EARLY AND LATE DIMENSIONS OF CLIENT-PERCEIVED THERAPIST SELF-DISCLOSURE AS THEY RELATE TO CONSTRUCTIVE CLIENT CHANGE AND TO OUTCOME IN PSYCHOTHERAPY

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ABSTRACT

EARLY AND LATE DIMENSIONS OF CLIENT-PERCEIVED THERAPIST SELF-DISCLOSURE AS THEY RELATE TO CONSTRUCTIVE CLIENT CHANGE AND TO OUTCOME IN PSYCHOTHERAPY

by Walter L. Stump

The general disclosure of therapists' "meanings" and "intentions" to the client, has been considered within Rogerian theory as a necessary aspect of successful psychotherapy. Recent suggestions have been made, that client-perceived therapist self-disclosure, to be therapeutically effective, is probably contingent on the ambiguity or veiling of therapists' meanings and intentions during early therapy sessions.

The major purpose of the present thesis was to test the prediction that there would be significantly higher frequencies of client-perceived therapist ambiguity or veiling indices (low self-disclosure) in early measures of (a) subjects showing higher degrees of constructive change than Ss with low degrees of change, (b) Ss given high success ratings than with Ss with low success ratings, and (c) Ss showing more degrees of disturbance than with Ss with less degrees of disturbance. It was also predicted that there would be higher frequencies of client-perceived therapist clarity or meaningful (high self-disclosure) indices in overall (or late) measures of Ss showing higher

degrees of constructive change and/or with Ss rated as more successful clients, than with low change Ss and/or with less successful clients.

Clients used in the present study were twenty-six self-referred Michigan State University undergraduate females, who had been seen at the University Counseling Center for personal counseling.

High and Low Constructive Change Groups were developed on the basis of differences between <u>Ss' pre-</u> and post-MMPI formula scores. Therapists' ratings of individual case success was the basis of High and Low Success Group compositions. Pre-MMPI formula scores provided a criteria for assigning Ss into More or Less Disturbed Groups.

Client's perception of therapist's self-disclosure was defined as S's scale-checking behavior on a series of seven-point (position) semantic differential judgments of the concept "Counselor." Positions 1, 4, and 7 (combined and individual), the meaningless-neutral scales, were separate indices of low therapist disclosure, and positions 2, 3, 5, and 6 (combined and individual), the most discriminatory scales, were separate indices of high therapist disclosure.

Sixteen judgments of the concept "Counselor" were made by each of the twenty-six Ss on early and/or late administrations of the semantic differential test. Frequency scores were obtained on the S's uses of the seven

alternate positions over 16 of the seven-point scale judgments of the concept "Counselor."

Twenty-two Mann-Whitney U, one tailed tests (α = .05) were then used to test predicted differences between the various groups mentioned above, on their frequency scores for each separate measure (individual and combined positions scores) either for 1, 4, and 7 or 2, 3, 5, and 6; depending on whether the hypothesis was investigating low or high therapist disclosure indices.

The results of the analyses supported only three of the twenty-two experimental predictions of group differences. As expected, High Constructive Change clients did use greater frequencies (significant at .016) of combined positions 1, 4, and 7 on early judgments of "Counselor" than did Low Change clients. On this one combined measure of positions 1, 4, and 7 (low therapist disclosure), there was support for the hypothesis ($\alpha = .05$) that High Constructive Change clients would perceive their therapist's meanings less clearly during early therapy, than would Low Constructive Change clients. The positions 1, 4, and 7, however, as individual measures of low therapist disclosure, were not significantly different between the above groups. The latter individual measures did not support the hypothesis that there would be greater indices of low therapist disclosure on earlier individual

position measures for High Change $\underline{S}s$, than for Low Change Ss.

High and Low Success Ss, as well as More and Less Disturbed Ss, showed no predicted differences in scale-checking behavior on their early therapy judgments of "Counselor" on positions 1, 4 and 7 (low therapist disclosure), either on individual or on combined measures of positions 1, 4, and 7. No support was gained on the above tests for the presence of early therapist veiling in those cases rated as successful. Also, no support was found in the above tests (individual and combined positions 1, 4, and 7) that More Disturbed clients would perceive therapists' meanings as more veiled in early therapy than Less Disturbed clients.

No differences were found between High and Low Constructive Change clients on late (individual and combined) measures of positions 2, 3, 5, and 6 (high therapist disclosure). The latter data did not support the hypothesis that High Constructive Change clients would have more indices of high therapist disclosure (positions 2, 3, 5, and 6) on overall (or late) measures, than Low Constructive Change clients.

Significant differences (α = .05) were found between High and Low Success Ss on two measures of overall (or late) indices of high therapist disclosure. Position 2 was significantly different between High and Low Success

groups at the .007 level, and position 6 at the .025 level. These two measures supported the hypothesis that High Success clients would perceive their therapists more clearly (high therapist disclosure) in overall therapy than would Low Success clients.

No differences between the same groups above were found, however, on the other measures of high therapist disclosure, combined positions (frequencies) of 2, 3, 5, and 6 and on individual positions (frequencies) 3 and 5.

The results of all twenty-two of the hypotheses tested in the present thesis, although failing to generally support the importance of the temporal contingency of early therapist veiling to successful therapy, did show some encouraging trends, in predicted directions.

Although the statistical analysis did not support the theory of the present thesis, two results of the study are cited as reasons for failure; (a) it can be argued that the fourth and eighth-interview semantic differentials provided only the middle of the continuum between early and late client perceptions of "Counselor." Consequently a much wider continuum between "early" and "late" client perceptions would be needed, and (2) the subjects can be regarded as homogeneous in terms of disturbance levels and consequently a more extreme degrees of disturbance would be needed.

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Ву

Walter L. Stump

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DEDICATION

To my wife, Jean, for patience, help and love; and to my son, Mike, for interest and acceptance.

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CHAPTER I

TNTRODUCTION

A growing number of studies are investigating the complex nature of therapist-client relationships. Two basic questions raised are: what can therapists do to increase successful therapy outcomes and what are the critical characteristics a therapist must possess or promote in himself to effect constructive change in his client?

Rogers (1957) has listed three therapist conditions he believed were necessary and sufficient to facilitate change in clients and increase prospects for therapeutic success: congruency, positive regard, and empathy. A variety of studies (Barrett-Lennard, 1962; Demos, 1964; Halkides, 1958; Rogers, 1965; Rogers, Gendlin, Kiesler and Truax, 1956; Truax, Wargo, Frank, Imber, Battle, Saric, Nash and Stone, 1966; VanderVeen, 1965) have attempted to determine the simultaneous presence of all three of Rogers' conditions and their effects on (a) therapeutic change, (b) case success, and (c) expansion or explorations of client feelings.

Much research has cited congruence or "genuineness" as a single element of critical importance in its effect on the dependent variables of case success and constructive

client change (Rogers, 1957; Thorne, 1950; Truax and Carkhuff, 1965; and Whitaker and Malone, 1957). Within the above theoretical framework the secondary but related concepts of "transparency" (Truax and Carkhuff, 1965) and "psychological openness" have been operationally defined and studied. The concepts of congruence, genuineness, transparency, and psychological openness all seem to relate to the phenomenon in which the therapist's "meanings" and "intentions" (Kell and Mueller, 1966) are revealed to the client; in essence, a phenomenon in which therapist self-disclosure occurs.

The traditional assumption has been that increased amounts of therapist self-disclosure along with other beneficial characteristics measured in a relationship would effect improvement in therapist-client relationships and ultimate therapy outcome. Mills and Zytowski (1967) have called this assumption into question. They have suggested that there may be therapist response contingencies for the various "beneficial" characteristics of a helping relationship. That is, there may be times and circumstances where the absence of therapist self-disclosure might strengthen the ultimate therapy relationship and results.

Several contingencies have already been cited by past investigators. VanderVeen's study (1965) suggested that, in part, the level of empathy and genuineness were determined by the client. Truax, Wargo, Frank, Imber,

Battle, Saric, Nash and Stone (1966) made a re-analysis of VanderVeen's hypothesis, using a different population of therapists and patients, as well as a different design, to confirm that it is the therapist who sets the level of empathy and genuineness.

Studies by Carkhuff (1966) and Demos (1964) provide significant evidence that therapist characteristics, i.e., self-disclosure, must be perceived by the clients in order to effect therapeutic change in clients.

Rogers (1966) found evidence that perception of these "important" therapist attitudes, i.e., self-disclosure, is contingent on client levels of disturbance.

Kell and Mueller (1966) have pointed to another possible contingency. After listening to many hours of tape recorded interviews from different client-therapist encounters, they believed that the more veiled or ambiguous the counselor is with his intentions and meanings during early interviews, the more opportunity there is for expansion and exploration of client feelings. Kell and Mueller assume that such early expansion and exploration enhances the therapeutic process.

To summarize the preceding remarks, researchers have focused on the disclosure of therapist's meanings and intentions as a necessary part of (a) successful therapeutic relationships, (b) constructive client change, and (c) ultimate case outcome. Further, it has been concluded

that such therapist self-disclosure must be perceived by the client to produce desired therapeutic effects. In addition, it is believed that the above therapist disclosure, to be effective, is probably contingent on other factors, e.g., a temperal dimension, i.e., early ambiguity or veiling of therapist's meanings and intentions facilitates constructive client change and/or successful case outcomes. The latter assumption, on the temporal dimension, leads to the conclusion that investigations should be conducted to explore the effect of this early-late client-perceived therapist self-disclosure contingency.

The major purpose of the present thesis was to assess whether there were significantly higher frequencies of client-perceived therapist ambiguity or veiling indices in early measures of subjects showing higher degrees of constructive change and/or with subjects rated as successful clients, than with control subjects showing little or no constructive change and/or with subjects who were rated as less successful clients.

Theoretical Background

Self-exposure has long been recognized as an important component of psychotherapy. Early attention has been given to those concepts describing what was hidden within the client. Dolliver (1965) suggests that various labels were applied; i.e., Freud's "The Unconscious," Jung's "The

Collective Unconscious" and his "Undiscovered Self,"
Rogers' "The Self Which One Truly Is," and the existentialist's "Authentic Being."

Early concerns in psychotherapy dealt with the "uncovering" process and the value of client self-disclosure. Recent attention has shifted toward the value of therapist self-disclosure and its relationship to the therapeutic process. Such labels as Rogers' (1961) "congruence" or "genuineness," Truax and Carkhuff's (1965) "transparency," Allen's (1967) "psychological openness," and Kell and Mueller's (1966) therapist "unveiling" or "selective revelations," are all ways in which therapist self-disclosure has been conceived.

Rogers (1951) was one of the first theorists to develop a basis for therapist self-disclosure. His concept of congruence or genuineness, along with acceptance or positive regard and empathy, were cited as "necessary and sufficient conditions" for facilitating client change. However, this early Rogerian theory kept the client at the center of the therapist's focus. The therapist was viewed as attempting to get into the client's world, without himself, as therapist, becoming obstructive or obvious in this relationship. Dolliver (1965) indicates, however, that recent trends in client-centered therapy encourage the therapist to experience and express more fully his own feelings in the relationship. Rogers (1961) states that,

when the therapist, in counseling, is "genuine and without facade," openly being at that moment the feelings that are flowing through him, he will facilitate change in the client. This latter position was recently reaffirmed by Rogers (1966).

The existentialist therapists (Brecht, 1964) have held similar views to those of Rogers above. They conceive psychotherapy as "a dynamic relationship between two people in which the therapist is able to offer part of himself for the benefit of the other person."

Wyatt (1962) quotes Fenichel, from the psychoanalytic position, as saying that psychotherapy is "not a case of behavior, something that has to be put on, but a delicate interaction which has to be appropriate to its avowed purpose but otherwise leaves the therapist as natural and spontaneous as he can be."

Kell and Mueller (1966), speaking from a dynamically oriented point of view, suggest that "Counselors help their clients by being human." They explain that, "the counselor has primarily himself to bring to the helping relationship." They have, as previously stated, introduced the possibility of the temporal dimension of therapist self-disclosure or, specifically, the importance of early veiling of therapists' intentions and meanings.

There is a growing body of research that tends to support the general hypothesis that therapist self-disclosure

is an integral variable in constructive therapeutic change. The following chapter will review these latter studies in depth. A special attempt will be made to point to the evidence in previous literature that has a direct relation—ship to the temporal dimension of therapist self-disclosure.

CHAPTER II

REVIEW OF LITERATURE

A number of published studies relate to the present study. One group of investigations deals with the multidimensional characteristics of therapists' variables. All of these multi-dimensional studies focus on Rogers' (1957) concepts of genuineness, regard, empathy, and/or extensions of these. A brief summary of the multi-dimensional literature and its relationship to this present thesis is contained in this chapter.

A smaller number of studies review the single dimension of self-disclosure, which is rooted in the Rogerian concept of congruence or genuineness. Following a summary of the multi-dimensional studies, an in-depth review will be made of two single-dimensional studies. The single-dimensional investigations have more direct implications to the present thesis.

Multi-Dimensional Studies

All of the following investigations tend to support Rogers' hypothesis that constructive personality change in the client, during therapy, is dependent upon three essential attitudes in the therapist: (a) congruence or

genuineness in the relationship, (b) acceptance or prizing of the client, and (c) an accurate understanding of the client's phenomenal world.

Halkides (1958) demonstrated that a high degree of therapist empathy, regard, and genuineness was significantly related to successful case outcomes. In her study therapists were rated on a seven-point scale by judges on the three Rogerian attitudes above. The latter ratings were based on a random selection of nine early client-counselor interaction units and nine late client-counselor units from twenty tape recorded cases. The most obvious weakness of Halkides' study was in her instrumentation and the use of ratings and judges.

Barrett-Lennard (1962), rather than using "objective" observers, developed a Relationship Inventory (client and therapist forms). The Relationship Inventory was designed to measure the manner in which five dimensions (including Rogers' three) of "necessary" attitudes were perceived by both client and therapist; each in the other. Each dimension was evaluated on a six-point scale. The results indicated that when clients perceived more of all dimensions (including Rogers' three), there was a significant positive change in the client.

One important result of the Barrett-Lennard (1962) study could have a possible bearing on the question raised by the present research. The fifth dimension on the

Relationship Inventory attempts to measure a "Willingness to be Known." The results revealed that a client-perceived therapist's "Willingness to be Known," at the time of the early interview, was not related to later success, as were the other four dimensions. No data were available from late interviews on the relationship between a client-perceived therapist "Willingness to be Known" and case success.

Concerning the use of the Barrett-Lennard Relationship Inventory, Barrett-Lennard recognized that despite attempts at item purification, the intercorrelation of the Inventory's subtests were reported as positive and moderately high (Barrett-Lennard, 1962). This suggests there may be a general factor which accounts for much of the variance for the entire instrument. Mills and Zytowski (1967) state that a factor analysis of this Inventory pointed to a general component which accounted for two-thirds of the total variance.

Demos (1964) found that congruence, although judged to be present to a greater degree in successful counselors than unsuccessful ones, was not significantly present at the .01 level of confidence as was empathy and regard. He used different methods and population than the first two studies above. Secondary school counselors' last recorded session with "normal" high school students were rated by trained judges on the Rogerian variables. In Demos'

study the early measurement of counselor characteristics is missing.

Rogers (1966), using a different population of unmotivated schizophrenics, discovered that perception of therapist attitudes is contingent on levels of disturbance. He concluded that a more disturbed person can less easily perceive and trust the "positive" attitudes of the therapist. Two significant results of Rogers' study related to the present thesis. First, the more the patient perceived of these "positive" attitudes, especially genuineness, the greater the measure of therapeutic movement. Also, Rogers found that the higher the degree of therapist congruence, the higher the degree of patient interaction with a third person outside of therapy.

This concludes the review of important investigations on multi-dimensional therapist variables. All of the above studies have implications for the present research. The following is a review of the uni-dimensional studies focusing more specifically on therapist self-disclosure.

Uni-Dimensional Studies

Two studies (Allen, 1967; Truax and Carkhuff, 1965) have direct implications for the present thesis. Both of the latter studies focus entirely on one therapist dimension, i.e., "transparency" and/or "psychological openness;" in essence, therapist self-disclosure. Truax and

Carkhuff (1965) e.g., assume that of all the Rogerian facilitative elements (empathy, regard, genuineness), genuineness or self-congruence is perhaps the most basic; a cornerstone for empathy and regard.

Truax and Carkhuff, above, conducted a series of investigations with therapy cases involving hospitalized mental patients and institutionalized juvenile delinquents. They examined two major hypotheses: (a) The greater the degree of transparancy, self-disclosure, or self-exploration within the patient, during the therapeutic encounter, the greater will be the evidence of constructive personality change in the client's total sphere of living; and (b) an increase in the degree of therapist transparency or self-congruence will be accompanied by an increase in the degrees of transparency, self-disclosure or self-exploration within the patient.

In Truax and Carkhuff's investigation client exploration or transparency was measured by several instruments:

(a) the Depth of Intra-Personal Exploration Scale (DX)

(Truax, 1962); (b) evaluations of "naive" lay raters on tape samples; (c) diagnosticians' "blind" evaluations of change based on pre-and post-test batteries; and (d) additional objective test scores (i.e., MMPI) and patient Q-sort measures of self-adjustment.

Therapist self-disclosure in the above study was measured by a five-point scale (Truax, 1961) from which judges rated how the therapist "appears" to be in the taped therapy samples. It should be noted that the latter was designed to measure moment-to-moment therapist transparency or self-disclosure throughout therapy; no emphasis was placed on early or late differences. Their study also failed to measure transparency as perceived by the client.

Truax and Carkhuff, in their research (1965), found a significant relationship between therapist transparency and patient's level of self-disclosure. The second major hypothesis was confirmed for hospitalized neuropsychiatric populations; the greater the degree of therapist transparency during therapy, the greater the constructive change in clients. However, with delinquents, the above authors found that the less the transparency or self-exploration. the greater the positive personality change. They state that their findings may suggest that the effectiveness of therapist self-disclosure may be contingent on whether the illness is mental or social, or whether the disturbance is internal or external. Another alternate rationale for Truax and Carkhuff's findings will be discussed in the conclusion to this review of literature, and an alternate hypothesis will be investigated by the present thesis.

Another closely related uni-dimensional study was conducted by Allen (1967). His assumption was that "psychological openness," as a personality factor, is a higher-order concept useful in predicting counselor effectiveness. He perceived psychological openness in more static or continual terms than in temporal terms. Allen proposed that the effectiveness of student counselors, from an introductory practicum in guidance, would be related to the degree of counselor psychological openness. The Rorschach Index of Repressive Style and a Group Supervision Report Scale, developed by Allen, were used as measures of psychological openness. As he predicted. Allen found a direct relationship existing between the freedom with which Ss responded to the Rorschach and the degree of overall competence attributed to these Ss (counselors) by their supervisors. Allen, however, raised a critical question; he wondered if his present measures of counselor's psychological openness were as closely related to the movement of their clients as they were to supervisor ratings of counselor effectiveness. This latter question will be investigated in the present study. An attempt will be made in the following section to tie together all questions raised in the review of literature in this chapter and to show how these questions will be investigated in the present thesis.

Research Conclusions

In general, all of the literature reviewed points to evidence that therapist self-disclosure is an important variable as it related to successful therapy outcomes (Halkides, 1958), to positive client change (Barrett-Lennard, 1962; Rogers, 1966; Truax and Carkhuff, 1965) and to personality characteristics of successful therapists (Allen, 1956; Demos, 1964).

The above evidence supports a general hypothesis that successful therapy outcome is dependent on therapist self-disclosure. But the assumption does not follow that increased amounts of self-disclosure have a one-to-one relationship to client movement, counselor effectiveness, and/or successful outcomes. But there is evidence to support the notion that therapist self-disclosure is contingent on both personal and temporal variables. Such contingencies as client perception (Carkhuff, 1966; Demos, 1964) and the degree of client disturbance (Rogers, 1966) are examples of contingent personal variables.

There are strong theoretical hunches (Kell and Mueller, 1966) supported by related research evidence (Barrett-Lennard, 1962; Demos, 1964; Truax and Carkhuff, 1965) indicating a possible contingent, temporal dimension to effective therapist self-disclosure. Of particular significance to the present thesis was Barrett-Lennard's (1962) findings which show therapists' "Willingness to

be Known" in the early interview was not related to therapy success. In the present thesis, the \underline{E} will investigate whether Barrett-Lennard's conclusions hold true with a different population and with different instrumentation.

Demos (1964) discovered a greater degree of congruence or self-disclosure present in cases of successful counselors. But these latter degrees were not significant. The main weakness of Demos' study was in the single use of late interview measures. The present thesis attempted to correct the latter weakness by designing early and late measures of therapist self-disclosure in order to assess the importance of these early-late temporal dimensions.

In conclusion, it should be noted that theoretical support for the importance of the temporal dimensions above are indicated by Kell and Mueller's (1966) observations. The latter authors have suggested that early counselor "veiling" or "ambiguity" allows the client to expand his own feelings and, of critical importance, to disclose himself first. Kell and Mueller indicate that early client self-disclosure is of special importance when there are possible client-counselor "control" struggles. "When the counselor's controls are a function of his inability to tolerate the exploration which the client can tolerate and which is necessary to help the client to change, then

suspect" (Kell and Mueller, 1966). They continue by stating, "A client may enter a counseling relationship because he experiences some anxiety about the effectiveness of his controls."

The latter observation by Kell and Mueller may offer an alternative rationale for differences found by Truax and Carkhuff (1965) between mental patients and juvenile delinquents. In their findings with a delinquent population, successful outcomes were not related to therapist self-disclosure. In fact, the opposite was true. It would seem, then, that the early control struggles suggested by Kell and Mueller would especially be true with delinquents. This early struggle would seem to be more true as well with "normal" than with a mentally-ill population.

Since the populations samples for the above studies impose certain inferential limits, the present thesis attempted to expand on the generalization possibilities. The present use of college subjects and college counselors will provide an additional sample expansion beyond those of juvenile delinquents, mentally ill, and high school students. New instrumentation has been used in this thesis to provide different operational definitions as well as allowances for early and late measures of client-perceived therapist self-disclosure. The latter, as previously mentioned, was a weakness found in both studies by Allen (1967) and Truax and Carkhuff (1965).

One conclusion should be made here, that Rogers' "congruence" is a higher order concept and therefore difficult to define. Also, secondary concepts, i.e., "transparency" (Truax and Carkhuff, 1965) and "psychological openness" (Allen, 1967), although related to congruence, are also vague and illusive. It is admitted in this thesis that the issue of therapist self-disclosure is far from clear and that previous operational definitions leave much to be desired. However, the above literature provides ample evidence that all previous investigations discussed in this chapter, which deal with therapist selfdisclosure, support the significant effect of this variable on client change and successful case outcomes. Therefore, the continued effort in this thesis to define therapist self-disclosure and its relationship to dependent therapy variables is clearly needed.

The review of literature does indicate several questions that the present thesis attempted to answer, at least in part. Primarily, is there a significant difference between early and late client-perceived therapist self-disclosure as it relates to constructive client change and/or to different therapy outcomes? There have been secondary questions raised and investigated by the reviewed studies which will be examined as well in the present thesis. First, when using a different population and design, is there a difference between high and low degrees of overall

client-perceived therapist self-disclousre as it relates to constructive client change and/or to different therapy outsomes? Seond, is there a difference between high and low degrees of client-perceived therapist self-disclosure as it relates to different levels of client disturbance?" These questions are developed into experimental hypotheses in the following section.

Experimental Hypotheses

The theoretical viewpoints and research evidence previously cited, albeit at times indirectly, supports E's position in the present thesis with regard to the importance of the absence of high degrees of client-perceived therapist self-disclosure early in the therapeutic process. The position stated in the testable form is as follows:

Hypothesis I

There is a significant difference between high and low constructive change groups with respect to levels of client-perceived therapist self-disclosure. So with high degrees of positive change will, early in therapy, perceive their therapist as more ambiguous or veiled than So with low degrees of positive change.

Hypothesis II

There is a significant difference between successful and unsuccessful client groups with respect to levels of client-perceived therapist self-disclosure. Successfull Ss

will, early in therapy, perceive their therapist as more ambiguous or veiled than unsuccessful Ss.

Hypothesis III

There is a significant difference between high and low constructive change groups with respect to levels of client-perceived therapist self-disclosure in the overall therapeutic process. So with high degrees of positive change will on late measures perceive their therapist as being more clear and meaningful than So with low degrees of positive change.

Hypothesis IV

There is a significant difference between successful and unsuccessful groups with respect to levels of client-perceived therapist self-disclosure in the overall therapeutic process. Successful Ss will on late measures perceive their therapist as being more clear and meaningful than Ss with low degrees of positive change.

<u>Hypothesis V</u>

There is a significant difference between more and less disturbed groups with respect to levels of client-perceived therapist self-disclosure. More disturbed Ss will, early in therapy, perceive their therapist as more ambiguous and veiled than less disturbed Ss.

CHAPTER III

METHODOLOGY AND PROCEDURES

A Semantic Differential was used to measure the early-late dimensions of client-perceived therapist self-disclosure. The concept "Counselor" was judged by each subject over a series of sixteen polar-opposite adjectives, i.e., fair-unfair, strong-weak, and active-passive. The subjects' selection of positions in the direction of successive alternatives gradually eliminated uncertainty of "meaning" as to the stimulus concept, "Counselor."

Client-Perceived Therapist Self-Disclosure

The Semantic Differential used in this thesis was made more sensitive by inserting a seven-point scale between each pair of adjectives, so that the subject can indicate the "intensity" as well as the "direction" of each judgment (see Appendix A for explanations of "intensity" and "direction"). The scale positions of 1 and 7 are considered polar-opposites, and position 4 is a neutral "meaningless" origin. Positions 2, 3, 5, and 6 are viewed as the discriminating positions on the scale, indicating most clearly the direction and intensity of "meaning."

Note: A complete description and rationale of the semantic differential used in this thesis is found in Appendices A and B.

In the present thesis the \underline{E} was not as concerned over the "direction" or structure of "Counselor" meaning provided by client judgments of the concept "Counselor" over the various polar-opposite adjective scales. The \underline{E} was more interested in the "intensity" or clarity of the subjects' judgments of the concept "Counselor" along the seven-positions continuum of meaning. The perceptual clarity of "Counselor" meanings was best observed in the subjects' use of scale positions over the entire series of bipolar judgments (for instrumentation rationale see Appendix A).

Client perception of therapist's meanings, whether those meanings were ambiguous-veiled or clear-open, are operationally defined in this thesis by the subjects' scale-checking behavior. Frequency of the S's use of positions 1, 4, and 7 were defined as an index of client-perceived therapist self-veiling or ambiguity. Frequency of the S's use of positions 2, 3, 5, and 6 were an index of client-perceived therapist self-disclosure or clarity.

The <u>E</u> assumes here that the more veiled and ambiguous a therapist is with his intentions and meanings, the less clear and meaningful will he be perceived by the client during therapy. It is also assumed that the more ambiguous or veiled a therapist remains to the client, the less discriminating will be a client's judgments of the concept "Counselor" over a series of semantic differential scales, like those used in this thesis.

The present thesis, then, tests the hypothesis that Ss using higher frequencies of less discriminating scale positions (1, 4, and 7) on early judgments of "Counselor" will be rated as more successful clients and show greater degrees of constructive change than Ss using lower frequencies of more discriminating scales (2, 3, 5, and 6).

Psychotherapy Outcome

Counselor ratings of case outcomes will serve as a measure of therapy success or failure. Each S was judged by his therapist as being: (a) unsatisfactory—"u", (b) partly unsatisfactory—"pu", (c) partly satisfactory—"ps", or (d) satisfactory—"s". The rating was made at the conclusion of therapy. Only Ss rated "s" were categorized as highly successful in the present thesis, and Ss rates "u", "pu" and "ps" were categorized as less successful.

Constructive Client Change and Disturbance

The Minnesota Multiphasic Personality Inventory (MMPI) was used to measure constructive client change and assess levels of client disturbance. Cooke's (1967) methods of actuarial diagnosis of MMPI profiles were used to obtain a formula score on each S's MMPI profile. The MMPI and one of Cooke's actuarial formulas are discussed in Appendices C and D.

In the present thesis the pre-MMPI formula scores established an initial level of disturbance. Also differences between pre-and post-MMPI formula scores provided an actuarial assessment of the degree of constructive client change for each S.

Operational Hypotheses

Hypothesis I

So with high degrees of positive change as measured in differences between pre-and post-MMPI formula scores will, early in therapy, perceive the therapist as being more ambiguous or veiled and will use a higher frequency of "neutral" or "meaningless" positions (1, 4, and 7) over an early series of sixteen, seven-point semantic differential scale judgments of the concept "Counselor," than So with lower degrees of positive change.

Hypothesis II

Ss judged by their therapist as being successful (or "s") clients on a four-point scale will, early in therapy, perceive the therapist as being more ambiguous or veiled and will use higher frequencies of meaningless positions (1, 4, and 7) over an early series of sixteen, seven-point semantic differential scale judgments of the concept

Note: "u" refers to unsuccessful; "pu" refers to partly unsuccessful; "ps", to partly successful; and "s", to successful.

"Counselor," than <u>S</u>s rated by their therapist as being less successful (or "u", "pu", or "ps").

Hypothesis III

<u>Ss</u> with high degrees of positive change as measured in differences between pre-and post-MMPI formula scores will, in overall therapy, perceive the therapist as being more clear and meaningful and will use a higher frequency of discriminating positions (2, 3, 5, and 6) over a late series of sixteen, seven-point semantic differential scale judgments of the concept "Counselor," than <u>Ss</u> with lower degrees of positive change.

Hypothesis IV

Ss judged by their therapist as being successful clients ("s") on a four-point rating scale ("u", "pu", "ps", and "s") will, in overall therapy, perceive the therapist as being more clear and meaningful and will use a higher frequency of discriminating positions (2, 3, 5, and 6) over a late series of sixteen, seven-point semantic differential scale judgments of the concept "Counselor," than Ss judged to be less successful ("u", "pu", or "ps").

Hypothesis V

Ss with high ranking MMPI formula scores (more disturbed) will perceive the therapist during early interviews as being more ambiguous or veiled and will use a higher frequency of "neutral" or "meaningless" positions

(1, 4, and 7) over an early series of sixteen, seven-point semantic differential scale judgments of the concept "Counselor," than <u>Ss</u> with lower ranking MMPI formula scores (less disturbed).

The Source of the Data

Data relevant to the present thesis were available as part of an ongoing research program at the Michigan State University Counseling Center. Fifty-four late adolescent undergraduate students volunteered to participate in the above program. They came to the Center on a self-referral basis, seeking counseling for social and personal concerns.

All of the above clients were first seen in an intake interview. A decision was made, between client and counselor, about the appropriateness of psychotherapy. Most available prospects not experiencing previous psychotherapy were then asked by their screening counselor to take part in the research project. Clients were assigned to project therapists on the basis of staff time and competencies. Final acceptance of clients was determined entirely by the therapist assigned to the case. His acceptance of the client was a subjective decision based on client's "readiness" for therapy. Screening notes on the intake session were made available to each therapist.

Therapy sessions at the Counseling Center are generally conducted for one hour each week. Short-term therapy

is encouraged and as a rule such cases tend to consist of ten to twenty interviews, with some exceptions extending in either direction.

Part of the research project was to give a form of the Semantic Differential before therapy, after every fourth interview, and immediately after termination of the client.

So were asked to judge twenty-one concepts on the semantic differential, including the concept "Counselor," over sixteen adjective bipolar opposite scales (Appendix B).

MMPI profiles were also obtained for most of the project So before the first and after the last therapy sessions.

Selection of Cases

All <u>S</u>s and data selected for the present thesis were drawn from the project described in the section above.

The selection of cases was based on a number of criteria differing slightly in each hypothesis. However, (a) all cases involve no less than four therapy sessions, (b) cases had been terminated, and (c) all <u>S</u>s were female.

Pre- and post-MMPI profiles were required on all $\underline{S}s$ for Hypotheses I, III, and IV, to establish initial levels of client disturbance.

Both pre- and post-MMPI profiles were needed to assess adjustment changes in $\underline{S}s$ for Hypotheses I and III.

Therapist ratings were also required for determining successful and unsuccessful $\underline{S}s$ for Hypotheses II and IV.

Semantic differential responses after the fourth interview were needed as an early measure of client-perceived therapist self-disclosure for each \underline{S} in Hypotheses I, II, and IV. Semantic responses which followed the eighth interview were used to assess the overall amount of "self-disclosure" for Ss in Hypotheses III and IV.

A total of twenty-six female $\underline{S}s$ met the criteria for part or all of the hypotheses. Table 1 contains a summary description and distribution of client and therapist characteristics. The all female sample selected for the present thesis was reduced to 26 ($N_{\underline{S}s}$ = 26) by problems of missing data and by limits of the selection criteria noted above.

Not every subject selected for this present thesis, however, could be used in all five of the hypotheses tested, due to missing data. Loss of data accounts then for the variance in total numbers, as well as some differences of individual <u>Ss</u>, listed witin the various hypotheses tested. The latter loss of data is reflected in the tables listed at the conclusion of Chapter IV.

A descriptive summary of overall client, therapist, and therapy characteristics is presented in Table 1.

Interviews for all <u>S</u>s used in this thesis ranged from 4 to 37 sessions. The mean average of interviews for all <u>S</u>s was 13.8. Therapists for all <u>S</u>s were 17 males and 4 females. The latter therapists had a considerable range

or experience: 1 4 senior staff (2 males, 2 females), 7 second-year interns (6 males, 1 female), 8 first-year interns (6 males, 2 females), and 4 practicum students (3 males, 1 female).

Note: Senior Staff were clinical or counseling psychologists with 2 to 20 years experience; Interns were advanced doctoral candidates in clinical or counseling psychology with an average of 2 years of intensive supervision in psychotherapy; and Practicum Counselors were doctoral candidates involved in their first supervised counseling experience.

CHAPTER IV

RESULTS OF STUDY

It has been noted in Chapter III that the hypotheses tested in this present thesis required Ss to be divided into high and low groups within three areas: (a) disturbance, (b) constructive client change, and (c) case success.

Measures of initial client disturbance were obtained from an MMPI administered to nineteen <u>Ss</u> prior to therapy. All scale scores were then converted into a single formula score using Cooke's Actuarial Diagnosis Formula (Appendix D). Nineteen pre-MMPI scale scores, and converted formula scores for the above subjects, are listed in Table 2. The assumption of the formula score is that higher scores indicate increased disturbance. Cooke (1967) established a cutting line of 550 to designate (a) nonpsychiatric subjects with scores of 549 or less or (b) campus psychiatric male <u>Ss</u> with scores of 550 or greater. Cooke indicated that this cutting line was an arbitrary decision and it would probably vary with the group being studied. As shown in Table 2, all pre-MMPI scores fell into the nonpsychiatric category, using Cooke's cutting line of 550.

¹ Personal Conversation.

In order to obtain client change scores, a post-MMPI was initially administered to eleven <u>S</u>s (Table 3) and all scales were converted into a formula score through the process described above. These post formula scores listed in Table 3, revealed a total nonpsychiatric distribution (all under Cooke's 550 cutting line). There was, however, a considerably smaller range of disturbance scores on post-MMPI's (316.12 to 387.95 as compared to a pre range of 268.95 to 458.73) as might be expected after therapy termination.

Client change scores were finally derived by subtracting the post from the pre formula score on eleven <u>Ss</u> as shown in Table 4. A plus (+) sign was assigned when post scores were depressed more than fifteen points from pre scores, indicating high constructive change. A negative (-) sign was given when post scores were either elevated or depressed less than fifteen points, indicating low constructive change.

Table 5 lists the ratings of case outcomes assigned by each therapist at termination of the <u>S</u>. The latter provided a measure for low and high case success for twenty <u>S</u>s [8 successful (S), 7 partly successful (PS), 4 partly unsuccessful (PU), and 1 unsuccessful (U)]. High success groups (Hypotheses II and IV) consisted of available successful clients (those rated "S"), while low success groups were composed from all remaining rated Ss

(those rated "PS", "PU", AND "U"). The small percentage of partly unsuccessful $\underline{S}s$ Table 5), and particularly the unexpected availability of only one unsuccessful \underline{S} , did not provide a broad distribution of case ratings needed for a substantial difference between high and low success groups.

All hypotheses tested in this present thesis required measurements of client-perceived therapist self-disclosure. It was noted in the previous section on operational definitions that the index of such therapist "disclosure" was obtained from the scale-checking behavior of Ss on the early and late administrations of a semantic differential. 1 Tables 6 and 7 provided a complete listing of each S's responses to the concept "Counselor" over sixteen bipolar, adjective scales for both early and late measures. On the early administration (after the fourth interview) of the semantic differential there were twenty-three Ss whose judgments provided a total of 368 responses ($n_1 = 368$; see Table 6). A total of 336 responses $(n_2 = 336; see Table 7)$ was obtained from twenty-one Ss on the late differential administered after the eighth interview. Each S responded a total of 16 times on one or more of the seven positions, on both early and late differential measures.

Note: Checks on positions 1, 4, and 7 were indices of client-perceived therapist ambiguity or veiling; or low self-disclosure. Checks on positions 2, 3, 5, and 6 were indices of client-perceived therapist clarity or openness; or high self-disclosure.

The final steps taken prior to testing the hypotheses were those of (a) obtaining scale-checking frequency scores on each position tested for all differentiated groups under each hypothesis and (b) summing the latter positions scores to derive one total frequency score on each position as well as a combined position score for all positions tested. These scale-checking frequency scores are listed in Tables 8, 9, 10, 11, and 12.

In general, all five investigations (see Experimental Hypothesis in Chapter III) in the present thesis, were undertaken to determine if there were significant differences between various differentiated groups in proportionate uses of combined positions (1, 4, and 7 or 2, 3, 5, and 6) as well as uses of individual positions (either 1, 4, and 7 or 2, 3, 5, and 6) on either early or late judgments of the concept "Counselor." Twenty-two different tests were conducted on the frequency-score data above, over all investigations. The null hypothesis (H_O) in each of the twenty-two tests was that there was no difference between tested groups on frequency scores.

The data used in this present thesis involved nominal and ordinal types of measures. Therefore, the latter

Note: Six different groups were used in this thesis: High Constructive Change Ss; Low Constructive Change Ss; High Success Ss; Low Success Ss; More Disturbed Ss; and Less Disturbed Ss.

measures were appropriate to the application of the Mann-Whitney U Test (see Siegel, 1956). A total of twenty-two Mann-Whitney U, rank order statistics (α = .05; one tailed tests) were used over all twenty-two hypotheses.

Figures 1 through 5 show the comparative percentage differences of all positions on combined as well as individual positions, between the various groups tested.

Table 13 contains all significant probabilities for values as small as observed values for each computed Mann-Whitney U.

Statistical Results of the Study

Hypothesis I

Null Hypothesis I $(HI_O)^1$: No differences will be found in the frequency scores of positions 1, 4, and 7 (combined and/or individual position scores) between High and Low Constructive Change Ss, on their early judgments of the concept "Counselor," over a series of seven-point Semantic Differential scales.

Hypothesis Ia (HIa): High Constructive Change Ss will have a higher combined frequency score on positions 1, 4, and 7, than Low Constructive Change Ss on early judgments of "Counselor."

Hypothesis Ib (HIb): High Constructive Change Ss will have a higher frequency score on position I, than Low Constructive Change Ss on early judgments of "Counselor."

Note: The null hypothesis is stated only once, but is the null for all alternate hypotheses listed; I, Ia, Ib, Ic, and Id. This above procedure will be repeated under each Null Hypothesis.

Hypothesis Ic (HIc): High Constructive Change Ss will have a higher frequency score on position 4, than Low Constructive Change Ss on early judgments of "Counselor."

Hypothesis Id (HId): High Constructive Change Ss will have a higher frequency score on position 7, than Low Constructive Change Ss on early judgments of "Counselor."

A comparison of five High Constructive Change $\underline{S}s$ with five Low Constructive Change $\underline{S}s$, in terms of actual frequency scores on positions 1, 4, and 7 for early judgments of "Counselor," is presented in Table 8. High Constructive $\underline{S}s$ checked the combined positions 1, 4, and 7 more frequently than Low Change $\underline{S}s$; 31/80 responses (or 39% of all position responses; see Figure 1) were checked on the combined positions of 1, 4, and 7 for the High Change group, as compared to 11/80 (13%) for the Low Change group. The latter differences between High and Low Constructive Change $\underline{S}s$ was significant at the .016 level (Table 13). The null hypothesis for test Ia, of no differences, was rejected (α = .05; one tailed), and the alternate Hypothesis Ia was supported.

It can be noted in Figure 1, that High Constructive Change Ss had consistently higher percentage frequency scores on each individual position (1, 4, and 7) on these early judgments. These latter individual position differences, however, were not significant (Table 13); so the null hypothesis for tests Ib, Ic and Id was accepted, that no differences exist between High and Low Constructive

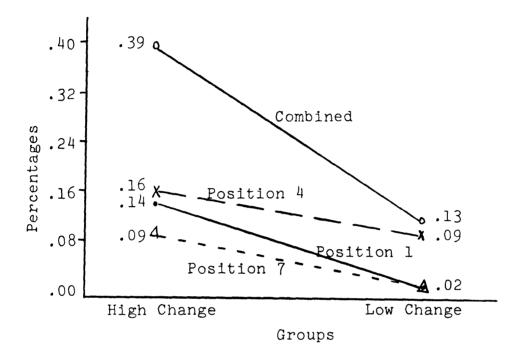


Figure 1.--Percentages of neutral and meaningless positions (1, 4 and 7) checked by High-Low Constructive Change groups, on early judgments of the concept "Counselor".

Ss on individual frequency scores for positions 1, 4, and 7.

Hypothesis II

Null Hypothesis II (HII) : No differences will be found in the frequency scores of positions 1, 4, and 7 (combined and/or individual position scores) between High and Low Success Ss, on their early judgments of the concept "Counselor," over a series of seven-point Semantic Differential scales.

Hypothesis IIa (HIIa): High Success Ss will have a higher combined frequency score on positions 1, 4, and 7, than Low Success Ss on early judgments of "Counselor."

<u>Hypothesis IIb (HIIb)</u>: High Success \underline{S} s will have a higher frequency score on position \overline{l} , than Low Success Ss on early judgments of "Counselor."

<u>Hypothesis IIc (HIIc)</u>: High Success Ss will have a higher frequency score on position $\overline{4}$, than Low Success Ss on early judgments of "Counselor."

Hypothesis IId (HIId): High Success Ss will have a higher frequency score on position 7, than Low Success Ss on early judgments of "Counselor."

There were no significant differences between High and Low Success Ss' frequency scores (Table 13) on positions 1, 4, and 7, combined and individual positions (regardless of unexpected inconsistencies in percentage differences noted in Figure 2 and Table 9). The Null Hypothesis for all tests, IIa, IIb, IIc, and IId, was accepted under Hypothesis II, of no differences between

Note: Null Hypothesis is stated once for all following alternate hypotheses.

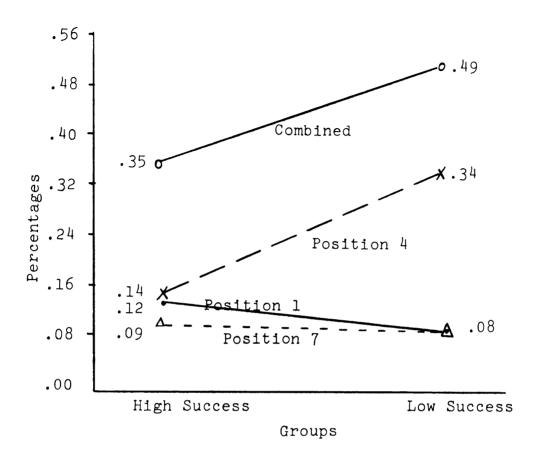


Figure 2.--Percentages of neutral and meaningless positions (1, 4, and 7) checked by High-Low Success groups, on early judgments of the concept "Counselor".

High and Low Success $\underline{S}s$ on early uses of positions 1, 4. and 7.

Hypothesis III

Null Hypothesis III (HIII): No differences will be found in the frequency scores of positions 2, 3, 5, and 6 (combined and/or individual position scores) between High and Low Constructive Change Ss, on their late judgments of the concept "Counselor," over a series of seven-point Semantic Differential scales.

Hypothesis IIIa (HIIIa): High Constructive Change Ss will have a higher combined frequency score on positions 2, 3, 5, and 6, than Low Constructive Change Ss on late judgments of the concept "Counse Tor."

Hypothesis IIIb (HIIIb): High Constructive Change Ss will have a higher frequency score on position 2, than Low Constructive Change Ss on early judgments of "Counselor."

Hypothesis IIIc (HIIIc): High Constructive Change Ss will have a higher frequency score on position 3, than Low Constructive Change Ss on early judgments of "Counselor."

Hypothesis IIId (HIIId): High Constructive Change Ss will have a higher frequency score on position 5, than Low Constructive Change Ss on early judgments of "Counselor."

Hypothesis IIIe (HIIIe): High Constructive Change Ss will have a higher frequency score on position 6, than Low Constructive Change Ss on early judgments of "Counselor."

All combined and individual position scores, except for position 6 (Table 10 and Figure 3) were unexpectedly higher for Low Constructive Change Ss. Note that the latter differences were significant on the combined score (positions 2, 3, 5, and 6) and for scores on individual positions 3 and 5 (Table 13 and Figure 3). Since all the

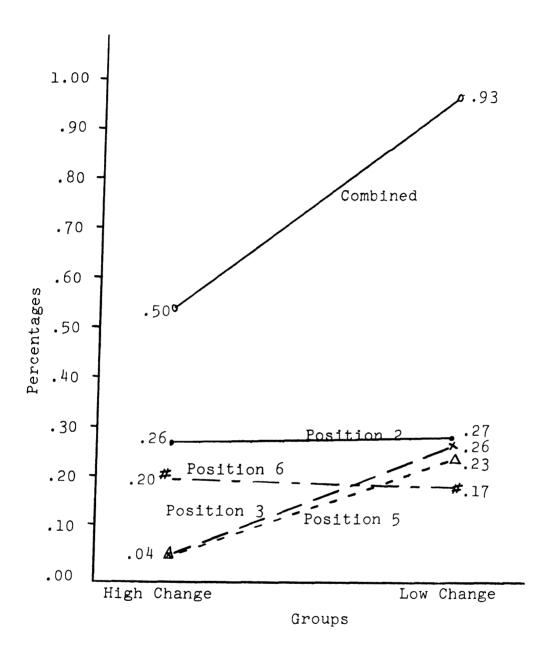


Figure 3.--Percentages of discriminatory positions (2, 3, 5, and 6) checked by High-Low Constructive Change groups on late judgments of the concept "Counselor".

differences on the above positions were, however, in the direction opposite to that expected (High Change > Low Change), the null hypothesis (HIII_O) was accepted for all tests, IIIa, IIIb, IIIc, IIId, and IIIe, that no differences would be found between High and Low Constructive Change Ss on late judgments of the concept "Counselor" over all positions 2, 3, 5, and 6 (combined and individual).

Hypothesis IV

Null Hypothesis IV (HIV): No differences will be found in frequency scores of positions 2, 3, 5, and 6 (combined and/or individual) between High and Low Success Ss, on their late judgments of the concept "Counselor," over a series of seven-point Semantic Differential scales.

Hypothesis IVa (HIVa): High Success Ss will have a higher combined frequency score on positions 2, 3, 5, and 6, than Low Success Ss on late judgments of the concept "Counselor."

Hypothesis IVb (HIVb): High Success Ss will have a higher frequency score on position 2, than Low Success Ss on late judgments of the concept "Counselor."

Hypothesis IVc (HIVc): High Success Ss will have a higher frequency score on position 3, than Low Success Ss on late judgments of the concept "Counselor."

Hypothesis IVd (HIVd): High Success Ss will have a higher frequency score on position 5, than Low Success Ss on late judgments of the concept "Counselor."

Hypothesis IVe (HIVe): High Success Ss will have a higher frequency score on position 6, than Low Success Ss on late judgments of the concept "Counselor."

There were no significant differences between High and Low Success Ss on late judgments of combined positions 2, 3, 5, and 6, as well as on individual positions 3 and 5 (Table 13). Small percentage differences between above groups are noted on their uses of positions 3 and 5 (Figure 4). Positions 2 and 6 were significantly different between above groups at the .007 and .025 levels, respectively. The null hypothesis for tests IVa, IVc, and IVd, of no differences in groups on this late measure, was accepted. The alternate hypotheses, HIVb and HIVe, were supported by significant data noted above and in Table 13, that High Success Ss would use higher frequencies of positions 2 and 6, than Low Success Ss.

Hypothesis V

Null Hypothesis V (HV₀): No differences will be found in the frequency scores of positions 1, 4, and 7 (combined and/or individual position scores) between More and Less Disturbed Ss, on their early judgments of the concept "Counselor," over a series of seven-point Semantic Differential scales.

Hypothesis Va (HVa): More Disturbed Ss will have a higher combined frequency score on positions 1, 4, and 7, than Less Disturbed Ss, on early judgments of "Cousnelor."

Hypothesis Vb (HVb): More Disturbed Ss will have a higher frequency score on position I, than Less Disturbed Ss, on early judgments of "Counselor."

Hypothesis Vc (HVc): More Disturbed Ss will have a higher frequency score on position 4, than Less Disturbed Ss, on early jdugments of "Counselor."

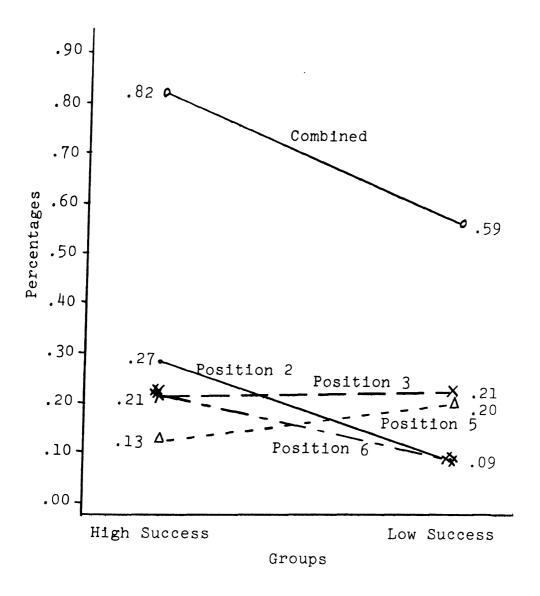


Figure 4.—Percentages of discriminatory positions (2, 3, 5, and 6) checked by High-Low Success groups on all late judgments of the concept "Counselor".

Hypothesis Vd (HVd): More Disturbed Ss will have a higher frequency score on position 7, than Less Disturbed Ss, on early judgments of "Counselor."

A comparison is made in Figure 5 of More and Less Disturbed groups in terms of judgments on positions 1, 4, and 7. Although the More Disturbed group used considerably larger percentages of responses on position 4 (28% compared to 13%), no significant differences between disturbance Ss were found on any frequency scores, combined or individual, for positions 1, 4, and 7, on these early judgments of "Counselor" (Table 13). The Null Hypothesis (HV₀) was accepted for all tests, Va, Vb, Vc, and Vd, that no differences exist between More and Less Disturbed Ss in their early use of positions 1, 4, and 7 (combined and individual) on early judgments of "Counselor."

A complete summary of significance probabilities associated with each observed Mann-Whitney U, and a statement of rejection or acceptance of each null hypothesis tested in this chapter, are listed in Table 13.

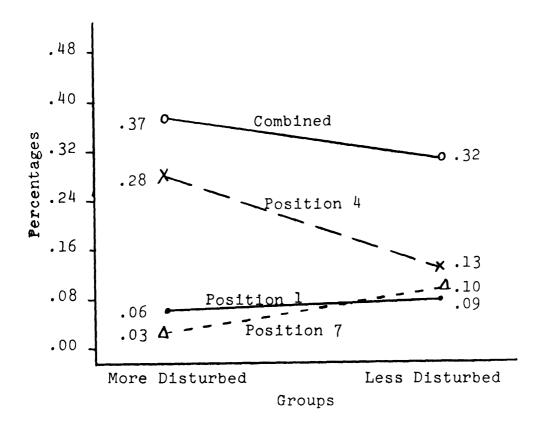


Figure 5.--Percentages of neutral or meaningless positions (1, 4, and 7) checked by More-Less Disturbance groups on all early judgments of the concept "Counselor".

TABLE 1.--Descriptive summary of client, therapist and therapy characteristics.

Clie	nt	T	herapis	t	Therapy
Subject Number	Sex#	Code Number	Sex	Level**	Total Number Interviews
3	F	78	M	I ₁	7
4	F	35	M	I ₂	6
5	F	33	M	I ₂	4
6	F	65	M	I ₁	6
7	F	79	M	ı	8
9	F	74	M	I	14
10	F	40	M	s	6
11	F	75	M	I	18
15	F	85	M	I,	15
16	F	33	М	I ₂	22
17	F	70	F	I	16
20	F	32	M	I ₂	22
25	F	15	F	s	23
26	F	41	F	I ₂	18
28	F	39	M	I ₂	11
29	F	77	M	I ₁	7
32	F	11	M	S	7
33	F	78	M	I ₂	9
34	F	19	F	S	6
40	F	53	F	I ₁	17
42	F	40	M	S	18
45	F	45	M	I ₂	20
47	F	59	M	P	12
50	F	95	М	P	13
51	F	56	F	P	18
54	F	98	М	P	37

^{*} \underline{M} refers to male; \underline{F} refers to female.

^{**}P refers to Practicum Student; \underline{I}_1 refers to first-year Intern; \underline{I}_2 refers to second-year Intern; and \underline{S} refers to Senior Staff.

TABLE 2.--Pre-MMPI raw and formula scores for nineteen Ss used in E's thesis.

FOrm:119	Scores	328 3274 3274 33977 33977 33977 33977 33977 33977 3399 33997 33997 33997 33997 33997 33997 33997 33997 3397 3497 34
	ម ន	とり ちょくり こくりょう ちょう ちょう ちょう ちょう ちょう ちょう ちょう ちょう ちょう ち
	sh R	2000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	Wel A	\$0008000000000000000000000000000000000
	Si	100112012 1001120 1001120
	Ma	8037400000000000000000000000000000000000
Scale	Sc	20000000000000000000000000000000000000
Each S	Pt	45000000000000000000000000000000000000
on Ea	Ра	30000000000000000000000000000000000000
	Mf	4180486788864180980 7484484888488448884
Scores	Pd	30 + 80 + 60 6 8 4 50 8 1 1 + 6 8 8 4 50 8 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Raw	Hy	80000000000000000000000000000000000000
	D	0842410770728 31281222707082222
	Hs	3522413456410250325 111111151151515151
	K	8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	Ŀ́ч	001100000000000000000000000000000000000
	ı	00000000000000000000000000000000000000
Subject to		4104204286504651646464646464646464646464646464646464

TABLE 3.--Post-MMPI raw and formula scores for eleven Ss used in E's thesis.

Subject						Raw	Scores	uo sə	n Each	1	Scale						() ()
Number	ī	ഥ	X	Hs	Д	Hy	Pd	M£	Pa	Pt	Sc	Ma	Si	Welsh	sh		Scores
														A	<u>س</u>	ध्य	
16	03	05	13	60	21	21	26	77	10	23	25	19	39	746	53	52	331.96
17	01	90	13	54	19	21	54	43	14	33	28	21	30	96	ħ ħ	50	346.30
26	02	03	12	11	54	23	77	38	11	27	25	20	25	50	58	9 17	328.48
32	0 4	05	15	13	21	24	56	43	14	28	30	21	34	51	7 7	9 †	361.90
34	03	02	21	12	17	23	24	35	08	23	25	20	30	37	51	52	343.89
40	03	90	14	12	23	23	22	40	11	30	31	17	70	99	53	50	355.09
42	02	03	15	12	14	54	25	42	10	25	25	25	12	43	32	L 4	329.65
۲۲	03	02	11	12	56	15	22	43	60	30	24	15	36	61	52	51	316.12
50	01	0 4	14	74	20	29	32	37	10	54	20	18	20	43	77	55	322.90
51	03	03	18	11	19	56	22	37	10	22	54	15	23	38	52	53	333.85
7 T	03	90	12	10	28	23	21	50	13	39	37	23	36	58	58	39	387.95

TABLE 4.--MMPI change scores and signs on eleven $\underline{S}s$ used in Hypotheses I and III.

Subject Number	Pre-MMPI Formula Score	Post-MMPI Formula Score	Change Score	Sign
16	270.62	331.96	-61.34	<u> </u>
17	330.28	346.30	-16.02	_
26	355.78	328,48	27.30	+
32	395.41	361.90	33.51	+
34	381.59	343.89	37.70	+
40	356.21	355.09	1.12	_
42	308.84	329.05	- 20.81	-
47	389.87	316.12	73.75	+
50	399.22	322.90	76.32	+
51	347.93	333.85	14.08	_
54	420.75	387.95	32.80	+

TABLE 5.--Therapists' ratings of case outcomes for twenty Ss used in this thesis.

Subject Number	Rating by Therapist
3	PU
4	PS
5	s
6	Ŭ
7	PU
9	PU
10	PU
15	S
16	S
17	PS
20	PS
25	PS
28	S
29	PS
32	PS
33	S
34	S
40	S
42	S
45	PS

U represents unsatisfactory.
PU represents partly unsatisfactory.
PS represents partly satisfactory.
S represents satisfactory.

TABLE 6.--Positions checked (1-7) by twenty-three Ss on judgments of the concept "counselor." Based on an early administration of the Semantic Differential.

))	•									
* ~ ~	7	5	7	6	10	15	16	17	20 %	25	56 5	28 2	8	2 3	3 34	7 7	7 0	2 45	5 50	51	54	
					-																	
Large-Small	\sim	Н	7	2	7	\sim	7	2	7	7	9	7	Ŋ	2	m	7 7	7	7	~	M	Н	
Thin-Thick 4	\sim	7	2	2	†	ħ	\sim	2	7	7	2	4	2		7	7 7	4 3	3 4	- 5	\sim	7	
Colorless-Colorful 3	7	۲-	7	7	\sim	5	9	5	7	2	7	9	4	5	7	9	5 6	7	ري س	7	9	
Easy-Difficult	Н	٦	2	2	\sim	\sim	\sim	\sim	\sim	2	Н	Н	5	2	7	2	9	†	9	2	7	
Safe-Dangerous	٦	 1	7	4	\sim	Μ	\sim	4	2	2	٦	 1	4		ω.	2	5 2	77		~	\sim	
Modest-Vain 5	2	٦	7	4	7	7	\sim	\sim	4	\sim	7	4	7	7	~	2	7 7	7	77	2	4	
Sharp-Dull 1	2	4	2	7	5	\sim	2	\sim	\sim	\sim	Н	2	7	7	m	2	1 4	7 +	~	7	~	
Optimistic-Pessimistic 5	Н	H	٦	7	\sim	2	~	2	_	2	۲٦	7	2	2	m	2	3 3	* 4	- 2	2	\sim	
Weak-Strong 7	9	7	7	7	Μ	5	9	9	2	9	Q	2	4	9	77	9	9 9	7 7		5	9	
Free-Constrained	2	٢	7	2	2	\sim	2	7	~	2	7	5	2	2	7	~	2 2	77 - 2	- 2	5	2	
Fair-Unfair	\sim	٦	7	⇉	\sim	7	~	2	4	2	Н	2	†7	-		-	1 2	77	- 2	2	٦	
Active-Passive l	7	Н	2	7	7	٦	\sim	7	5	2	9	2	4	2	7	7	2 3			\sim	\sim	
Bad-Good 7	7	7	9	9	2	5	9	9	9	9	7	7	9	_			9 9	4	ī.	9	9	
Destructive-Productive 7	7	7	77	4	2	2	9	9	7	2	7	7	7	7	7	9	9 9	77 5	- 2	7	9	
Slow-Fast 2	い	7	2	7	\sim	\sim	5	7	7	7	4	7	4	7	7	2	5 6	7 7	7	5	S	
Changing-Stable 7	9	7	7	7	\sim	5	5	9	7	9	7	7	7	4	5	9	3	ω	77 8	9	7	

*Note: Column headings refer to S's number.

TABLE 7.--Positions checked (1-7) by twenty-one Ss on judgments of the concept "counselor." Based on a late administration of the Semantic Differential.

Scales					P.	osit	ion	Ø	Chec	cked	by	Еас	ch S	Subj	ect				I
	3* 5 6	7	0	11	15 .	161	7 2	0 2	5 2	6 2	8 33	2 33	1 m	0 7	42	47	51	54	
Large-Small			1					1											ı
Thin-Thick		ν u	ν n	ч ч	m (γ (m i	7 .	\sim		5 2	Υ)	2	\sim	5	\sim	\sim	7	
Colorless-Colorful	9	٧ ٧	7 7	о и	n u	n 4							9	\sim	\sim	Ţ	2	7	
Easy-Difficult	9) נכ	- ע) (o ر	5 (9 /		7	9	5	9	Ŋ	9	9	
Safe-Dangerous) () () =	u c	υ,	n (m	1 2	m	\sim	2	2	\sim	2	2	2	
Modest-Vain	J L	n =	7 (ν ι	1 (1 2	2	\sim	2	5	2	2	2	2	
Sharp-Dull	U U	, =	· ·	r o	\sim			7	2	4 3	-1	7	2	7	~	7	2	2	
Optimistic-Pessimistic	v c	J (t	γ) ι	m ,				3 1	Υ.	7	\sim	2	2	4	4	4	2	
Weak-Strong		n	ν <i>-</i>	ט ו	н 1				~	†	٦	\sim	٦	\sim	2	2	7	7	
Free-Constrained	- r	0 0	4 F		(9	9	5	7	9	5	9	2	9	
Fair-Unfair	٦ ،	v r	ر د	v c	_						2	4	7	2	†	2	\sim	_	
Active-Passive	۱ ,	ر د	n r	Ì	٦ ,					7	Т	\sim	2	2	2	2	2	1	
Bad-Good	4 V	ı u								C	9	(۲)	7	7	(۲	7	\sim	2	
Destructive-Productive		o y						7	7	7	7	5	Q	7	2	9	9	9	
Slow-Fast		o r						7	7	9	4	2	9	9	9	,9	9	9	
Changing-Stable		n 1						5	7	4	7	7	9	2	9	4	72	7	
		_	$\boldsymbol{\mathcal{C}}$	\	9	2	\sim	5	7	9	7	2	9	2	\sim	7	9	-	

*Note: Column headings refer to \underline{S} 's number.

TABLE 8.--Frequencies of neutral or meaningless positions (1, 4, 7) checked by high and low constructive change groups on early Semantic Differential judgments of the concept "counselor."

H	ligh	Cha	nge	Group	Low C	hang	e G	roup	1
Subject	Pos	iti	ons	Total	Total	Pos	iti	ons	Subject
Number	1	4	7	Frequency Score	Frequency Score	1	4	7	Number
26	6	2	4	12	0	0	0	0	16
32	1	4	2	7	2	0	1	1	17
34	2	0	1	3	5	2	3	0	40
50	0	3	0	3	2	0	2	0	42
54	2	4	0	6	2	0	1	1	51
— Sums	11	13		31	11	2	7	2	Sums

TABLE 9.--Frequencies of neutral or meaningless positions (1, 4, 7) checked by high and low success groups on early Semantic Differential judgments of the concept "counselor."

Н	igh	Suc	cess	Group	Low	Suco	cess	s Gro	oup
Subject	Pos	iti	lons	Total	Total	Pos	sit	lons	Subject
Number	1	4	7	Frequency Score	Frequency Score	1	4	7	Number
5	8	1	7	16	12	7	1	4	3
15	1	2	0	3	7	4	0	3	4
16	0	0	0	0	8	1	4	3	7
28	2	4	4	10	10	0	10	0	9
33	0	6	0	6	4	0	4	0	10
42	0	2	0	2	9	. 1	8	0	20
34	2	0	1	3	10	0	10	0	29
40	2	3	0	<u>5</u>	7	1	4	2	32
Sums	15	18	12	45	15	0	15	0	45
					2	0	1	1	17
					<u>3</u>	0	3	0	<u>25</u>
					87	14	60	13	Sums

TABLE 10.--Frequencies of discriminating positions (2, 3, 5, 6) checked by high and low constructive change groups on late Semantic Differential judgments of the concept "counselor."

	Hig	h C	har	nge	Group	Low	Cha	nge	Gr.	oup	
Subject	Ро	sit	ior	ıs	Total	Total	Po	sit	cior	ns	Subject
Number	2	3	5	6	Frequency Score	Frequency Score	2	3	5	6	Number
26	1	0	1	1	3	15	6	5	1	3	16
32	3	2	0	2	7	16	3	5	7	1	17
34	7	0	0	6	13	14	4	3	5	2	40
47	5	1	1	3	10	14	3	5	3	3	42
54	5	0	1	4	10	15	6	3	2	4	51
Sums	21	3	3	16	43	74	22	21	18	13	Sums

TABLE 11.--Frequencies of discriminating positions (2, 3, 5, 6) checked by high and low success groups on late Semantic Differential judgments of the concept "counselor."

	Hig	sh S	Suc	cess	Group	Low	Suc	ces	ss (Grou	p
Subject	Pc	sit	ior	ıs	Total	Total	Po	sit	cior	ns	Subject
Number	2	3	5	6	Frequency Score	Frequency Score	2	3	5	6	Number
5	5	0	1	7	13	7	1	3	2	1	3
15	3	5	1	2	11	2	0	1	1	0	6
16	6	5	1	3	15	13	3	4	2	4	7
28	6	2	1	4	13	11	2	2	5	2	9
33	0	7	5	0	12	16	3	5	7	1	17
34	7	0	0	6	13	3	0	2	1	0	20
40	4	3	5	2	14	16	0	8	7	1	25
42	3	5	3	3	14	7	3	2	0	2	32
Sums	34	27	17	27	105	7 5	12	27	25	11	Sums

TABLE 12.--Frequencies of neutral or meaningless positions (1, 4 7) checked by high and low disturbance groups on early Semantic Differential judgments of the concept "counselor."

Higher	Di	stur	banc	e Group	Lower Di	stur	ban	ce G	roup
Subject Number	Positions			Total	Total	Positions			Subject
	1	4	7	Frequency Score	Frequency Score	1	4	7	Number
9	0	10	0	10	8	1	4	3	7
15	1	2	0	3	0	0	0	0	16
20	1	8	0	9	2	0	1	1	17
25	0	3	0	3	12	6	2	4	26
32	1	4	2	7	10	2	4	4	28
34	2	0	1	3	5	2	3	0	40
54	2	4	0	6	2	0	2	0	42
Sums	7	31	3	41	2 41	$\frac{0}{11}$	1	1 13	51 — Sums

TABLE 13.--Significance probabilities associated with all values as small as observed values of U in Hypotheses I-V.

Alternate Hypothesis (Directional)	Position(s)	Mann- Whitney U (P≤)	Null Hypothesis (No Differences)
Ia Ib Ic Id	1, 4 & 7 (combined) 1 4 7	.016* .075 .345	rejected accepted accepted accepted
IIa IIb IIc IId	1, 4 & 7 (combined) 1 4 7	n.s. n.s. n.s.	accepted accepted accepted accepted
IIIa IIIb IIIc IIId IIIe	2, 3, 5, & 6 (combined 2 3 5 6	.004+ .500 .004+ .008+ .345	accepted accepted accepted accepted accepted
IVa IVb IVc IVd IVe	2, 3, 5, & 6 (combined 2 3 5 6) .117 .007* .439 .253 .025*	accepted rejected accepted accepted rejected
Va Vb Vc Vd	1, 4 & 7 (combined) 1 4 7	.232 .433 .095 .095	accepted accepted accepted accepted

Note: * refers to significance at α .05. + refers to significance at α .05 in opposite direction.

CHAPTER V

SUMMARY AND CONCLUSIONS

The general disclosure of therapists' "meanings" and "intentions" to the client, has been considered within Rogerian theory as a necessary aspect of successful psychotherapy. Recent suggestions have been made, that client-perceived therapist self-disclosure, to be therapeutically effective, is probably contingent on the ambiguity or veiling of therapists' meanings and intentions during early therapy sessions.

Summary

The major purpose of the present thesis was to test the predictions that there would be significantly higher frequencies of client-perceived therapist ambiguity or veiling indices (low self-disclosure) in early measures of (a) subjects showing higher degrees of constructive change than Ss with low degrees of change, (b) Ss given high success ratings than with Ss with low success ratings and (c) Ss showing more degrees of disturbance than with Ss with less degrees of disturbance. It was also predicted that there would be higher frequencies of client-perceived therapist clarity or meaningful (high self-disclosure) indices in overall (or late) measures of Ss showing higher

degrees of constructive change and/or with $\underline{S}s$ rated as more successful clients, than with low change $\underline{S}s$ and/or with less successful clients.

Clients used in the present study were twenty-six self-referred Michigan State University undergraduate females, who had been seen at the University Counseling Center for personal counseling.

High and Low Constructive Change Groups were developed on the basis of differences between Ss' pre-and post-MMPI formula scores. Therapists' ratings of individual case success was the basis of High and Low Success Group compositions. Pre-MMPI formula scores provided a criteria for assigning Ss into More or Less Disturbed Groups.

Client's perception of therapist's self-disclosure was defined as S's scale-checking behavior on a series of seven-point (position) semantic differential judgments of the concept "Counselor." Positions 1, 4, and 7 (combined and individual), the meaningless-neutral scales, were separate indices of low therapist disclosure, and positions 2, 3, 5, and 6 (combined and individual), the most discriminatory scales, were separate indices of high therapist disclosure.

Sixteen judgments of the concept "Counselor" were made by each of the twenty-six $\underline{S}s$ on early and/or late administrations of the semantic differential test. Frequency scores were obtained on the \underline{S} 's uses of the seven

alternate positions over 16 of the seven-point scale judgments of the concept "Counselor."

Twenty-two Mann-Whitney U, one tailed tests (α = .05) were then used to test predicted differences between the various groups mentioned above, on their frequency scores for each separate measure (individual and combined positions scores) either for 1, 4, and 7 or 2, 3, 5, and 6; depending on whether the hypothesis was investigating low or high therapist disclosure indices.

The results of the analyses supported only three of the twenty-two experimental predictions of group differences. As expected, High Constructive Change clients did use greater frequencies (significant at .016) of combined positions 1, 4, and 7 on early judgments of "Counselor" than did Low Change clients. On this one combined measure of positions 1, 4, and 7 (low therapist disclosure), there was support for the hypothesis ($\alpha = .05$) that High Constructive Change clients would perceive their therapist's meanings less clearly during early therapy, than would Low Constructive Change clients. The positions 1, 4, and 7, however, as individual measures of low therapist disclosure, were not significantly different between the above groups. The latter individual measures did not support the hypothesis that there would be greater indices of low therapist disclosure on earlier individual position measures for High Change Ss, than for Low Change Ss.

High and Low Success Ss, as well as More and Less Disturbed Ss, showed no predicted differences in scale-checking behavior on their early therapy judgments of "Counselor" on positions 1, 4, and 7 (low therapist disclosure), either on individual or on combined measures of positions 1, 4, and 7. No support was gained on the above tests for the presence of early therapist veiling in those cases rated as successful. Also, no support was found in the above tests (individual and combined positions 1, 4, and 7) that More Disturbed clients would perceive therapists' meanings as more veiled in early therapy than Less Disturbed clients.

No differences were found between High and Low Constructive Change clients on late (individual and combined) measures of positions 2, 3, 5, and 6 (high therapist disclosure). The latter data did not support the hypothesis that High Constructive Change clients would have more indices of high therapist disclosure (positions 2, 3, 5, and 6) on overall (or late) measures, than Low Constructive Change clients.

Significant differences (α = .05) were found between High and Low Success Ss on two measures of overall (or late) indices of high therapist disclosure. Position 2 was significantly different between High and Low Success groups at the .007 level, and position 6 at the .025 level. These two measures supported the hypothesis that High

Success clients would perceive their therapists more clearly (high therapist disclosure) in overall therapy than would Low Success clients.

No differences between the same groups above were found, however, on the other measures of high therapist disclosure, combined positions (frequencies) of 2, 3, 5, and 6 and on individual positions (frequencies) 3 and 5.

The results of all twenty-two of the hypotheses tested in the present thesis, although failing to generally support the importance of the temporal contingency of early therapist veiling to successful therapy, did show some encouraging trends, in predicted directions.

Although the statistical analysis did not support the theory of the present thesis, two results of the study are cited as reasons for failure; (a) it can be argued that the fourth and eighth-interview semantic differentials provided only the middle of the continuum between early and late client perceptions of "Counselor." Consequently a much wider continuum between "early" and "late" client perceptions would be needed, and (2) the subjects can be regarded as homogeneous in terms of disturbance levels and consequently a more extreme degrees of disturbance would be needed.

Conclusions

Hypothesis I

- 1. Female clients who show evidence of high constructive change, as a result of therapy, are more apt to perceive less of the therapist's meanings and intentions during early therapy than low constructive change female clients, when therapist's meanings are measured on combined "low therapist disclosure" indices; positions 1, 4, and 7, from a series of semantic differential seven-point bipolar scale judgments of the concept "Counselor."
- 2. Female clients who evidence high constructive change are likely to be no different from low constructive change females on early perceptions of therapist's meanings and intentions when these latter client perceptions are measured on individual "low therapist disclosure" indices; positions 1, 4, and 7, from a series of semantic differential seven-point bipolar scale judgments, of the concept "Counselor."

Hypothesis II

No differences are apt to be found between female clients rated as successful or unsuccessful in their early therapy perceptions of therapist's meanings and intentions when these latter perceptions are measured on individual or combined "low therapist disclosure" indices; positions 1, 4, and 7, from a series of semantic differential

seven-point bipolar scale judgments, of the concept "Counselor."

Hypothesis III

No differences are likely to be found between female clients who show evidence of high or low constructive change, as a result of therapy, on their overall (or late) perceptions of therapist's meanings and intentions, when the latter perceptions are measured on combined or individual "high therapist disclosure" indices; positions 2, 3, 5, and 6, from a series of semantic differential seven-point bipolar scale judgments, of the concept "Counselor."

Hypothesis IV

- 1. Female clients rated as successful cases by their therapists, are more apt to perceive more of the therapist's meanings and intentions, during overall (or late) therapy, than unsuccessful rated female clients, when therapist's meanings are measured on individual "high therapist disclosure" indices; positions 2 and 6, from a series of semantic differential seven-point scale judgments, of the concept "Counselor."
- 2. No differences are likely to be found between female clients rated as successful or unsuccessful, on their overall (or late) perceptions of therapist's meanings and intentions, when the latter perceptions are measured on "high therapist disclosure" indices; positions 2, 3, 5, and

6 combined, or individual positions 2 and 6, from a series of semantic differential seven-point bipolar scale judgments, of the concept "Counselor."

Hypothesis V

No differences are likely to be found between more and less disturbed clients, on their early therapy perceptions of therapist's meanings and intentions, when the latter perceptions are measured on combined or individual "low therapist disclosure" indices; positions 1, 4, and 7, from a series of semantic differential sevenpoint bipolar scale judgments, of the concept "Counselor."

Discussion

Failure to find support for nineteen of the twentytwo analyses in this present thesis, requires further
explanation. Important differences between the present
thesis and other studies (Chapter II), which suggest a
temporal contingency to the effectiveness of clientperceived therapist self-disclosure, may relate to sample
size and composition, instrumentation, and/or procedures.

Unlike previous studies reviewed in Chapter II, all Ss in the present thesis were college females. Sex differences and institutional relationships of Ss in this thesis were different from Ss in related studies by Barrett-Lennard, 1962; Demos, 1964; and Truax and Carkhuff, 1965.

The counselors in the present thesis were varied in terms of sex and levels of experience (Table 1). The latter counselor differences could possibly add to the problems of early control struggles (discussed on page 16 in this dissertation). Such counselor-client control struggles may account for lower than predicted frequencies of "low therapist disclosure," positions 1, 4, and 7, of the clients' semantic differential judgments of the concept "Counselor" in analyses of tests under Hypotheses I, II, and V. Three of the five counselors, e.g., involved in all investigations under Hypothesis I (Chapter IV), worked with the Low Client Change group. Only one of the three Senior Staff counselors worked with the Low Client Change Ss, in studies under Hypothesis I.

One important methodological problem that may have contributed to limitations on the present thesis, could be related to the timing of the "early" and "late" semantic differential administrations. The latter early differential, e.g., was administered at the conclusion of the fourth interview. An examination of Table 1 (Chapter IV) of Ss involved in studies under Hypothesis I (Table 8), shows that the High Change Ss were counseled for a total of 71 sessions (a mean average of 14.2 sessions). Low change Ss, however, were involved in a total of 91 sessions (a mean average of 18.2 sessions). The latter difference in length of sessions between the groups

in Hypothesis I, could suggest that the fourth interview administration of the semantic differential may not have been "early" enough, particularly for the Low Change Ss.

Differences in length of therapy (Table 1) are also noted for <u>S</u>s (Tables 10 and 11) under Hypotheses III and IV analyses. In the latter studies, overall (or late) measures were taken from semantic differential judgments which followed the eighth interview. Perhaps differences in average length of therapy between groups, indicate that the eighth interview is not "late" enough. High Success <u>S</u>s, e.g., had a total of 80 sessions while Low Success Ss were seen for a total of 91 session (Table 1).

Another limitation of this present thesis, relating to length of therapy, centers on the student sample.

Therapy termination of "student" clients, may have consisted of time limitations imposed by the school year, as well as client and/or therapist decisions.

One possible source of error, specifically relating to all tests under Hypotheses II and IV, arises from the division between experimental (high success Ss) and control (low success Ss) groups. The latter division was made solely on the basis of therapist's ratings, which reflect only the subjective judgment of each therapist. No other objective criteria was used in the above dividing process.

It should be also noted here that the initial decision in Hypotheses II and IV was to (a) assign only those Ss rated "successful" (or those assigned an "S": see Table 5) into the high success groups, and (b) all other Ss, "partly successful," "partly unsuccessful," and "unsuccessful" into the Low Success group. This latter decision imposed certain limitations on the studies above, under II and IV. A closer look, e.g., at the low success group under II tests, revealed that none of those low success Ss were rated "unsuccessful." Only four of the eight Low Success Group were rated "partly unsuccessful," with four (one-half of the entire Low Success Group) rated as "partly successful." The unexpected imbalance in the ratio of "real" unsuccessful Ss to successful Ss could well explain the lack of significant differences of groups in these studies.

Studies under Hypothesis V also ran into some unexpected group-division problems, which may have been a substantial limitation on the latter investigations. Groups were to be divided between more and less disturbed clients. It was noted in Chapter IV, that all of the 15 Ss with pre-MMPI formula scores, fell into the non-psychiatric category (using Cooke's cutting line of 550). More significant results might have been obtained if more substantial differences in group disturbance levels could have been achieved.

Certain instrumentation limitations must be noted, in regard to Cooke's formula (Appendix D), which provided formula scores for pre- and/or post-MMPI tests used as the basis for group divisions in Hypotheses I, III, and V. The formula was derived for college (freshmen) females, who were enrolled in a nursing program. Some lower reliability measures than those given in Appendix D (r = .91 and .80) might be expected since the college undergraduate female Ss in the present thesis did not represent this single academic major.

All the limitations suggested so far in this discussion are undoubtedly sources of error, and could well account for failures to find the significant differences predicted in this present thesis.

In addition to the three studies (Ia, IVb, and IVe; see Table 13) in which significant, predicted results were obtained, there were a number of other encouraging trends (see Figures 1 through 5) which merit some attention in this following discussion. These latter trends deal specifically with the use of alternate semantic differential positions, as either separate or combined measures of low or high therapist disclosure.

As suggested in Chapter III, and in Appendix A, each position on the semantic differential was defined as a "single" measure of differing intensity or clarity of client-perceived therapist self-disclosure. The polar

positions, 1 and 7, because of their extremity on the bipolar scale, ordinarily would be considered the most intense or clear measure of therapists' meanings. However, as noted in Appendix A, both female and high I.Q. Ss usually check these polar positions when under "generalized" anxiety and when judging an ambiguous concept. Positions 1 and 7, for the latter reasons, were assumed, in this present thesis, to be single measures of "low therapist disclosure," in which judgments of "Counselor" were less clear to the client. Positions 1 and 7 were then included with position 4, the origin position, considered to be the most "meaningless" (gray or unclear) judgment of the concept "Counselor."

It was assumed in this present thesis that position 4 would be the most "powerful" or "reliable" as a measure of "low therapist disclosure," and would be chosen proportionately more than positions 1 and 7, when judgments were made of counselors' meanings as being veiled or ambiguous. It was, however, expected that all "low therapist disclosure" positions (1, 4, and 7) would consistently measure differences between groups as individual and combined measures of "low therapist disclosure." The latter assumption was not substantiated throughout these studies, and the contradictory and inconsistent results may raise some questions about the usefulness of different alternate positions as measure of therapist disclosure, not in terms of levels of validity, but of reliability.

While direct differences between position frequencies, within the neutral-meaningless position grouping (1, 4, and 7) as well as the most discriminating position grouping (2, 3, 5, and 6) were not originally designed as studies in this thesis, the present thesis data contain some intriguing, post hoc descriptions, that relate to all hypotheses investigated in the present thesis.

In Figure 6 the rank proportionate uses of alternate positions (1-7) on total responses for all, undifferentiated, female subjects, for early, late and combined early-late proportions is depicted. Note, that when early and late measures were combined in Figure 6, position 4 was used more frequently (19% of all combined responses) for all undifferentiated subjects. Position 7 was used least (8%), and position 1 was next to last (10%) in low frequency use on all responses.

When early and late measures of undifferentiated subjects are graphically depicted, apart from the combination early-late responses (see Figure 6), an appreciable shift occurred on position 4 (24% of all early alternate responses and only 15% of late alternate responses as compared to the 19% on overall alternate responses). The latter shift on position 4 indicates that undifferentiated female Ss, as might be expected, perceive the concept "Counselor" as being considerably more meaningless in early therapy than undifferentiated female Ss do in late therapy.

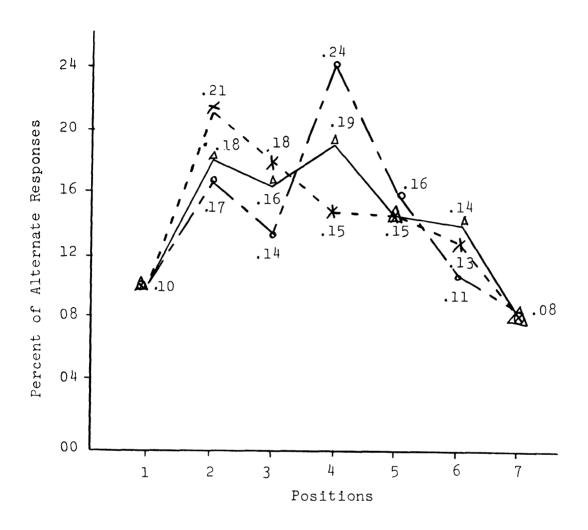


Figure 6.--Proportionate uses of alternate positions by undifferentiated $\underline{S}s$ used in this thesis.

Note: ——— refers to combined Early and Late Frequencies

————— refers to Early Frequencies

—————— refers to Late Frequencies

The unexpected differences arise, however, within position groupings, and are depicted in Figure 6; particularly significant are the descriptions on the polar positions, 1 and 7, as well as for position 5. When early and late responses are partialed out from total responses, however, the polar positions (1 and 7) e.g., remain at the same proportions as the total polar responses. This tentative, post hoc, descriptive analysis suggests, that for this particular undifferentiated population, the polar positions are not as useful in their individual contribution to early-late differences of S's judgments of the concept "Counselor" as position 4. Note that this is also true for position 5 in the discriminatory group.

It is also suggested in Figure 7 that undifferentiated Ss, however, to tend to shift from higher uses of neutral-meaningless position in early therapy to greater uses of discriminatory positions in later therapy. From this latter shift it is suggested that these undifferentiated Ss in Figure 7, characteristically tend to perceive the concept "Counselor" in clearer terms on later judgments than on earlier responses.

The reliability weaknesses of the instrument are suggested in the findings in Figures 6 and 7, particularly on the individual use of the latter positions 1, 7, and 5, as reliable measures of "therapist disclosure." The above weakness in instrumentation, may account in part for the

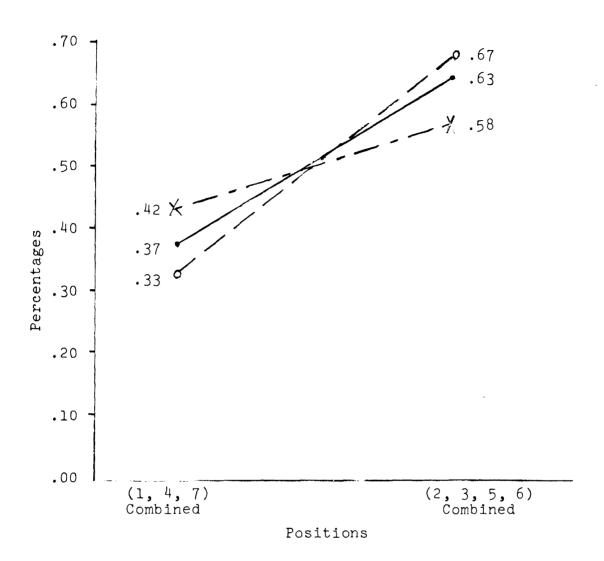


Figure 7.--Proportionate differences between meaningless (1, 4, 7) and discriminatory (2, 3, 5, 6) position group responses on undifferentiated \underline{S} s used in this thesis.

Note: ——— refers to combined Early and Late Frequencies

———— refers to Early Frequencies

————— refers to Late Frequencies

failure to find statistical support on much of the data in this present thesis.

Implications for Future Research

All Hypotheses analyzed in the present thesis remain somewhat inconclusive (although three were supported and nineteen found no support), due to limitations discussed above. The limitations of the thesis, along with encouraging "predicted" trends on twelve of the twenty-two measures (Tables 8-12 and Figures 1-5) invite further research into the problems investigated in the present thesis.

Future researchers could design more rigid controls for (a) Counselor differences, (b) early and late semantic differential administrations, (c) a better ratio between client-success groups, and (d) a greater difference in levels of disturbance between disturbance groups.

Perhaps as important as the increased controls suggested above, future researchers may wish to limit their measures of "therapist self-disclosure" to those positions which seemed to show greater reliability. It may be more reliable in further research employing the seven-point differential scale, to use only position 4 as a measure of "low therapist disclosure" and positions 2 and/or 6 as measures of "high therapist disclosure."

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APPENDICES

APPENDIX A

The Description and Rationale for the Use of a Semantic Differential in This Thesis

The Description and Rationale for the Use of a Semantic Differential in This Thesis

A Semantic Differential was developed by Osgood and his associates (1957) as a research tool for the measurement of meaning. It is essentially a controlled association and scaling procedure wherein each concept to be differentiated is rated on a series of seven-point scales composed of polar opposite adjectives. S's task for each scale is only to indicate the direction of his association and its intensity on the seven-point scale.

ment has led Osgood and his co-workers to conclude that the three primary factors—evaluation, potency and activity—account for the great majority of the factorial structure operating in such meaningful judgments. To test the generality of this factorial structure, Osgood, Suci, and Tannenbaum (1957) undertook several studies in which they varied subjects, concepts, type of judgmental situation used in collecting the data, and method of factoring the data. In each case, the same three factors emerged in roughly the same order of magnitude.

Reliability measures of a Semantic Differential generally are quite acceptable. Osgood, Suci, and Tannen-baum (1957) report test-retest coefficients ranging from .87 to .93 with a mean r of .91. Again, citing the results

of their own item reliability check, the authors report a Rho test-retest correlation of .85. Reported error measurements of a Semantic Differential on the average are .67 scale units--much less than the expected deviation.

Reporting on the general <u>validity</u> of the instrument, the authors cite as evidence many instances where validity criteria of specific sorts are available; e.g., evaluative location of the Thematic Apperception Test (TAT) pictures, judged by <u>Ss</u> against a Semantic Differential, were found to correlate significantly with clinical judgments of stories told about the pictures by the same <u>Ss</u>. A validity estimate of the Semantic Differential's factorial structure is obtained in the demonstration that representation of concepts by a Semantic Differential reveals essentially comparable structures as yielded from the method of trials. Finally, other validity measures were obtained by comparing a Semantic Differential with the Thurstone and Guttman scales, which yielded correlations of the order .90 and .78.

Osgood (1957) makes certain assumptions about what is being measured in a Semantic Differential. Often psychologists tend to define meaning as something inherently non-material, more akin to "idea" and "soul" than to observable stimulus (Osgood, 1957, p. 1). Osgood makes a difference in what he calls semantic meaning, and the measurement of an emotive reaction (Osgood, 1957, p. 320).

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Semantic meaning is viewed as including dimensions of "attitude" or "value" (Osgood, 1957, p. 1).

Osgood (1957, pp. 1-3) specifically refers to the use of the Differential as assessing some implicit process or state which must be inferred from observables. It is a mediational process which occurs in the organism whenever a sign is received (decoded) or produced (encoded) (Osgood, 1957, p. 3). When a subject decodes a given sign, it is assumed that a complex mediating reaction occurs, consisting of a pattern of these alternate bipolar reactions elicited with varying intensities (Osgood, 1957, p. 319).

The problem of predicting the meaning of word mixtures is viewed by Osgood (1957, p. 277) as somewhat analogous to that of predicting the color of wave lengths. The direction of a point from the origin (position 4 on a seven-point scale) of a semantic space is analogous to wave lengths of visual stimuli; the distance from the origin out to a point is analogous to the color metric purity of visual stimuli. Words of opposed meaning mixture will cancel toward a "neutral gray." This involves what Osgood and associates have called the "congruity prin-ciple" (1957, p. 277).

Osgood (1957, p. 15) specifically insists that there is an intimate relation between perceptual and meaningful phenomena. He feels that the advantage of the Semantic

Differential over usual perceptual methods is that availibility of habit strength of alternate meaning forms is set within a definite pattern of meaning itself.

The rationale for the use of Semantic Differential in the E's study relates to the need to measure perceptions of therapist meanings as well as clarity or purity of those meanings. It is assumed (Osgood, 1957, p. 220) that changes taking place during therapy are reflected by changes in patients' meanings of such relevant concepts as "Counselor," which in turn should be reflected in judgments on the Semantic Differential.

It has been suggested (Osgood, 1957, p. 239) that the Semantic Differential can be employed in a large number of hypothetical situations. The only apparent restriction is that some aspect of meaning be functioning as either the dependent or independent variable. There are several ways in which attitudes and meanings of a concept can be measured with a Semantic Differential. One measure, suggested by Osgood (1958, p. 241), is simply the location of the concept against the coordinates of a differential.

One can also estimate the meaningfulness of concepts to the subject, those variables falling near the origin being relatively meaningless (within the aspects of the meaning sampled) and those falling far out toward the edges of the space being relatively "saturated" in meaning (Osgood, 1957, p. 97).

The above indicates that the location of a concept along the continuum between coordinates gives a measure of "meaningfulness" or purity of conceptual stimulus to the judge. The nearer the center position, or origin, the concept is viewed as relatively meaningless and impure or "gray" (Osgood, 1957, pp. 264-265). In this thesis the concern is only with the deviation or polarization from the origin, regardless of the direction of the sign; i.e., associative-affirmative or dissociative-negative (Osgood, 1957, pp. 122, 195, 201, 278).

It should also be noted that in early assumptions the loading on the evaluative judgments (Osgood, 1957, p. 122). However, Osgood, in later studies (1957, p. 195), states that a Semantic Differential in toto, i.e., evaluative, potency, and activity dimensions, may provide a richer picture of this purity or saliency of meaning. The E's investigation will sum across all three dimensions to determine frequencies of different positions as an index of the purity or clarity of client-perceived therapist self-disclosure.

We cannot refer to "the" Semantic Differential as if it were some kind of "test" having a definite set of items and a specific score. On the contrary it is a very general way of getting at a certain type of information. As Osgood (1957, p. 76) states, "a highly generalizable technique of measurement which must be adapted to the requirement of each research problem to which it is applied."

A variety of studies have examined the differences in scale-checking styles. Since these latter studies relate to the design of the present research, they will be summarized here.

It has been noted (Osgood, 1957, p. 85) that the choice of a seven-step scale rather than five or nine is based on the consistency with which all seven scales tend to be used, and with roughly equal frequencies.

In 1949 Stagner and Osgood (Osgood, 1957, p. 85) noted that American Legion members tended to use only three positions: 1, 4, and 7 (all, nothing, or neither). Grade school children seemed to work better with a five-step scale, unlike older subjects who prefer the sevenstep scale. The above indicates a possible relationship between age, emotionality or maturity, and scale-checking patterns.

Bopp's 1955 study (Osgood, 1957, p.85) also indicated that schizophrenic patients used the discriminative positions (2, 3, 5, and 6) significantly less frequently than their controls. This supported her notion that there should be differences in the number and nature, or at least clarity, of semantic factors.

The latter differences in the use of scale positions were not correlated with distances (D) between profiles for S (Stimulus) and R (Response) words. It appears from Bopp's study that more disturbed patients are far less

discriminatory in their use of semantic scales. "The reason for this difference--whether due to intellectual deficits or to emotional factors in the testing situation-- cannot be determined from these data" (Osgood, 1957, p. 227).

Kerrick's (Osgood, 1957, p. 227) study provided some evidence that I.Q. score is related to "position habits" in responding to the differential. Subjects of lower intelligence tended to be more polarized in their judgments. The brighter subjects tended to use a higher number of the more discriminatory intermediary positions.

Lyons and Solomon (Osgood, 1957, p. 155) studied the relationships between extremeness of judgment and an index of overt reaction (judgmental latency) time in scale checking. Their findings supported the basic assumption that the extremeness of judgment on semantic differential scales is a valid measure of the strength with which signs are associated with the mediational process.

Studies by Osgood (1957, pp. 228-229) on response conflict and anxiety as related to scale selection provided several significant results. The introduction of the elements of anxiety reverses the usual scale-checking patterns of high and low I.Q. subjects. The effect of making people of lower intelligence anxious, is to make them cautious, more wary and subsequently, more discriminating in choices. Anxious, intelligent subjects become less discriminating in judgments, more prone to either

extreme "black and white" decision (positions 1, 4, or 7).

Osgood (1957, p. 235) also suggests that the use of the

latter positions by intelligent subjects is like "a quick,

polite smile in an ambiguous and potentially threatening

social situation."

The above review of literature on scale checking behavior would suggest a number of important elements bearing on this thesis. Since college subjects are used in the present study, we would expect them to be more discriminating overall in their use of scales when the concept of "Counselor" is highly salient, pure or clear. Also, college students should be less discriminating in their judgments when the concept "Counselor" is less salient, impure ("gray") and/or ambiguous.

In conclusion, the design of this thesis depends on the Semantic Differential, scale-checking patterns of the subjects. The use of the seven positions on each scale is an index of client-perceived therapist self-disclosure. The assumption in the present thesis is that what takes place in therapy is reflected in changes in client meanings of the concept "Counselor," which in turn are reflected in the subjects' use of discriminatory (2, 3, 5, and 6) versus less discriminating scale positions (1, 4, and 7).

APPENDIX B

The Semantic Differential, Form A

The Semantic Differential, Form A

The following Semantic Differential was used in the present investigation. Only the concept "Counselor" has been included here, for the purpose of illustration. There were a total of twenty-one such concepts on the original research instrument used in the Michigan State University Counseling Center project. (See Source of Data, p. 26 of this thesis.)

Measurem	ent of Meanings-	-Form A		
(1-6)	Student Number			
(8-25)	Student Name _			
(26-27)	Age	Last	First	Middle
(28)	Male (1)			
	Female (2)			

INSTRUCTIONS

(check one)

The purpose of this study is to measure the meanings of certain things to various people by having them judge them against a series of descriptive scales. In taking this test, please make your judgments on the basis of what these things mean to you. On each page of this booklet you will find a different concept to be judged and beneath it a set of scales. You are to rate the concept to each of these scales in order.

Note: Other concepts used in the Michigan State University Counseling Center research were: Woman; My dependency on others for love and help; My father; Man; My feelings of anger directed at myself; Others depending on me for love and help; Hate; Controlling myself; Guilt; Sex; Most disliked me; Love; My failing to accomplish something I set out to do; My feelings of anger directed at others; Most liked me; My mother; My mixed-up feelings about my behavior; Me; Authority; and My conscience.

Here i	s hov	you	are	to	use	these	scales:
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If you	ı feel	that	tl	ne co	once	ot .	at '	the	top	of	the	page	is	very
close	ly rela	ated	to	one	end	of								
your (check-r	nark	as	fol	lows	:								

fair_	<u>x</u> :_	:	:_	:_	:_	:	_unfair
			(OR			
fair_	:_	_:_	_:_	_:_	:	_:_X	unfair

If you feel that the concept is <u>quite closely related</u> to one or the other end of the scale (but not extremely, you should place your check-mark as follows:

strong_	_:_	:_	:_	 :-	:_	<u>x_:</u> _	weak
				OR			
strong	:	x :	:	:	:	:	weak

If the concept seems only slightly related to tone side as opposed to the other side (but is not really neutral), then you should check as follows:

active_	_:	:_ [:] _:	<u>x</u> :_	: _	:_	:_	passive
			(OR			
active	:	:	:	: X	:	:	passive

The direction toward which you check, of course, depends upon which of the two ends of the scale seem most characteristic of the thing you're judging.

If you consider the concept to be neutral on the scale, both sides of the scale equally associated with the concept, or if the scale is completely irrelevant, unrelated to the concept, then you should place your check-mark in the middle space.

safe__:__:_X:__:_dangerous

IMPORTANT: (1) Place your check-marks in the middle of spaces, not on the boundaries:

- (2) Be sure you check every scale for every concept—do not omit any.
- (3) Never put more than one check-mark on a single scale.

Sometimes you may feel as though you've had the same item before on the test. This will not be the case, so do not look back and forth through the items. Do not try to remember how you checked similar items earlier in the test. Make each item a separate and independent judgment. Work at a fairly high speed through the test. Do not worry or puzzle over individual items. It is your first impression, the immediate "feelings" about the items, that we want. On the other hand, please do not be careless, because we want your true impressions.

This study consists of ten concepts. Turn the page and begin and continue through the conclusion of the concepts. (The "next page" referred to will follow below, as a matter of clarity in this present appendix.)

Remember to make your judgments on the basis of what these things mean to you.

Counselor

large_	:_	:_	:.	:	:	:	small
thin_	:_	:_	:_	:_	:	<u>:</u>	thick
colorless_	:_	:_	:_	:_	: <u>_</u>	:	colorful
easy_	:_	:_	:_	:_	:_	:	difficult
safe_	:_	:_	:_	:_	:_	:	dangerous
modest_	:_	:_	:_	:_	:_	: <u>_</u>	vain
sharp_	:_	:_	:_	:_	:_	:_	dull
optimistic_	:_	:_	:_	:_	:_	:_	pessimistic
weak_	_ :_	_:_	_:_	:_	 :_	:_	strong
free_	:_	_:_	_:_	:_	_:_	:_	constrained
fair_	:_	;	_:_	_:_	:_	_:_	unfair
active_	_:_	_:_	_;	_:_	_:_	_:_	passive
bad	_:_	_:_	_:	_:_	_:_	_:_	good
destructive_	_:_	_:_	_:	_:	_:	_:_	_productive
slow	_:_	:	_:	_:	_:	_:	_fast
changing	:	:	:	:	:	:	stable

Go on immediately to the next page. 1

Note: In the Michigan State Counseling Center research, the same scales as above were used under the 20 other concepts referred to at the beginning of this present appendix. Those 20 other scales have not, however, been included in this appendix.

APPENDIX C

The Description and Rationale for the Use of the Minnesota Multiphasic Personality Inventory in This Thesis

The Description and Rationale for the Use of the Minnesota Multiphasic Personality Inventory in This Thesis

The Minnesota Multiphasic Personality Inventory was developed to serve as an objective device for diagnosing psychopathology (Dahlstrom and Welsh, 1960). In its most common form the instrument consists of at least nine clinical scales and three validating scales. S is asked to respond to a series of questions designed to assess symptomatology indicative of various types of psychopathology. S's responses are readily converted into numerical scores for each of the clinical scales. In this way an objective measure of psychopathology is obtained. Currently, however, common practice is to interpret profile patterns in combination with scale scores in arriving at a diagnosis.

Cooke (1967) recently developed an actuarial formula that was able to duplicate judges' ratings of college male MMPI profiles more reliably (r = .91) than the judges were able to duplicate their own ratings at a later time (r = .83) or that these judges could agree among themselves (r = .80). Cooke has developed a similar formula for rating college female nurses, and this female formula was used in this thesis to discriminate levels of psychological disturbance, as well as degrees of constructive client change (see Appendix D).

Commenting on the MMPI validity, Ellis (1959) cites Calvin and McConnel who assayed eighty MMPI studies from 1940 to 1950 and reported findings of significant discriminations between different kinds of groups in seventy-one and eighty studies. Ellis himself reviewed one hundred and sixty MMPI studies between 1946 and 1951 and found one hundred and two (64 per cent) of these showed significant between-group discriminations. Both reviews cited above suggest that the MMPI's discriminative powers are better than that of the average personality inventory (Ellis. 1959). Ellis concludes, however, that the question of the MMPI's absolute validity has not been finally settled. More recently, Kleinmuntz (1962) reviewed MMPI validity studies with college populations under three headings -concurrent, predictive, and construct validity. The bulk of these studies report results favorable for MMPI validity.

The table below lists in summary form the results of several studies in MMPI test-retest reliability with college or psychiatric populations.

Summary of Results of Studies on MMPI Test-Retest Reliability with College or Psychiatric Populations

Study

Results

No significant differences

Parker, C. A. (1961) 65 Ss from General and Edu- between test-retest scale cational Psych. classes. Test- scores except for Pd scale. retest interval 14.7 months. Long and short form MMPI.

No significant differences between test-retest scores.

Greenfield, N. S. (1958) 31 college Ss. MMIP's obtained at college admission and at time of contact with college health center. Testretest interval 11 months.

Dahlstrom, W. G. and Welsh, G. S. (1960) College Ss. Test-retest interval one week.

Rosen, A. (1953) 40 male psychiatric hospital patients. Test-retest interval four days.

Correlations reported range between .71-.92 for clinical scales.

Test-retest reliabilities were between .80 to .88 for clinical scales in common use. except for L, K, Mf, Pa, and Ma scales which were between .55 to .75.

¹Pd refers to psychopathic deviate.

Note: L refers to lie score, K to control score for bland expressions, Mf to masculinity-feminity, Pa to paranoia, and Ma to hypomania.

APPENDIX D

Cooke's Actuarial Formula

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Cooke's Actuarial Formula

Cooke (1967) developed an actuarial formula that duplicates judges' ratings of college male MMPI profiles more reliably (r = .91) than the judges were able to duplicate their own ratings at a later time (r = .83) or that judges could agree among themselves (r = .80).

Cooke in an unpublished study (see letter in this appendix), has developed another formula for rating college female nurses. This latter formula was used in this thesis. The entire female formula, with beta weights, is listed as follows:

Formula for Converting MMPI Raw Scores into Judges' Formula

The following formula takes into account the manipulations to scales L and F and is the formula for replicating the judges' ratings from MMPI raw scores:

- 1. For L, subtract 5 from the raw score of L, then multiply by 10, then multiply this result by the beta weight for L (see below).
- 2. For F, subtract 10 from the raw score of F, then multiply by 10, then multiply this result by the beta weight for F (see below).
- 3. For all other scales, multiply the raw score for each scale by the beta weight for each respective scale (see below).
- 4. Add together the 16 scores which have been obtained by the above steps. The psychometric formula score equals the sum of these scores

Raw	Score	Beta	Weightings	for	MMPI	Scales

L	.21	D	 67	Рa	1.06	Si	.00
F	17	Ну	1.37	Pt	1.29	Α	. 44
K	2.21	Pd	1.50	Sc	3.08	R	.51
Hs	 18	${ t Mf}$	1.14	Ma	.00	Es	•57

These beta weightings were derived from three MMPI judges' ratings of 110 MMPI profiles of freshmen nursing students at the Medical College of Virginia.

Correlation between the formula and the judges' ratings: r = .86. A letter from Cooke, concerning the actuarial formula for female \underline{S} s described above, has been included at the close of this present appendix.

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April 12, 1968

Mr. Walter L. Stump 1723 Marywood Avenue Kalamazoo, Michigan

Dear Mr. Stump:

Thank you very much for your interest in my research. I am sorry for the delay in getting this material to you and hope that it has not held you up too much.

I am enclosing the information about the beta weightings and the formula for using the beta weightings for converting MPI raw scores into the judges! formula.

The same method was used in deriving this formula as was used in the previous study (reprint enclosed). The only difference is that three judges were used instead of five. The three most reliable judges from the previous study were used.

This data was derived from a nursing student group rather than a liberal arts group.

I hope that this information will be helpful. Please let me know if you have any additional questions.

Again, thank you for your interest.

Sincerely,

Jane K. Cooke, Ph.D. Director of Psychological Services

JKC

Note: Cooke, J. K. MMPI in actuarial diagnosis of psychological disturbance among college males. <u>Journal of Counseling Psychology</u>, 1967 14 (5), 474 477.

