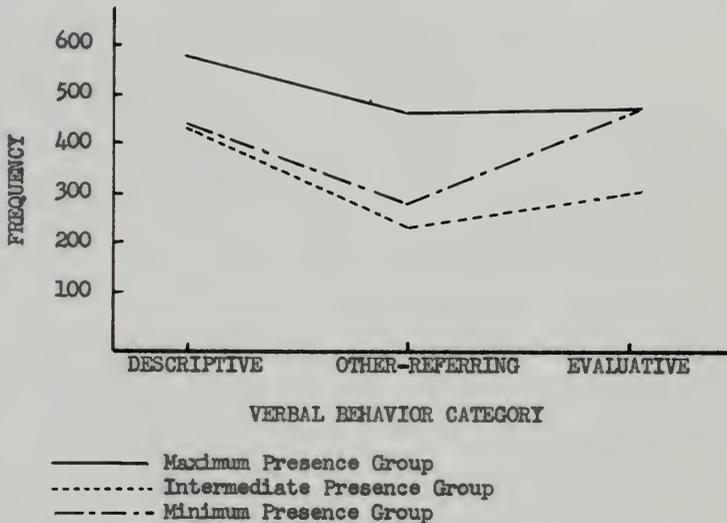


Fig. 1. Frequency of verbal response category by group.

output by converting into proportions. This was done in the same manner as expected frequency is computed in a contingency table. The percentage of the total group responses of the particular subject was obtained and this figure was then multiplied by the total number of responses for the group in a particular response category to obtain the adjusted cell entry for that individual in that response category. As a concrete example, if a subject in the maximum physical presence group gave a total of eighty codable responses, the subjects of his group gave a total of one thousand codable responses and five hundred of these were self-descriptive, the individual adjusted cell entry for this subject for self-descriptive responses would be  $\left(\frac{1,000}{100}\right) 500 = 62.50$ . The raw frequency data and adjusted scores may be seen in Appendix B.

The resulting analysis of variance on these converted data may be seen in Table 1. The source of response refers to the three possible response categories: (a) self-descriptive, (b) self-evaluative, and (c) other-referring. The group variable refers to the experimental groups assigned to the subjects, maximum physical presence, intermediate physical presence, and minimum physical presence. The performed analysis of variance was of the McNemar, Case XVII type (McNemar, 1955, p. 332).

The data were subjected to a series of F-tests to examine the variance of subjects within groups and also to study subject by group interaction within groups for each of the three groups. The ratios proved non-significant at the .05 level of confidence; hence the assumption of homogeneity of the variances was confirmed and the legitimacy of the statistical operation involved in an analysis of variance of this type was demonstrated.

TABLE 1

SUMMARY OF ANALYSIS OF VARIANCE FOR THREE DEGREES OF  
EXPERIMENTER PHYSICAL PRESENCE AND THREE CONDITIONS OF  
RESPONSE

Source	df	SS	MS	F
Response	2	2,868.7369	1,434.3685	141.6271***
Group	2	3,552.5776	1,776.2888	3.9489**
Response by Group	4	833.0603	208.2651	20.5928***
Subjects	42	18,692.4889	449.8211	
Remainder	84	849.5323	10.1135	
Total	134	26,996.3960		
		**	***	
		p.01	p.001	

There was a significant difference, at the .001 level of confidence, between the frequency of the various response types. In a series of ensuing t-tests (see Appendix C), it was found that the subjects had a significantly greater number of self-descriptive responses than other-referring responses ( $p < .001$ ) and a significantly greater number of evaluative responses than other-referring responses ( $p < .05$ ) but the difference between the self-descriptive and self-evaluative responses was not significant.

As can be seen in Table 1, a significant difference in the verbal output of the three experimental groups, using the data adjusted for verbal rate, was found. This significant difference reached the .01 level of confidence. When t-tests were used to locate the differences between groups that contributed to the overall significant difference, it was found that the Maximum Presence

group had a significantly greater number of codable responses, that is spoke more, than the intermediate presence group ( $p < .02$ ) but not than the minimum presence group ( $p > .10$ ). There was no significant difference ( $p > .10$ ) between the intermediate and minimum groups on number of codable responses.

The interaction between group and response, found to be significant at the .001 level, indicated that group membership did influence the type of response made. Again a series of t-tests was performed (see Appendix C) to find the locus of the difference. No significant differences were found between the maximum and intermediate presence groups in the frequency of self-descriptive responses ( $p > .10$ ), while significant differences were found in the frequency of self-evaluative responses ( $p < .02$ , intermediate < maximum) and in the frequency of other-referring responses ( $p < .001$ , intermediate < maximum). Thus, it was found that the maximum physical presence group was more responsive, that is talked more, in two of the three response categories than did the intermediate physical presence group. When comparing the maximum to minimum presence groups it was found that there was a significant difference between these two groups in the frequency of other-referring responses ( $p < .01$ , minimum < maximum). There were not significant differences between the maximum and minimum groups in either the frequency of self-descriptive or self-evaluative responses. In the comparison of the intermediate with the minimum presence groups only the frequency of self-evaluative responses was found to be significantly different. This was significant at the .02 level of confidence with the minimum presence group yielding more self-evaluative responses than had the intermediate presence group.

## Discussion

There were two hypotheses to be tested in this study.

The first of these was the prediction that the greater the degree of physical presence of an interviewer, greater the responsiveness of the subjects. Thus, it was predicted that the maximum presence group, where the interviewer and subject were in a face to face relationship, would provide the greatest number of codable responses, and that the intermediate and minimum presence groups would have progressively fewer codable responses respectively. That there was a significant difference in responsivity between the three groups was demonstrated in the analysis of variance. There was found that the difference between the groups was significant at the .01 level of confidence. The ordering of these differences, however, was not as had been predicted. The maximum presence group did, as predicted, yield a significantly greater amount of responses than the intermediate participation group. The differences in verbal output between the intermediate and minimum presence groups, and the maximum and minimum presence groups were non-significant. This would suggest that face to face, maximum presence facilitated verbal responsiveness, while the absence of the stimulation accruing to the face to face situation inhibits or does not elicit responsiveness. There was some subjective, as well as the above quantitative, data available to this experimenter which tended to support this hypothesis. A number of subjects in the intermediate and minimum presence groups, while in the experimental process, commented that the situation was like talking to oneself. They also reported feeling very uncomfortable in the situation, moreso than was reported by members of the maximum presence group. Several subjects reported that the discomfort they experienced had disrupted their

thought processes. There were other subjects, however, who did not appear to experience the disruptive effects in the intermediate and minimum conditions. This would be in accord with Taylor and Spence's (1952) findings in the effect of anxiety on performance. Some people function more efficiently under anxiety arousing conditions while others experience performance decrement under similar conditions. There was no attempt in this present study to correlate personality variables with responsiveness under the experimental conditions, however, so examination of this factor must depend upon future research.

In ordering the total responses for each of the three groups it was found that the resulting order was maximum, minimum, and intermediate. While the difference between the intermediate and minimum groups did not reach statistical significance as noted above, the difference was of a magnitude to suggest that with a larger sample, the minimum presence group might prove significantly more responsive than the intermediate participation group. The results of the present study were, thus, in disagreement with Colby's (1960) findings. Qualifying the discrepancy of results by the fact that the present study was in no way a replication of Colby's research, still there were important differences. Colby found the non-observable, present, silent observer to facilitate the flow of information from the subject, while the present study found no significant difference between the intermediate and minimum groups on the amount of verbal behavior yielded. There were major motivational as well as experimental differences between these two studies which might account

for the different findings. Colby's subjects were paid five dollars per session for serving as subjects. He used only eleven subjects which could also have had a biasing effect, and all of these eleven subjects were in the medical profession. It is interesting to note that Colby's subjects subjectively reported the experience more in line with the present results than with Colby's. In guessing what the experiment was attempting to study they concluded that it was studying the inhibitory effects of the silent observer. This would be in keeping with the present findings of lowered productivity under the intermediate presence condition.

The second hypothesis tested in this study was that the differing interview conditions would yield a difference in quality, as well as quantity of verbal material. It was predicted that the greater the degree of physical presence of the interviewer, the greater the proportion of self-descriptive behavior, the greater the proportion of self-evaluative behavior, and the lesser the proportion of other-referring behavior would occur. There did occur a significant difference between the use of the different forms of response across subjects as well as a significant interaction effect. Membership in a particular experimental group did affect mode of response. Membership in one of the three groups thus affects both quantity and quality of response. This finding would be contrary to those of Metzner and Mann (1952). One would expect, from their findings, that the minimum presence group would yield the greatest number of self-descriptive and self-evaluative responses, but this was not the case. The maximum presence group was equally productive as the minimum group in its yielding of self-descriptive responses while no significant

difference was found between the maximum and minimum presence groups in frequency of self-evaluative responses.

Martin, Lundy, and Lewin (1960) did show a discrepancy between their nonverbal (our maximum presence) group and their tape (our minimum presence) group on meaning unit rate. Their meaning unit rating was designed to assess the revelation of affect laden material, a unit somewhat similar to the present study's self-evaluative category. One would thus expect to find a similar relationship in this study. This is not the case, however, as the t-test showed that there was not a significant difference between these two groups on this type of verbal behavior. Martin et al. (1960) however, did not report on the statistical significance of the discrepancies they found. If it was the case that their discrepancies did not reach a statistical level of significance, then the results of that study and of the present one are in accord. The Martin et al. study did not report findings on amount of verbal material obtained under the differing conditions as they measured in time units. This precluded comparison between the present study and that one on this dimension.

In summarizing the results, it was found that the maximum presence group was more responsive and that they talked more about themselves and about others than either of the other two groups. The minimum and intermediate groups were alike except in their talking about self-evaluations. The minimum group spoke significantly more of self-evaluations than did the intermediate group. Thus, it was found that in regard to self-evaluative behavior, those subjects who were face to face with the interviewer behaved like those for whom

the interviewer was not physically present, while under the condition where the interviewer was physically present but not observable there were significantly fewer evaluative statements made by the subjects. This would suggest that a psychoanalytic orientation in which the patient cannot see the analyst is the least likely of the three conditions used here to produce self-evaluative behavior.

The question of generalizability of the data obtained in this present study is an important one. As in most studies of this nature, the imposed conditions make it difficult to use a true patient population. In addition, the instructions to the subjects which constituted an attempt to produce a role playing situation where the subject would act as if he were a patient in psychotherapy has obvious shortcomings. The motivation for disclosing personal, perhaps sensitive, emotional content was lacking. There was no commitment on the part of the subject to a therapy relationship nor, in most cases, did the subject see any need for one. Furthermore, being an experiment, the subject could easily, in spite of assurance to the contrary, doubt the confidentiality of his remarks. We would also necessarily have to question how closely the college student population, or even more specifically, the male college student population at the University of Florida, would resemble a patient population. Another factor which compounded the motivation problem was that the subjects were, in a sense, compulsory volunteers. There thus results the possibility of strong negative motivation towards full cooperation, as a passive resistance to the course requirement. As one subject clearly stated, "I wonder what you'd do if I didn't say anything?"

Another hinderance to generalizability would be the nature of the situation itself. The testing situation most resembles the intake interview and as such would say little about the course of psychotherapy as a whole. This would be offset by the fact that the intake often sets the tenor of the later therapy sessions.

In short, care must be taken in generalizing the results beyond the situation as presented in the experiment itself. This was not a unique fault in design, however. It is extremely difficult to use a patient population seeking therapy in an experiment which affords less than optimum opportunity to the patient for relief of his distress, so that we are forced by circumstance to approximate such a patient population as closely as possible.

The intention of the present study was not so much to shed light onto a great truth of psychotherapy as it was to serve as a prototype for future research. To this extent it achieved its purpose as a host of future studies were indicated. It would be of value to study, as did Martin, Lundy, and Lewin (1960), the longitudinal effects of therapist interaction on self-evaluative behavior. By this means it would be possible to ascertain how the initial experience influences later experience. Thus, in the experiment envisioned here, the experimenter variable would not remain constant for the subject. The initial interview might occur under one condition while all subsequent interviews be under still another condition. Therapist personality factors would also be of interest in such a paradigm. As has been noted in the introductory section of this research, a relationship between therapist personality and therapeutic success has been found in a number of studies. The unanswered question remains, however, as

to how the differences in therapist personality relate to differences in patient behavior in the therapy hour. In particular, how do various therapist personality factors affect the rate of self-evaluative behavior elicited from the patient? A corollary question to be answered by further research would be the correlation between self-evaluative patient responses and judged therapeutic success. It is indeed possible that talking about one's feelings or thoughts has no relation at all to remission of symptoms and return to social productivity. These are just a few of the many research ideas that were engendered by the present research. The shibboleth "further research is indicated" would certainly be warranted here where so little has been done and so much needs be done.

It is yet premature to make a final judgement on the value of the dependent variable used here. It was found to discriminate between groups and this would suggest that it was sensitive enough to pick up behavior differences produced by experimental conditions. Coder reliability was high and the coding technique was not difficult to learn. It would be of value to code interviews with this technique and with a host of others to get some validity estimates. This would, however, only be suggestive of the validity of the measure as it is difficult to assess, except through the use of factor analysis, what dimensions are being uncovered by the instrument. This experimenter feels that such future research would be well warranted in light of the great need of a reliable, easily codable measure of approach to affective material in psychotherapy, and by the suggestion that such an approach was to some extent achieved in this study.

## CHAPTER IV

### SUMMARY AND CONCLUSIONS

Three degrees of interviewer's physical presence were studied as to their effects upon the subjects' verbal behavior. In the maximum physical presence situation the interviewer sat face to face with the subject. The intermediate physical presence condition differed from the maximum situation in that the interviewer was seated behind the subject and then could not be readily seen. The third condition, that of minimum physical presence, was one in which the interviewer left the room and the subject spoke to a tape recorder. In all of these interviewer conditions the interviewer was permitted no verbal comments beyond the initial reading of instructions.

The subjects' verbal behavior was evaluated in three categories. The first of these was a self-referring category which consisted of a frequency count of the number of times the subject spoke of himself in a descriptive manner, that is, told facts about himself that were theoretically subject to empirical verification. The second category of the subjects' verbal behavior scored was that of other-referring behavior. This consisted of a frequency count of the number of statements about someone other than the subject. The

third category was that of self-evaluative statements. A self-evaluative statement was any statement made by the subject about himself that was based on an internalized reference, that is, was not subject to empirical verification. In this category were included the subjects' feelings, thoughts, attitudes, opinions, and judgements.

Forty-five male undergraduate students enrolled in an introductory psychology course served as subjects. They were randomly divided into three groups of fifteen subjects each, and assigned to one of the three treatment groups. The instructions to the subjects were such as to encourage them to play the role of a client in psychotherapy. All of the interviews were recorded on tape for later coding.

After the data were adjusted to account for differences between subjects in gross amount of talking an analysis of variance was performed. It was found that there was a significant difference between the maximum and intermediate physical presence groups in amount of verbal behavior elicited, with the maximum group yielding more verbal behavior than the intermediate group. There were no significant differences between the maximum and minimum groups on amount spoken. A significant interaction between the group to which the subject was assigned and the response category profile led us to examine the effect of group membership on the use of the three different response categories. It was found, again using the data adjusted for individual differences in amount spoken, that the maximum presence group spoke significantly more than the

intermediate presence group in the self-evaluative and other-referring categories, but not in the self-descriptive category. In the comparison between the maximum and minimum presence groups the only category that was found to yield significant differences was in the use of other-referring responses. In the comparison of the intermediate with the minimum presence groups only the frequency of self-evaluative responses was found to be significantly different. This would suggest that the psychoanalytic positioning, where the therapist is seated behind the patient, initially yields the least amount of subjective material of the three situations examined here.

The results of this study suggested a number of research ideas which would further test the utility of the particular behavioral measures used here. The ability to generalize the findings of the present study is also limited until future verification can be attained.

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## APPENDICES

## APPENDIX A

### CODING OF SUBJECT'S VERBAL BEHAVIOR

The following steps were used for the coding scheme.

They were derived, prior to the coding of the experimental data, from a pilot study of five subjects.

1. A simple sentence was coded as a single unit. As an example; "John went to town." would be considered as one codable unit.

2. A compound sentence was broken down into its major clauses and each major clause counted as one unit. Thus the sentence, "John went to town and bought a book." was coded as, "John went to town." and "John bought a book."

3. A complex sentence was coded as a single unit. The sentence, "John went to town whenever he needed a book." was treated as one unit.

4. A compound-complex sentence was broken down into its major clauses and each clause coded as a single unit. The sentence, "Whenever John needed a book he went downtown and bought one." was coded as, "Whenever John needed a book he went downtown." and "He bought one."

5. Interrogative sentences were not coded.

6. Imperative sentences were not coded.

7. A codable unit that referred to the speaker but was descriptive in nature was coded as self-descriptive. The sentences, "I am six feet tall." and "I went to the store yesterday." would both be examples of sentences included in the category.

8. A codable unit that referred to the speaker, but was as well evaluative in nature was coded as self-evaluative. "I am happy." and "I think I'm smart." and "I believe in God." are all examples of this category.

9. A codable unit that referred to someone other than the speaker was coded as other-referring. "My mother is fifty-five years old." "He left the house." and "John was sick." are sentences that would be coded in this category.

10. A codable unit that referred to someone other than the speaker while still using evaluative terms, was coded as other-referring. An example of this would be, "They believed it."

11. If a codable unit referred to both the speaker and someone else it was coded twice, one time for the speaker (either self-descriptive or self-evaluative) and one coding of other-referring. An example of this situation would be, "We like baseball." This sentence would be coded as one self-evaluative response and one other-referring response.

12. If a codable unit's subject is a generalized other, including supposedly the speaker, it was coded as other-referring. An example of this would be, "Everyone likes ice cream."

13. If a codable unit referred to someone other than the speaker, but constituted the speaker's evaluation of that other person, it was coded as self-evaluative. "He is horrid." is an example of this situation.

APPENDIX B

FREQUENCY DATA FOR SUBJECTS IN THE  
MAXIMUM PHYSICAL PRESENCE GROUP

<u>Self-descriptive</u>		<u>Self-evaluative</u>		<u>Other-referring</u>		<u>Total</u>
<u>Raw</u>	<u>Adjusted</u>	<u>Raw</u>	<u>Adjusted</u>	<u>Raw</u>	<u>Adjusted</u>	
5	15.25	21	11.89	13	11.86	39
24	34.80	22	27.13	43	27.07	89
23	23.85	25	18.59	13	18.56	61
38	44.58	4	34.75	72	34.67	114
5	3.13	2	2.44	1	2.43	8
58	52.79	37	41.15	40	41.06	135
39	31.28	27	24.39	14	24.33	80
63	60.61	51	47.25	41	47.14	155
45	59.05	43	46.03	63	45.92	151
45	34.80	24	27.13	20	27.07	89
40	50.05	45	39.02	43	38.93	128
53	45.36	44	35.36	19	35.28	116
58	53.96	52	42.06	28	41.98	138
39	38.32	31	29.87	28	29.81	98
<u>50</u>	<u>37.15</u>	<u>28</u>	<u>28.96</u>	<u>17</u>	<u>28.89</u>	<u>95</u>
585	584.98	456	456.02	455	455.00	1,496

## APPENDIX B

FREQUENCY DATA FOR SUBJECTS IN THE  
INTERMEDIATE PHYSICAL PRESENCE GROUP

<u>Self non-evaluative</u>		<u>Self-evaluative</u>		<u>Other-referring</u>		<u>Total</u>
<u>Raw</u>	<u>Adjusted</u>	<u>Raw</u>	<u>Adjusted</u>	<u>Raw</u>	<u>Adjusted</u>	
18	16.08	7	10.94	10	7.98	35
48	53.28	55	36.27	13	26.45	116
20	20.67	20	14.07	5	10.26	45
13	11.94	8	8.13	5	5.93	26
24	17.45	9	11.88	5	8.67	38
29	28.48	19	19.38	14	14.14	62
14	12.40	3	8.44	10	6.16	27
48	43.17	12	29.39	34	21.44	94
17	17.45	12	11.88	9	8.67	38
8	9.64	11	6.57	2	4.79	21
54	52.36	40	35.64	20	26.00	114
57	48.23	29	32.83	19	23.94	105
30	29.86	18	20.32	17	14.82	65
38	54.20	33	36.89	47	26.91	118
<u>11</u>	<u>13.78</u>	<u>16</u>	<u>9.38</u>	<u>3</u>	<u>6.84</u>	<u>30</u>
429	428.99	292	292.01	213	213.00	934

## APPENDIX B

FREQUENCY DATA FOR SUBJECTS IN THE  
MINIMUM PHYSICAL PRESENCE GROUP

<u>Self non-evaluative</u>		<u>Self-evaluative</u>		<u>Other-referring</u>		<u>Total</u>
<u>Raw</u>	<u>Adjusted</u>	<u>Raw</u>	<u>Adjusted</u>	<u>Raw</u>	<u>Adjusted</u>	
40	41.02	39	43.30	31	25.68	110
19	24.24	24	25.59	22	15.17	65
28	28.34	30	29.92	18	17.74	76
19	19.02	13	20.08	19	11.90	51
25	25.73	37	27.16	7	16.11	69
43	44.76	49	47.23	28	28.01	120
53	49.23	55	51.96	24	30.81	132
11	13.80	11	14.56	15	8.64	37
35	19.02	13	20.07	3	11.91	51
40	25.36	23	26.77	5	15.87	68
30	46.99	30	49.60	66	29.41	126
29	32.45	42	34.24	16	20.31	87
13	12.68	20	13.38	1	7.94	34
26	25.73	30	27.16	13	16.11	69
<u>22</u>	<u>24.61</u>	<u>41</u>	<u>25.98</u>	<u>3</u>	<u>15.41</u>	<u>66</u>
433	432.98	457	457.00	271	271.02	1161

APPENDIX C

t-TESTS ON ADJUSTED DATA

Comparison of maximum and intermediate groups.

1. Frequency of self-descriptive responses.

$$\begin{array}{l} \bar{X}_{\text{Max.}} = 39.00 \\ t = 1.7207 \end{array} \quad \begin{array}{l} \bar{X}_{\text{Interm.}} = 28.60 \\ p > .10 \end{array} \quad \text{d.f.} = 28$$

2. Frequency of self-evaluative responses.

$$\begin{array}{l} \bar{X}_{\text{Max.}} = 30.40 \\ t = 2.4792 \end{array} \quad \begin{array}{l} \bar{X}_{\text{Interm.}} = 19.47 \\ p < .02 \end{array} \quad \text{d.f.} = 28$$

3. Frequency of other-referring responses.

$$\begin{array}{l} \bar{X}_{\text{Max.}} = 30.33 \\ t = 4.1314 \end{array} \quad \begin{array}{l} \bar{X}_{\text{Interm.}} = 14.20 \\ p < .001 \end{array} \quad \text{d.f.} = 28$$

4. Frequency of all categories of responses combined.

$$\begin{array}{l} \bar{X}_{\text{Max.}} = 49.73 \\ t = 2.6197 \end{array} \quad \begin{array}{l} \bar{X}_{\text{Interm.}} = 62.27 \\ p < .02 \end{array} \quad \text{d.f.} = 28$$

Comparison of Maximum and Minimum groups.

1. Frequency of self-descriptive responses.

$$\begin{array}{l} \bar{X}_{\text{Max.}} = 39.00 \\ t = 1.9675 \end{array} \quad \begin{array}{l} \bar{X}_{\text{Min.}} = 28.37 \\ p > .10 \end{array} \quad \text{d.f.} = 28$$

2. Frequency of self-evaluative responses.

$$\begin{array}{l} \bar{X}_{\text{Max.}} = 30.40 \\ t < 1.0000 \end{array} \quad \begin{array}{l} \bar{X}_{\text{Min.}} = 30.47 \\ p > .10 \end{array} \quad \text{d.f.} = 28$$

3. Frequency of other-referring responses.

$$\begin{array}{ll} \bar{X}_{\text{Max.}} = 30.33 & \bar{X}_{\text{Min.}} = 18.07 \\ t = 3.2657 & \text{d.f.} = 28 \quad p < .01 \end{array}$$

4. Frequency of all categories of responses combined.

$$\begin{array}{ll} \bar{X}_{\text{Max.}} = 99.73 & \bar{X}_{\text{Min.}} = 77.40 \\ t = 1.6678 & \text{d.f.} = 28 \quad p > .10 \end{array}$$

Comparison of intermediate and minimum groups.

1. Frequency of self-descriptive responses.

$$\begin{array}{ll} \bar{X}_{\text{Interm.}} = 28.60 & \bar{X}_{\text{Min.}} = 28.87 \\ t < 1.000 & \text{d.f.} = 28 \quad p > .10 \end{array}$$

2. Frequency of self-evaluative responses.

$$\begin{array}{ll} \bar{X}_{\text{Interm.}} = 19.47 & \bar{X}_{\text{Min.}} = 30.47 \\ t = 2.5239 & \text{d.f.} = 28 \quad p < .02 \end{array}$$

3. Frequency of other-referring responses.

$$\begin{array}{ll} \bar{X}_{\text{Interm.}} = 14.20 & \bar{X}_{\text{Min.}} = 18.07 \\ t = 1.3452 & \text{d.f.} = 28 \quad p > .10 \end{array}$$

4. Frequency of all categories of responses combined.

$$\begin{array}{ll} \bar{X}_{\text{Interm.}} = 62.27 & \bar{X}_{\text{Min.}} = 77.47 \\ t = 1.2112 & \text{d.f.} = 28 \quad p > .10 \end{array}$$

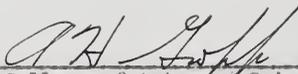
## BIOGRAPHICAL SKETCH

Irwin Farbman was born on June 2, 1936, in New York, New York. From 1953 to 1954 he attended the Polytechnic Institute of Brooklyn. In the Fall of 1954 he attended the College of the City of New York. Entering New York University in the Spring of 1955 he received his B.A. from that institution in 1957. He entered graduate school at the University of Maryland in the Fall of 1957, in the Department of Psychology, where he remained until 1959. During this time he was also employed as a research psychologist by the Child Research Branch of the National Institute of Mental Health.

In the Fall of 1959 he continued his graduate training in psychology at the University of Florida. He was an Office of Vocational Rehabilitation trainee in psychology from 1960 to 1962. He received his M.A. from the University of Florida in August, 1961. He completed his internship at the Teaching Hospital, University of Florida in 1962. Since that time he has been employed as a staff psychologist at the Alachua County Health Department. Irwin Farbman is an associate member of the American Psychological Association and a member of the Florida Psychological Association.

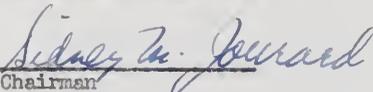
This dissertation was prepared under the direction of the chairman of the candidate's supervisory committee and has been approved by all members of that committee. It was submitted to the Dean of the College of Arts and Sciences and to the Graduate Council, and was approved as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

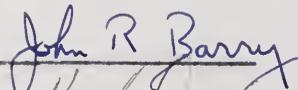
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Dean, College of Arts and Sciences

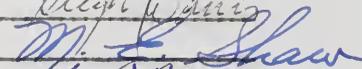
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Chairman

  
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