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THE IMPACT OF

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ON PSYCHOTHERAPY PROCESS

by

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ABSTRACT

THE IMPACT OF THERAPIST PERSONALITY VARIABLES

ON PSYCHOTHERAPY PROCESS

By

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The purpose of the present study is to investigate the relationship of therapist personality variables to therapist behavior in actual psychotherapy cases. The therapist's interpersonal attitudes, and the quality of the therapists's ego functioning, are hypothesized to relate to the way the therapist behaves with the client. Aspects of the therapist's personality are assessed by the TAT, which was completed while the case was in progress. Interpersonal attitudes are measured by the Pathogenesis scale (Meyer and Karon, 1967), which scores the plot of the stories for the extent to which nurturant figures ignore, or take into consideration, the needs of dependent figures. Ego functioning is measured by the Pine scale (Pine, 1960), which is a system for scoring the amount and directness of drive expression in the content of each story. Other predictors include the duration of therapy, the sex of the participants, and the level of experience of the therapists.

The in-therapy behaviors which serve as the criteria are Accurate Empathy (Traux and Carkhuff, 1967), Nonpossessive Warmth (Truax and Carkhuff, 1967) and Specificity (Siegman and Pope, 1962). The therapy sessions are tapes of nineteen clients who sought psychotherapy for interpersonal and emotional problems from the Michigan State University Counseling Center. All clients were screened for their appropriateness for psychotherapy. Each of the nineteen clients was assigned to a different therapist and seen for an average of twelve sessions.

The data is analyzed using first order correlations and stepwise multiple regression of predictors on criteria. Stepwise multiple regression provides a means of selecting the most important predictors. Through the use of semipartial correlation, stepwise multiple regression enables one to statistically control the influence of preceding predictors and demonstrate the additional amount of criterion variance accounted for by the last predictor.

It is evident that in-therapy behavior is predictable by multiple, rather than by single, characteristics of the participants. The pattern of correlations strongly suggests that different personalities achieve optimal in-therapy behavior in different ways (Allen, 1964).

The stepwise multiple regression equations suggest that therapists with a high frequency of drive-related content on the TAT tend to have higher levels of Accurate Empathy than therapists with a low frequency of drive-related content. Therapists with more modulated drive expression tend to have higher levels of Accurate Empathy than therapists with less modulated drive expression. One way to interpret these results is to say that therapists who are expressive but not impulsive are more empathic than therapists who are inhibited and/or impulsive. This supports the adaptive regression model of empathy that emphasizes the ability to relax, and then to resume, ego control. Pathogenesis is not significantly related to Accurate Empathy.

With respect to Nonpossessive Warmth, the more modulated the expression of drive, the higher the level of Nonpossessive Warmth. It is thought that modulated impulse expression is associated with freedom from conflict that promotes non-evaluativeness, and associated with lack of frustration that promotes nonpossessiveness. Neither total

amount of drive-related content nor Pathogenesis are significantly related to Nonpossessive Warmth.

Therapists with a high frequency of drive-related content tend to have lower levels of Specificity than therapists with a low frequency of drive-related content. Therapists with more benign interpersonal attitudes tend to have lower levels of Specificity than therapists with less benign interpersonal attitudes. One might speculate that there is a self-effacing character style which manifests itself in allowing the other person to be more prominent both in the TAT stories and in psychotherapy. Directness of drive expression is related to level of Specificity in a difficult to interpret manner that interacts with the stage of therapy.

Of the three kinds of demographic predictors in the present study (duration of therapy, sex of participant, therapist experience), only therapist experience is related in a small but significant way to all three in-therapy behaviors. Therefore, the variable of therapist experience should continue to receive attention in future studies.

Other recommendations for subsequent research include the use of test batteries to predict therapist behavior; studying the ways in which client variables interact with therapist variables; continuing a multivariate approach with larger samples; developing a more multivariate approch to personality theory to guide such studies; and broadening the focus of such studies to include the outcome of psychotherapy. As Bergin and Strupp put it (1972), "Since therapists appear to be differntially successful in their ability to influence patients, the personality characteristics potentiating this influence are urgently in need of more exhaustive study (p.29)."

To my father, who also liked to put things in order, and to G. B. Shaw, who said that the secret of happiness was to be so busy doing what you liked that you didn't have time to wonder whether or not you were happy.

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INTRODUCTION

Heller states that "the impact of the person of the therapist on the person of the patient remains largely an uncharted area (1971, p. 140)." The paucity of research in this area is a significant deficit. If one is to understand how psychotherapy affects patients, one must be able to specify therapist variables with the same comprehensiveness as patient and outcome variables (Kiesler, 1971). Personality variables must, to some extent, determine the therapeutic tasks, bonds, and goals (Bordin, 1975) that are optimal for a given therapist. The purpose of the present study is to investigate how selected aspects of the personality of the therapist are related to his behavior in the therapeutic situation.

The perspectives of psychoanalytic and client-centered theory on psychotherapy take into account the personality of the therapist. These theories agree that neurosis is the result of the denial to awareness of anxiety-provoking aspects of oneself and one's experience (Gendlin, 1964). There is agreement that the task of the therapist is to help the patient overcome defensive denials and distortions so that the patient can learn to cope with his conflicts in a more adaptive manner (Gendlin, 1964). Lastly, there is agreement that the personality of the therapist is related to in-therapy behavior (Fromm-Reichmann, 1950; Greenson, 1967; Truax and Mitchell, 1971). Client-centered and psychoanalytic conceptions of how the personality of the therapist relates to in-therapy behavior are presented in the following.

Rogers (1951) describes empathy as assuming, insofar as one is able, the internal frame of reference of the patient, in order to understand the patient's feelings and attitudes without losing one's own point of view. It is not clear how it is possible to assume the patient's frame of reference and retain one's own at the same time. The client-centered explanation is that the therapist never loses his objectivity because he can never "really" become the patient (Rogers, 1951; Truax and Carkhuff, 1967). The "facilitative conditions" (therapist empathy, unconditional acceptance and genuineness) have also been offered as the means by which empathy is achieved.

Client-centered theory considers the possibility that personality factors other than the facilitative conditions might affect the ability to identify yet to retain objectivity. With respect to the therapist's personal needs, client-centered theory asserts that the therapist who is intensely concentrating on the task of understanding the patient has neither the time nor the energy to relate the patient's statements to the therapist's values and needs (ibid). Thus, concentration is invoked to explain how the dangers of evaluativeness and conditional acceptance are minimized. The client-centered perspective accounts for the nature and vicissitudes of the task of the therapist, and spells out the role of the therapist's personality to some extent.

Psychoanalytic theory adds to the understanding of the tasks of therapy and the role of the personality of the therapist. From the psychoanalytic perspective, the task of empathic understanding is of vital importance (Freud, 1913; Fromm-Reichmann, 1950). A partial, temporary identification with the patient that Fliess (1942) calls a

"trial identification" is the means by which empathy is thought to occur. As Greenson (1967) puts it: "I have to let a part of me become the patient, and I have to go through her experience as if I were the patient and to introspect what is going on in me as they occur (p. 367)." Trial identification shares many of the characteristics of regression in the service of the ego (Chessick, 1969): it is a relaxed, unstructured experience; it involves an oscillation between primary and secondary process; and it involves a temporary fusion of ego boundaries, then subsequent detachment. Ferenczi (1952) states that the task of the analyst is to allow free play of his fantasy and association, to use his unconscious to intuitively grasp the patient's unconsious meanings in the manifest content, and to submit his intuitions to logical scrutiny. This is a restatement of what Freud recommends (1912) in his stress on "evenly hovering attention," in order to avoid the perpetual discovery of what the analyst expects to find. He also states in this same paper that the analyst must tolerate no resistances in himself, and must not withhold from consciousness that which his unconscious perceives. A personal analysis was seen as necessary in order to attain maximal openness to one's intrapsychic experience (Freud, 1912). The freedom of the analyst to delve into his own unconscious is viewed as vital to the conduct of psychoanalysis.

The needs of the therapist are a personality characteristic that can interfere with the tasks of therapy (Freud, 1912; Greenson, 1967; Chessick, 1969). Unmet needs of the therapist can cause him (or her) to use the patient for personal gratification. The progress of the patient could become a demonstration of the prowess of the therapist

and thus become and ego-oriented demand of the therapist. Unmet needs can bias the perception of the therapist. The use of the trial identification for vicarious, personal gratification can cause the therapist to avoid the phase of empathic understanding that calls for detachment and objectivity. The motive to empathize must be neutralized, freed of its aggressive or sexual undertones, in order to avoid unduly exciting or frustrating the patient. Thus, from a psychoanalytic point of view, some personality characteristics of the therapist that relate to in-therapy behavior involve the ego functions for handling need-gratification. The above emphasizes the way in which inadequacies of ego functioning can disrupt the task of empathic understanding, or prevent the use of understanding for the benefit of the patient.

On the other hand, the resonance of the therapist to the patient's affect can be used to diagnose its nature and intensity when this is not clear on the manifest level (Fromm-Reichmann, 1950). The therapist can make use of his (or her) affective reactions to the patient only if the affect is sustained rather than repressed or discharged through acting out (Chessick, 1969). The emphasis on delay of discharge and resistance to repression point out that therapist personality characteristics can facilitate as well as inhibit the therapeutic process.

The psychoanalytic concept of the working alliance sheds additional light on the role of the therapist's personality. The working alliance is the rational, non-neurotic aspect of the therapeutic relationship (Greenson, 1967). The result of a strong working alliance is that the patient works <u>with</u> the therapist despite the stress of expressing and exploring conflict and anxiety (Greenson, 1967). The personality of

the therapist is instrumental in safeguarding the working alliance (Greenson, 1967; Chessic, 1969). Only when the therapist respects the patient as a human being and is willing to work hard for the patient's benefit can the working alliance develop. Once the patient believes that the therapist is working in the patient's best interests, the patient can more readily identify with the therapeutic point of view, and begin to explore anxiety provoking experiences.

It is evident from client-centered and psychoanalytic points of view that the personality of the therapist can help or hinder the course of therapy. The therapist must be the kind of person who can show respect and compassion for the patient, and work hard in the patient's best interests. In the absence of this benevolent attitude, the development of a strong working alliance is unlikely. Furthermore, the ego functions of the therapist must be sufficient to master the complex and often contradictory demands of the tasks of psychotherapy. Without the cognitive and affective tools, even the best intentioned therapist will meet with limited success.

Ther present study examines the utility of the above account by investigating the extent to which therapist personality variables can predict in-therapy behavior. The therapist's attitudes and ego functioning are the aspects of the therapist's personality that serve as the predictor variables. Accurate Empathy, Specificity, and Non-possessive Warmth are the in-therapy behaviors that are the criterion variables. The relevant literature is reviewed in the following pages.

CHAPTER II

REVIEW OF THE LITERATURE

Research on the personality of the therapist - EGO FUNCTIONING

From the psychoanalytic point of view, the adequacy of the therapist's ego functioning affects both his ability to form a working alliance and the accuracy of his understanding of the patient (Freud, 1912; Fromm-Reichmann, 1950; Greenson, 1967; Chessick, 1969). Freedom from conflict and insight into one's own dynamics are two aspects of ego functioning which receive emphasis in the above. Insight and conflict are negatively related. As Sullivan (1947) asserts, one is conflicted to the extent that one does not see oneself as others do because of gaps and distortions in awareness of interpersonal impact.

There is a series of studies that utilize the hypothesis of a negative relationship between insight and conflict to investigate therapist behaviors that are associated with degree of insight. The therapist's self-awareness can be measured by differences between self and peer ratings of interpersonal behavior. Cutler (1958) uses this approach with self and peer ratings of two therapists, who are defined as "conflicted" in any category of interpersonal behavior where self-ratings deviate from ratings by nine peers. Both therapists tend to report their own and the patient's behavior less accurately when these behaviors are in the conflicted areas than when they are in non-conflicted areas. Both therapists make more responses that inhibit the flow of therapeutically relevant material when the patient's behavior is in areas of conflict. The more experienced the therapist, who also had a personal analysis, is less disrupted by patient behavior than the less experienced therapist.

The success of the Cutler (1958) study prompted further studies defining conflicts as the discrepancy between ratings of self and others on personality variables (Rigler, 1957; Munson, 1960). These studies demonstrate that therapist conflict significantly affects the process of therapy. This is most evident when the patient behaves in ways that the therapist finds conflictful. When the patient behaves in a similar way, some therapists are more likely to report inaccurately these behaviors, and to make inhibiting rather than facilitative responses (Cutler, 1958); some therapists are more likely to get anxious and reply to the patient in ways that call for a highly structured answer (Rigler, 1957); and some therapists are more likely to make avoidant responses to the patient and to evaluate him more negatively (Munson, 1960). When the therapist does not understand how his own behavior affects others, the therapist has difficulty understanding how the patient's behavior affects him, which increases the likelihood of therapeutic errors.

The theoretical discussions of Freud (1912), Fromm-Reichmann (1950), Greenson (1967), and Chessic (1969) emphasize the role of the therapist's needs and need regulation in his attitude and understanding of the patient. Mills and Abeles (1965) use the EPPS to measure strength of nurturant and affiliative needs. They find that high levels of these needs for giving or getting affection are associated with greater likelihood of therapist approach to patient hostility most strongly in the least experienced therapists. Nurturance and affiliation do not relate to therapist approach to patient dependency.

Tollefson (1965) uses a combination of projective and objective techniques to relate counselor needs as measured by the EPPS to effectiveness as rated by the supervisor and the patient. In this sample of

graduate student therapists, those who are high on nurturance are rated as most effective by both the patient and the supervisor. When one notes that these are inexperienced therapists, this study serves to further support the notion that for the young therapist, needs and effectiveness are highly related.

From the above it is clear that self-report measures of therapist needs relate to behavior in therapy in significant and meaningful ways. It is noteworthy that these relationships are less strong and less frequent for experienced therapists. Mullen and Abeles (1971) suggest that as the therapist becomes more experienced, he learns to limit the direct expression of his needs in therapy. This ability to regulate need expression may permit the more experienced therapists to be more facilitative than less experienced therapists to clients perceived as less likeable and less gratifying.

Abeles (1963) utilizes a measure with the TAT that deals with how the therapist perceives others. He concerns himself with the components of therapist sensitivity. Accurate perception of client affect involes perception of the complex forms of affect of all types and intensities. This in turn presupposes sensitivity to minimal behavioral cues and the ability to respond to his own affect. Differences in this ability must have something to do with one's defensive organization, and the resulting resistence to repression and openness to experience. Furthermore, there may well be a kind of affective lag, reflecting the fact that a trainee's ability to respond to his own affect might exceed his ability to respond to that of this patient's.

This theory is tested by using Henry and Shlien's (1958) scale of affective complexity to rate the TAT's and the therapy sessions of graduate students in counseling. Abeles (1963) finds that the more experienced students demonstrate more affective complexity in therapy. In addition, there is a greater difference between the projective and the interview measure of affective complexity for the more experienced students, thus demonstrating the phenomenon of affective lag. More importantly, these results suggest that the ability of the therapist to understand himself is essential if he is to understand his patient. This supports the findings of Cutler (1958), Rigler (1957), and Munson (1960). The study by Abeles (1963) implies that the ego functions of intrapsychic defense, perception and discrimination may be fundamental to the ability to understand oneself and the patient.

Bachrach (1968) uses Holt's system (Holt and Havel, 1960) to study the relationship of defense effectiveness and defense demand to his own measure of "conjunctive empathy" for inexperienced therapists. The psychoanalytic hypothesis underlying this study is that conjunctive empathy involves a relaxation of defense and secondary process in order to freely generate hypotheses about the patient's communications, and then a reassertion of control in order to critically evaluate the hypotheses. This temporary, self-controlled reliance on primary process is adaptive regression (Bachrach, 1968). The construct is operationalized by summing defense effectiveness and defense demand on the Rorschach and dividing by the total number of primary process responses. Bachrach (1968) finds a correlation of .79 (significant at the .001 level) between conjunctive empathy and adaptive regression; a correlation of .55 between conjunctive empathy and defense effectiveness (significant at the .03

level); and no relationship between conjunctive empathy and defense demand. For inexperienced therapists, the greater their ability to be empathic, the greater the adaptive regression on the Rorschach and the greater the defense effectiveness. Thus, in this sample, the highly empathic therapist has access to primary process and the ability to delay drive discharge. In assessing ego functioning of therapists, it seem essential to examine both openness to impulse and the effectiveness of controls.

The TAT can also be used reliably and validly to assess ego functioning in an interpersonal context (Gutman, 1964; Whiteley and Hummel, 1965; Yufit, 1969). In an attempt to parallel the Holt (Holt and Havel, 1960) system, Pine (1960) has developed a comprehensive system for rating the coordination between ego functioning and impulse expression using the TAT. Each story can be reliably rated for the frequency of drive content, for the extent to which the content is integrated into the theme, and for the degree of directness and socialization in they way that the drive is expressed. These dimensions are intended to reflect the quality of ego functioning: the degree of openness to impulse expression, and the degree of modulation of impulse expression.

The validity of Pine's system receives support from several directions. There are significant relationships between literary quality of TAT stories and indirect drive content, and total amount of drive content (Pine, 1959). As a measure of ego syntonicity Berg (1963) uses the frequency with which drive content is well-integrated into the theme of the story. As predicted, psychopathic criminals use thematic drive integration more frequently than neurotic criminals. In

another study on psychopathic criminals, more total drive content, more thematic integration and more direct/unsocialized drive expression are associated with ineffective than with effective repression in an experimental situation (Perkins, 1965). In a study of normal college students, the higher the self-esteem, the higher the frequency of the following: drive content, thematic integration of the content, and direct/socialized expression; and the less frequent is direct/unsocialized expression (Dietzel and Abeles, 1971).

The most relevant validation of the Pine system relates global personality variables to the drive expression and integration dimensions (Pine, 1960). Thirteen normal males took a battery consisting of the TAT, the Rorscharch, the WAIS, an autobiographical statement, and clinical interviews. These data were examined by two clinicians and turned into integrated clinical ratings by means of Q sorts. The Q sorts are factor analyzed and these factors are related to the Pine scale scores.

Without regard for directness of drive expression or thematic integration, high total drive content is associated with emotionality, and expressiveness; while low total drive content is associated with inhibition, overcontrol and rigidity. Holding total drive content constant, well-integrated use of drive content is related to an overall quality of functioning that is smooth and perhaps slightly detached; while poorly integrated drive content is related to anxious and disrupted functioning.

With respect to the quality of drive expression, a most interesting pattern emerges. Ranking subjects on frequency of direct-socialized drive expression generates minimal relationships with other variables.

However, subjects who are high on indirect expression and low on direct/unsocialized drive expression, show a good balance between expressiveness and control, and a tendency to experience and work though conflicts internally. Subjects who are low on indirect drive expression and high on direct/unsocialized expression show a tendency toward impulsive discharge and rigid, conventional mechanisms of adjustment to this.

The clarity with which the constructs emerge from ego psychology lend the Pine system a heuristic value that has been recognized by other researchers (Freed,1960; Berg, 1963; Perkins, 1965; Dietzel and Abeles, 1971). The Pine system possesses sufficient clinical richness to measure openness to impulse expression and control of impulse expression; and to suggest some concomitants of these qualities (Pine, 1960; Berg, 1963; Perkins, 1965; Dietzel and Abeles, 1971). Given such sensitivity, and recognized utility, the Pine system lends itself well to the task of describing the ego functioning of the therapist.

From the theory and research on therapist ego functioning, it is evident that openness to impulse and to primary process is one side of the ability of the therapist to make the trial identifications essential for understanding the patient (Rigler, 1957; Cutler, 1958; Munson, 1960; Abeles, 1963; Greenson, 1967; Bachrach, 1968; Chessick, 1969). This empathic understanding in turn enables the patient to get sufficiently involved with the therapist to form a working alliance (ibid). However, the therapist must be in control of his drives, as well as open to them (Bachrach, 1968). Control of drive discharge is essential if the therapist is to be free to help a wide range of patients and at the same time avoid using them for personal gratification (Mills and Abeles, 1965; Mullen and Abeles, 1971; Chessick, 1969). One would

expect that optimal in-therapy behavior is associated with an openness to one's drives which is accompanied by the ability to regulate drive discharge, the balance between expression and control measured by the Pine system.

Research on the personality of the therapist - ATTITUDES

From both the client-centered (Rogers, 1951, 1957; Truax and Carkhuff, 1967; Truax and Mitchell, 1971) and psychoanalytic points of view (Chessick, 1969; Greenson, 1967) the attitude of the therapist toward the patient affects the strength of the working alliance and the outcome of treatment. Reviews of both theory (Snyder and Snyder, 1961) and research (Gardner, 1964) on the therapeutic relationship conclude that the therapist's attitude, respect, warmth, and tolerance towards the patient, is a major determinant of in-therapy behavior and prognosis. A positive orientation toward the patient is a necessary (though not a sufficient) condition for effective therapy.

Strupp (1973) makes extensive use of a stimulus film of actual patients to examine the relationship between the therapist's attitude and his technique. The collection of twenty years research using this analog amply demonstrates that the therapist's attitude toward the patient, as it ranges from positive to negative, significantly affects the therapist's clinical evaluations such as prognosis, and capacity for insight; treatment plans such as duration and intensity; and behavior in therapy such as frequency of "cold vs. warm" responses.

It is important to note that the therapist's attitude interacts with the experience level of the therapist and completion of a personal analysis (Strupp, 1973). For example, experienced therapists (more than ten years of experience) who have been analyzed show significantly

greater freedom than unanalyzed experienced therapists from the effects of attitude on globally rated therapeutic climate (empathy, warmth and genuineness) and prognosis. This suggests that the relationship between attitude, clinical evaluations, and behavior in therapy is mediated by the kind of personality variables that change as a result of the personal analysis of the therapist.

Mullen and Abeles (1971) offer some support for the relationship between attitude and process using the behavior of the therapist in the therapeutic situation itself, rather than an analog. Using a sample of college students with personal and social problems who are outpatients at a university counseling center, they find that for experienced therapists, ratings from the interview of Accurate Empathy are independent from rated liking for the patient (Nonpossessive Warmth). However, for the inexperienced therapists, Accurate Empathy is significantly related to liking ($r = .81$, .001 level of significance). Accurate Empathy alone significantly predicts outcome as measured by changes in patient MMPI. Therefore, for inexperienced therapists, a positive attitude toward the patient is associated with higher levels of Accurate Empathy, which is in turn associated with more favorable outcome.

The relationship between outcome and the positive attitude of therapist Nonpossessive Warmth has been investigated in a least eleven studies (Truax and Mitchell, 1971). Nine out of these eleven studies offer strong support for the greater likelihood of successful outcome when the therapist demonstrates a positive attitude toward the patient. Most recently, Shapiro (1974) finds that premature termination and unfavoarable prognositc evaluation are associated with a negative affective reaction to the case by the therapist which is <u>not</u> related to degree of maladjustment.

The Edwards Personal Preference Schedule has been used to investigate the relationship of the therapist's self-reported needs to the therapist's attitude and behavior. Mills and Abeles (1965) use the EPPS to measure the therapist's needs for affiliation and nurturance. Liking for the patient (Nonpossessive Warmth) as rated in the interview significantly and positively relates to the needs for nurturance and affiliation only for inexperienced therapists.

Integrating the results of Mills and Abeles (1965) and Mullen and Abeles (1971), it appears that the effects of the therapist's attitude toward the patient varies depending upon the experience level of the therapist. Thus, the relationship between the therapist's attitude toward the patient and the process and outcome of therapy should be most evident with inexperienced therapists. The strength of these relationships is suggested by an early study of therapist personality characteristics and in-therapy behavior (Ashby, Ford, Guerney and Guerney, 1957). Four of the ten inexperienced therapists in this study were unable to vary the nature of their interventions due to strong needs to be either non-threatening or authoritarian.

Mueller and Dilling (1968) use the Holtzman Inkblot technique to relate personality variables to behavior in therapy as measured by the Leary interpersonal circumplex. The Holtzman variables may be viewed as attitudes since the ones of interest deal with content, not form. The more hostile content on the HIT, the less likely is therapist hostility. Abeles (1967) finds that therapists who like their patients tend to show significantly more anxiety and hostility on the HIT. The results show that personality variables from projective tests relate to behavior in therapy, but that they do so in complex ways. The presence

of socially undesirable hostile content on the HIT is associated with less therapist hostility. By inference this suggests that, for the HIT, the projection of socially undesirable content serves a compensatory function and is less likely to be acted out. On the other hand, the projection of socially desirable content could serve a representational function and be more likely to be acted out (Fisher and Morton, 1965; Dana, 1972). Whether projection serves a compensatory or representational function affects the direction of the relationship between responses on projective tests and behavior.

"Cognitive flexibility" receives attention in a study using projective techniques (Whiteley, Sprinthall, Mosher, and Donaghy, 1967). Whitely et al. (1967) measure cognitive flexibility on the TAT by scales that rate the hero's degree of responsiveness to others and respect for the integrity of others, vs. the extent to which the hero looks down on others, or uses others to prove his prowess. The content of these scales suggest that they are measuring the benevolence of the relationships between the hero and others, though theoretically this should relate to cognitive flexibility. In fact, the results of the study show that these dimensions are significantly associated with cognitive flexibility of counseling trainees and the ability to be facilitative for their patients as rated by supervisors.

Vandenbos and Karon (1971) have also related therapist effectiveness to therapist interpersonal assumptions or attitudes as shown on the TAT. The authors point out that when one comes to the therapist for help, one has placed oneself in a position of dependency.

Therefore,

> therapists who consciously or unconsciously utilize dependent individuals (in this case, their clients) to satisfy the therapist's own personal needs will be less clinically effective than therapists who put the legitimate needs of the client first (or at least consider these needs when acting in a contradictory manner and allow the client to deal with their feelings about the therapist's actions)(Vandenbos and Karon, 1971, pp. 253-4).

This hypothesis is easily translated into a scoring system for the TAT, which classifies the story as "benign" (a dependent character's needs are taken into account), or "pathogenic" (the needs are ignored). In six earlier studies dealing with the parents of normal children vs. the parents of schizophrenics, delinquents, and child-abusing parents, this "Pathogenesis" scale successfully differentiates between psychologically benign and destructive individuals (Meyer and Karon, 1967; Mitchell, 1968; Mitchell, 1969; Melnick and Hurley, 1969; Nichols, 1970; Mitchell, 1971).

Ten therapists being trained in clinical psychology and psychiatry took the twenty TAT cards and received a score for the percentage of stories told that were pathogenic (Vandenbos and Karon, 1971). The results of six months of psychotherapy with fifteen schizophrenic patients was assessed using seven outcome measures. The results show that the less pathogenic the attitude of the therapist, the more likely improvement on four out of seven outcome measures.

Strupp's account (1973) of how psychotherapy helps the less disturbed patient suggest that therapist Pathogenesis is crucial for this population as well. He states that only when the patient has found a new strength and security in the relationship with the

therapist will the patient be willing to relinquish his resistance and overcome repression. "But the touchstone for these changes is the experience that, in a profound sense, the therapist has the patient's best interests at heart (p. 66, Strupp, 1973)." It is evident that there is much theoretical and empirical support for the importance of a therapeutic attitude toward others. Therefore, in the present study, it is expected that the scores of therapists on the Pathogenesis scale will be significant predictors of in-therapy behavior.

Research on process analysis - ACCURATE EMPATHY

In the most comprehensive review of the area, Kiesler (1973) underlines the importance of research on the process of communication between the therapist and patient: in the final analysis, all therapists use communication as the means of having an impact on the patient.

Gendlin (1964) points out, as mentioned earlier, that both psychoanalytic and client-centered theory utilize a repression paradigm to account for the development of neurosis. Gendlin (1961) also shows that both types of therapy attempt to overcome repression. Most importantly, communication that is effective at removing repression (Freud) or expanding the patient's experiencing (Rogers) can be described in a way that applies equally well to client-centered and psychoanalytically oriented therapists alike.

An effective interpretation is more than a explanation to the patient of that which the patient is unaware, which would result in intellectual insight alone (Gendlin, 1961). Fenichel (1942) states that

> Since interpretation means helping something unconscious become conscious by naming it at the moment it is striving to break through, effective interpretations can be given at one specific point, namely, where the patient's immediate interest is momentarily centered (p. 25).

It is evident that the psychoanalytically-oriented therapist must be accurate in his understanding of the patient in two ways: he must be correct in naming what is striving to break through, and he must be sensitive to when this is occurring.

Similarly, an effective client-centered response is more than a simple reflection of content (Gendlin, 1961). In order to expand the patient's awareness of his experiencing, the client-centered therapist must refer to implicit, partially unaware (to the patient) meanings, as well as to the manifest content. It is evident from the above that both the client-centered and the psychoanalytically-oriented therapists must know what lies just beneath the "surface," or manifest content of the patient's statements, and must be able to communicate this at the proper time. The therapist must understand the patient.

Truax (1963) is the originator of the Accurate Empathy scale, the measure of therapist statements that has been used most widely to assess the extent to which the therapist understands the patient. Rogers (1957) defines empathy as the ability to sense the patient's private world as if it were one's own. Truax and Carkhuff (1967) utilize a more pragmatic definition: accurate empathic understanding refers to the ability to perceive and communicate accurately and sensitively the patient's feelings and experiences, as well as their meaning.

The usefulness of the Accurate Empathy scale is amply demonstrated by more than forty studies employing it (Truax and Mitchell, 1971). The validity of the measurement of Accurate Empathy is evident from the most

recent comprehensive review of this literature by Truax and Mitchell (1971). They find that therapists vary widely in Accurate Empathy with, unfortunately, only one out of three reaching the minimal level of helpfulness. Truax and Mitchell (1971) find that across a variety of therapists, patients, and treatment modalities, high levels of Accurate Empathy are associated with successful outcome; low levels are associated with unsuccessful outcome.

Accurate Empathy receives the most unequivocal support of all the facilitative conditions for being a crucial factor in personality change. A recent review (Bergin and Suinn, 1975) points out that there are too many negative results to describe empathy, warmth and genuiness as sufficient for therapeutic personality change but that they do appear to be necessary (Garfield and Bergin, 1971; Kurtz and Grummon, 1971; Mitchell, 1974).

The present study is concerned with the process of therapy, rather than the outcome. There has been a great deal of research on the nature of other process variables that might be associated with empathy, warmth and genuineness. The main finding is that as the therapist offers higher levels of the facilitative conditions, the patient increases his depth of self-exploration (Truax and Mitchell, 1971). Once there was a controversy about the interaction of the therapist's facilitative level and the patient's self-exploration. The question was, whether the therapist determined the patient's level of functioning or vice versa.

Truax and Mitchell (1971) observe that in analog studies, where the "patient" is instructed to lower his self-exploration briefly,

the therapist is indeed significantly affected by the patient's behavior, particularly low-functioning therapists. On the other hand, in actual therapy, the evidence indicates to Truax and Mitchell (1971) that a given therapist offers levels of empathy and genuineness that are consistent across patients. Truax, Wargo, Frank, Imber, Battle, Hoehn-Saric, Nash and Stone (1965) find that the therapist's levels of empathy and genuineness are independent of the patient's depth of self-exploration, though therapist warmth is influenced by the patient. Prager (1971) and Mintz, Luborsky and Auerbach (1971) find therapist conditions to be independent of patient variables. However, Bienenfeld (1975) and Steinitz (1976) find that differences in patient sex and diagnosis effect the level of therapist-offered empathy. Thus, the weight of evidence suggests that the facilitative conditions are determined by the therapist.

The levels of empathy, warmth and genuineness significantly relate to other therapist process variables. Friel, Berenson, and Mitchell (1971) find that in the initial interview, low functioning therapists (non-facilitative levels of empathy, warmth and genuineness) tend to refer to relatively non-significant others, to make fewer confrontations, to use less here-and-now focus, as well as to elicit lower levels of patient self-exploration than high functioning therapists. Berenson, Mitchell, and Moravec (1968) emphasize types of confrontation, and show that high functioning therapists not only tend to use confrontation more frequently, but do so in experiential and didactic ways more often than low functioning therapists. More importantly, high functioning therapists tend to confront the patient about strengths, while low functioning therapists tend to confront the patient with his (or her) weaknesses. Truax and Wittmer (1971) demonstrate that the

level of empathy is significantly and positively related to the extent to which the therapist focuses on the patient's source of anxiety, and that both empathy and focus on anxiety source are related to outcome.

In summary, one can readily agree with Bergin and Suinn (1975) that empathy must be a necessary, if not sufficient condition for therapeutic personality change. This conclusion makes sense theoretically, because client-centered and psychoanalytic theories identify empathy as the major vehicle of an effective relationship, and of effective technique (Gendlin, 1961, 1964). Empirically, empathy significantly relates to the process and outcome of therapy. Therefore, it is appropriate to relate the therapist characteristics of interest in the present study to this salient in-therapy behavior. It is expected that therapist attitudes and ego functioning will be significant predictors of Accurate Empathy.

Research on process analysis - NONPOSSESSIVE WARMTH

Client-centered theory has emphasized the role in effective psychotherapy of the therapist communicating genuine, unconditional, and nonpossessive warmth to the patient (Rogers, 1951; Rogers, 1957; Truax and Carkhuff, 1967). Psychoanalytic theory stresses the demonstration of respect, interest and involvement with the patient as the foundation of the working alliance that is essential for the cooperation and hard work of both participants (Greenson, 1967; Chessick, 1969; Strupp, 1973). Earlier it was pointed out that the therapist possess benevolent, trusting attitudes and expectations concerning interpersonal relationships. Here the emphasis is on the communication of this "set" to the patient in the process of therapy. To make this distinction

clear, the trait of positive attitudes will be called "benevolence" and the state of positive attitude in therapy will be called "Non-possessive Warmth". Client-centered and psychoanalytic theories agree that the therapist must demonstrate some degree of respect and interest to the patient during therapy.

Low levels of Nonpossessive Warmth, as defined by the research scale (Truax and Carkhuff, 1967), reflect potentially destructive therapist behaviors of dominance, evaluation, rejection or withdrawal (Truax and Mitchell, 1971). Such cold, rejecting behavior can be avoided and the therapist can demonstrate his non-dominating, non-evaluative warmth for the patient without becoming excessively affectionate. Truax and Carkhuff (1967) cite Alexander (1950) as the source of the idea that it is the nonpossessive quality of the therapist's warmth, rather than intensity which is crucial. According to Truax and Carkhuff (1967), when the therapist is possessive, the therapist feels responsible for the thoughts, feelings and behavior of the patient, and therefore the therapist communicates warmth only when the patient is "good," i.e., non-neurotic. The therapy experience then repeats the patient's early experiences that produced repression and defensiveness. The degree to which the therapist's warmth is nonpossessive determines the degree to which therapy has the potential to provide a corrective emotional experience.

As part of a larger study, Holt and Luborsky (1958) have supervisors rate psychiatric residents on the quality of their relationship with their patients, and their overall success as residents. Non-significant trends in the data suggest that psychiatric residents with lower ratings of success and patient relationships are either impulsively expressive, or over-controlled and unexpressive. Residents

rated as more successful and as having better relationships fall in the middle range of expressiveness, control, and impulsivity. Gardner (1964) cites this study in his argument that testing hypotheses of curvilinear relationships between personality and process will be more productive than testing hypotheses of linear relationships. However, a relationship such as that found in the Holt and Luborsky study can be conceptualized in a linear fashion: the more flexible the therapist's ego controls, the better the therapeutic relationship.

Abeles (1967) reports that anxiety and hostility on the Holtzman Inkblot Test is positively related to therapist liking for patients in a sample of inexperienced therapists. Mueller and Dilling (1968) find a similar surprising result: the more hostile content on the HIT, the less likely is therapist hostile-competetive behavior.

Abeles (1967) reports another unexpected finding. Inexperienced therapists who rank high in likeing for patients have significantly lower form appropriateness on the HIT than inexperienced therapists who rank low. The author speculates that perhaps high levels of liking for disturbed and disturbing people is achieved at the expense of accurate perception of the patient.

Mills and Abeles (1965) find that the correlates of therapist warmth vary in relation to other variables, such as level of experience. Using Edwards' Personal Preference Schedule to measure needs for nurturance and affiliation, they find significant relationships between therapist needs and therapist liking for the patient only within the least experienced group of therapists. In addition, the two needs are highly correlated only for the inexperienced group. Trends in the correlations between needs and liking suggest that the inexperienced

therapist nurtures the patients that he or she likes. Greater experience provides the intern with the awareness that too much nurturance can result in short-lived transference cures or excessive patient dependency. Therefore the intern forgoes nurturing liked patients. The result is a nonsignificant negative correlation between liking and need for nurturance and affiliation for interns. Further experience teaches the senior staff member how to be moderately nurturing toward patients that are liked without cultivating too much dependency. Thus, there is a nonsignificant positive correlation between needs and liking for senior staff.

Strupp (1973) also finds that the variables of therapist level of experience effects the relationship between therapist Nonpossessive Warmth and the course of therapy. In an analogue of therapy, therapist liking for a "patient" significantly affects clinical evaluations, treatment plans, and behavior in therapy. A personal analysis has no effect on these relationships for inexperienced therapists. However, experienced therapists with a personal analysis are much more free of the "halo effect" of liking than experienced therapists without a personal analysis. Evidently, personality variables of the kind that change during analysis have something to do with therapist warmth and its concomitants, but this effect is not uniform across levels of experience. Thus, when investigating the personality correlates of therapist warmth, it will be necessary to take into account the variable of therapist experience.

The above theoretical and research evidence suggests that in the optimal therapeutic relationship, the therapist communicates respect and interest in the patient by demonstrating Nonpossessive Warmth. The way that personality variables relate to therapist Nonpossessive

Warmth seems to change with level of therapist experience (Mills and Abeles, 1965; Strupp, 1973). Taking into account the covariable of therapist level of experience, one expects that therapist scores on the Pathogenesis scale (Meyer and Karon, 1967) will be significant predictors of therapist Nonpossessive Warmth. Gardner (1964) and Holt and Luborsky (1952) conclude that therapist over or under-control of affect predicts poor therapeutic relationships, while flexible control predicts good therapeutic relationships. Therefore, in the present study, one expects that the flexibility of the therapist's controls will significantly predict the level of Nonpossessive Warmth.

Research on direct process analysis - SPECIFICITY

The dimension of ambiguity has been defined as the degree to which the stimulus field determines the response (Bordin, 1955) by reducing the range of response alternatives (Siegman and Pope, 1962). Statements high in ambiguity (low Specificity) place minimal restrictions on the range of appropriate responses; statements high in Specificity (low ambiguity) place maximal restrictions on the realm of appropriate responses. It is clear that formal psychoanalysis represents a situation that maximizes ambiguity: the patient gets no cues from the analyst as to which topics are appropriate, what kind of relationship there is to be, or what the analyst's goals and values are (Bordin, 1955). Freud (1912) is emphatic about the best interests of both the patient and the analyst being served if the analyst "is impenetrable to the patient, and, like a mirror, reflects nothing but what is shown to him (p. 330)." The analyst must keep his needs and his personality out of therapy as much as possible in order to facilitate transference resolution (Freud, 1912; Fenichel, 1942).

With respect to psychoanalytically-oriented therapy other than formal analysis, ambiguous therapeutic interventions act like a projective technique. The smaller the influence of the therapist as stimulus on the patient's response, the greater the influence of the patient's motives, affects, defenses, and conflict, no matter how well-oriented to reality the patient is (Bordin, 1955). Once the patient projects his basic motives and conflicts onto the "blank screen" of the therapeutic relationship, the therapist has an opportunity to fully and deeply understand the patient's difficulties in living in all their immediacy (Bordin, 1955). As Freud (1912) pointed out, minimizing the contribution of the therapist to the relationship enables one to most easily bring to awareness the irrational elements in the patient's contributions to the immediate relationship.

Client-centered theory is less emphatic about the need for ambiguity. However, there is a goal of preventing the needs and values of the therapist from interfering with empathy and unconditional acceptance (Rogers, 1951; Truax and Carkhuff, 1967). This is accomplished by devoting one's full energy to empathic understanding which maintains the client-centered, non-directive aspect of therapy (ibid). The result is an ambiguous, unstructured therapeutic situation (Bordin, 1955). Thus, ambiguity, rather than Specificity, is the preferred condition of therapy from both viewpoints.

Ambiguity vs. Specificity has been shown to be one of three major dimensions that expert raters use to judge therapeutic responses in a series of studies summarized by Howe (1965). Thirty-five psychiatrists used forty semantic differential scales to rate ten therapist responses to patient statement. A factor analysis of ratings demonstrates that the judges rely mainly on three dimensions;

one being precision/potency (18% of the variance). The precision/potency dimension has to do with the Specificity or ambiguity of the therapist's response.

Using an a priori scale of Specificity, Lennard and Bernstein (1960) hypothesize that low Specificity (ambiguous) therapist responses will create a high degreee of informational uncertainty that the patient will try to reduce by an increased amount of verbalization. The four therapists in this study differ considerably in degree of Specificity (Lennard and Bernstein, 1960). Therapist statements of low Specificity (high ambiguity) yield greater patient verbalization which is likely to be affective than therapist statements of high Specificity (low ambiguity). Lennard and Bernstein (1960) conclude that low Specificity statements facilitate the task of getting the patient to verbalize about affect. Siegman and Pope (1962) use the Lennard and Bernstein (1960) scale to replicate the finding of a negative relationship between Specificity and patient verbal productivity. In addition. significantly more patient speech disturbances occur with low Specificity therapist statements (Siegman and Pope, 1962).

Siegman and Pope (1962) note the disadvantages of an a priori scale such as that of Lennard and Bernstein (1960). The scale may overlap in unanticipated ways with scales of similar connotations, as in the case of the dimensions of depth of interpretation and plausibility (Fisher, 1956). An empirical scale of Specificity is developed by having fourteen therapists rate thirty-nine therapist statements on an eleven-point scale accompanied only by the definition of Specificity: no scale points are anchored. Ebel intraclass reliability (.71) and average reliability (.97) are high. The thirty-nine statements are

rank ordered according to the average Specificity rating of all raters, then grouped into categories of logically related responses, and assigned a Specificity score which is the median of scores on all the responses in the category. Thus, Siegman and Pope (1962) developed an empirical scale of Specificity which is reliably used by untrained raters in the last stage of the study. Excellent construct validity is evident from an average correlation of .80 with the Lennard and Bernstein (1960) scale.

The Specificity scale has been used most frequently in experimental analogues rather than clinical interviews, because the experimenters wished to avoid the confounding of variables found in the naturalistic setting (Keisler, 1973). The results from analogue interviews will not be reviewed due to the difficulty with which one can generalize to the clinical setting. In the scale construction study, Siegman and Pope (1962) find that there is a significant relationship between Specificity and activity level in seven out of twelve psychotherapeutic interviews. However, only Specificity is significantly and negatively related to patient verbal productivity and speech disturbance. Low Specificity is associated with greater verbal productivity in an economically deprived population and in a group of schizophrenic patients (Kiesler, 1973). The most recent naturalistic study confirms the negative relationship between Specificity and verbal productivity, and demonstrates that the speech disturbances associated with low Specificity have to do with caution and hesitation (slow rate of speech, longer reaction time, more silent pauses) rather than anxiety (stammering, sentence correction or incompletion, incoherent sounds; Pope, Blass, Cheeck, Siegman, and Bradford, 1969). Most importantly, there is more

psychologically meaningful content in response to low Specificity interventions (Pope, et al., 1969).

Thus, the empirical evidence shows that the lower the Specificity level of the therapist statements, the greater the patient verbal productivity, the greater the patient's uncertainty, and the greater the likelihood of psychologically meaningful material (Lennard and Bernstein, 1960; Siegman and Pope, 1962; Pope et al., 1969; Kiesler, 1973). The experimenters in this area conclude that statements of low Specificity create informational uncertainty which the patient tries to reduce by increased verbal activity. The hesitancy and affective content of this activity suggest that the patient is exploring unfamiliar aspects of psychologically significant experience. Thus, therapist remarks of low Specificity generate patient material that is likely to facilitate the task of overcoming repression, resistence, and increasing self-awareness.

Theory and research suggest that an effective therapeutic response is often of low rather than high Specificity. As shown earlier, one can expect that the therapist personality characteristics in terms of attitudes and ego functioning will predict in-therapy behavior. With respect to Specificity, Rigler (1957) finds that when a resistant client initiates behavior in one therapist's areas of conflict, the therapist's responses tend to become more structured and less ambiguous. Ashby et al. (1957) instructed ten inexperienced therapists to vary the degree of directiveness in treatment. They note that three therapists could not make themselves be more directive, and one could not make himself be less directive. Ashby et al. (1957) attibute the failure to comply with the instructions to the therapist's personality. The research suggests that, as Bordin puts it, "One might expect that an

inactive, relatively self-effacing style will come easily to some persons but not to others (Bordin, 1974, p. 171)." Therefore, one expects that therapist scores on the Pathogenesis scale (Meyer and Karon, 1967), and on amount and manner of drive expression (Pine, 1960), will be significant predictors of level of Specificity.

CHAPTER III

HYPOTHESES

It is clear from the preceding review of the literature that one can expect therapist attitudes and ego functions to relate significantly to the in-therapy behaviors of Accurate Empathy, Nonpossessive Warmth, and Specificity. The direction of these relationships are also of concern. One must keep in mind the characteristics of the sample. All of the therapists had completed or were completing professional training. It is likely that this sample falls within the upper range of intelligence and academic achievement. In terms of ego controls, it is likely that this sample generally falls above the average level of adaptiveness. As Bachrach (1968) points out, within the adaptive range of ego functioning, the greater the access to primary process and the greater the defense effectiveness, the higher the level of empathy. Thus, both openness to impulse and the effectiveness of controls are important. Given this theoretical consideration and the characteristics of the sample, it is not clear whether a linear or curvilinear relationship will best describe the association between amount and directness of drive expression, and in-therapy behavior. For example, will moderate or high frequencies of drive content best predict optimal in-therapy behavior? Will moderate, high, or low percentages of direct/unsocialized drive expression best predict optimal in-therapy behavior? Given this uncertainty, the hypothesis concerning amount and directness of drive expression will be nondirectional.

The construct of Pathogenesis focuses on the therapist's assumptions about interpersonal relationships (Karon, personal communication).

Given this way of interpreting the Pathogenesis scale, one must conclude that the number of pathogenic stories directly represents interpersonal assumptions. Thus, a high percentage of pathogenic stories is likely to represent pathogenic interpersonal assumptions, and lead to nonfacilitative in-therapy behavior. However, when one takes into consideration whether moderate or low percentages of pathogenic stories will best predict optimal in-therapy behavior. A therapist who tells not a single pathogenic story may be rigid, defensive, overcontrolled. Thus, the relationship between Pathogenesis and optimal in-therapy behavior may be negative, positive, or curvilinear. Therefore, nondirectional hypotheses will be made for this as well as the other predictors. To formally state all hypotheses:

1. Total amount of drive content will significantly relate to mean, peak and basal levels of Accurate Empathy.

2. Directness of drive expression will significantly relate to mean, peak and basal levels of Accurate Empathy.

3. Scores on the Pathogenesis scale will significantly relate to mean, peak and basal levels of Accurate Empathy.

4. Total amount of drive content will significantly relate to mean, peak and basal levels of Nonpossessive Warmth.

5. Directness of drive expression will significantly relate to mean, peak and basal levels of Nonpossessive Warmth.

6. Scores on the Pathogenesis scale will significantly relate to mean, peak and basal levels of Nonpossessive Warmth.

7. Total amount of drive content will significantly relate to mean, basal and peak levels of Specificity.

8. Directness of drive expression will significantly relate to mean, basal and peak levels of Specificity.

9. Scores on the Pathogenesis scale will significantly relate to mean, basal and peak levels of Specificity.

CHAPTER IV

METHODOLOGY

General description

Psychotherapy cases for the present study come from the research tape library at Michigan State University. The patients are undergraduates at Michigan State who sought psychotherapy at the Counseling Center, the main on-campus agency for psychological services. They have presented problems that include identity conflicts, sexual conflicts, and feelings of alienation, anxiety, and depression (Kurtz and Grummon, 1972). The patients were screened via an intake interview to determine the appropriateness of psychotherapy in each case, and assigned on the basis of matching patient-therapist schedules. There are 19 patients who include fifteen females and four males.

Kurtz and Grummon (1972) describe the therapists as emphasizing self-exploration, insight, current vs. past intrapsychic conflicts, and utilizing an interpersonal theory of personality. Thus the therapists may be described as psychoanalytic in their approach. Thirteen therapists are male, and six therapists are female. There are nine same-sex client-therapist pairs, and nine opposite-sex pairs. Therapists vary with respect to level of experience: ten senior staff members (PhD level); four interns (fourth and fifth year clinical or counseling students); and five practicum students (third and fourth year clinical or counseling students).

The tape recordings of the entire case for each patient forms the tape library from which the sample is drawn. Tape recordings of cases

were made only with the consent of both therapist and patient. The sample of the present study consists of all cases which lasted at least five sessions, and where a TAT protocol is available for the therapist. The number of sessions ranges from five to 29, with a mean of 12.3. There are a total of 246 hours of therapy sessions. Sampling is utilized to reduce the amount of data to a manageable size. The middle and second to last sessions were selected. Three four-minute segments were extracted from the first four minutes of the second, third, and fourth fourths of each session. There are three segments per session, two sessions per case, and 19 cases. Thus, the sample is 114 four-minute segments from the middle and end of 19 therapy cases, or approximately seven and a half hours of therapy to be rated.

The segments were rated by three pairs of raters, one pair assigned to each scale of psychotherapy process: Accurate Empathy, Nonpossessive Warmth, and Specificity. The ratings are averaged (in a manner described in more detail in the following) to yield the mean, peak, and basal scores for each session. Two stages of therapy are sampled from: the middle and the second to last session. Thus there are three scales, three kinds of variability for each scale, and two stages of therapy, which generate a total of 3 x 3 x 2, or eighteen, criteria to be predicted.

Two pairs of raters were trained to rate the TAT stories, one pair assigned to the Pine scale, and one pair assigned to the Pathogenesis scale. There are eleven stories per protocol, and nineteen protocols, for a total of 209 stories. On the Pathogenesis scale, each story receives one rating, while on the Pine scale, a rating is made in every

instance of manifest drive content, and the score a story receives consists of the amount or directness of drive content in the story.

The aspects of psychotherapy process of interest in the present study are Accurate Empathy, Nonpossessive Warmth, and Specificity, which generate eighteen criteria to be predicted. The personality variables expected to predict psychotherapy process are five variables from the Pine scale (amount of drive, percent Level I, percent Level II, percent Level III, and Pine Rank Order), and four variables from the Pathogenesis Scale (Pathogenesis Total I, Pathogenesis Total II, Pathogenesis Benign I, Pathogenesis Benign II), which will be described in the following. However, it is known that other elements of the psychotherapeutic situation are related to psychotherapy process, such as the experience of the therapist, the sex of the therapist and of the patient, and the duration of therapy. Therefore, sex, duration, and level of experience are used in the analysis as covariables, and serve as six predictors in addition to the nine personality variables (sex of therapist, sex of patient, sex of therapist-patient pair, duration of therapy, senior staff vs. non-senior staff, intern vs. non-intern). Thus, there are fifteen predictors of psychotherapy process, and eighteen criteria of psychotherapy process. Stepwise multiple regression and Pearson "r" are utilized to reveal predictors of psychotherapy process.

The purpose of the present study is to examine the relationship between therapist personality and therapy process. In the preceding, psychotherapy is discussed in terms of optimal behavior and in terms of

personality characteristics that facilitate or inhibit such behavior. Thus, the therapist's personality is expected to manifest itself on the TAT and in therapy. The personality constructs of ego functioning and interpersonal attitudes are expected to mediate the relationship between responses on a projective test and behavior in therapy in ways consistent with theories about the impact of the therapist's personality on behavior. A more detailed discussion of the methodology follows.

Measurement of Personality Characteristics

The Thematic Apperception Test (Murray et al., 1943) is the means by which the present study seeks to

> approach the personality and induce the individual to reveal his way of organizing experience by giving him a field (objects, materials, experiences) with relatively little structure and cultural patterning so that the person can project upon that plastic field his way of seeing life, his meaning, significance, patterns, and especially his feelings. Thus we elicit a projection of the individual's private world because he has to organize the field, interpret the material and react affectively to it. (Frank, 1939, pp. 402-03).

The TAT is used in the present study to focus on aspects of the "private world" of the therapists.

There is some question about the possible defensive distortions in the responses of therapists whose training in counseling or psychology may have included academic or clinical work with the TAT. The results of the one available study on the effect of sophistication with the TAT are equivocal (Kaplan and Eron, 1965). There are no significant differences between sophisticated and unsophisticated subjects on tone, outcome, perceptual distortions, or frequency of common themes, but the stories of sophisticated subjects have significantly more

unusual formal characteristics, and fewer number of aggressive themes. The balance of the evidence is against the notion that "test-wise" subjects successfully "fake good" by portraying themselves in exclusively socially desirable ways, or as exceptionally creative.

The results of Abeles (1961), Mueller and Abeles (1964), and Mueller and Dilling (1968) suggest that on the HIT, if anything, psychologically sophisticated graduate students are unusually frank about the socially undesirable aspects of the "private world." It must be noted that the HIT represented a new projective test that the subjects were unfamiliar with at the time (Mueller and Abeles, 1964). Vandenbos (1969) points out that when his therapists took the TAT, they were "naive" with respect to the scoring of Pathogenesis. Similarly, in the present study, therapists who may be familiar with the clinical use of the TAT are highly likely to be naive with respect to the specific research application of the scales of Meyer and Karon (1967), and Pine (1960). Therefore, in the present study the experimenter "decoded" the information of the TAT using a meaning system of which the subject-therapists were not aware (Laforge, 1973). Under these circumstances one can assume that the relevant dimensions of the therapist's inner world are being externalized with a minimum of defensive censorship and distortion (Laforge, 1973).

As Eron (1972) recommends in his review of the TAT, highly specified dimensions of responses are being used rather than global judgments of the TAT. The specificity is said to maximize the power of the TAT to validly discriminate between contrasted groups (Zubin, Eron, and Schumer, 1965; Eron, 1972). These groups (high-low Pathogenesis, etc.) are predicted to differ on behaviors in therapy.

Note, however, that the present attempt does not utilize the TAT to directly predict behavior. The author is in agreement with Korner (1965) who states that "if we are aware of the constantly intervening variables between the needs of the individual and the adaptation he makes to them in reality, we do not expect reality behavior necessarily to correspond with fantasy...(p. 27)." The general approach is to establish, by means of theory and research, what kind of person makes a good therapist with respect to the dimensions of attitudes and impulse control. One can then hypothesize how one expects such a person to behave (Korner, 1965).

Thus, three sets of inferences mediate the relationship between the TAT responses and therapist behavior. The first set of inferences defines the personality of the optimal therapist in terms of interpersonal assumptions and ego functioning. The second set of inferences defines the in-therapy behavior of the optimal therapist in terms of Accurate Empathy, Nonpossessive Warmth, and Specificity. The third set of inferences relates the responses on the TAT to in-therapy behavior by means of the construct of the personality of the optimal therapist.

TAT Procedures

The TAT was individually administered using the standard instructions (Murray et al., 1943). Transcripts were made from tape recordings of the oral responses, as recommended by Pine (1960) to minimize censorship. A standard set of cards were used which consisted of the following: 1, 2, 3BM, 4, 6BM (or 6GF for females), 7BM (or 7GF for females), 10, 12M, 13MF, 16 and 20. The protocols were scored using two systems.

Scale Description - Pathogenesis

The "Pathogenesis" scale (Meyer and Karon, 1967) is used to score the TAT's of the therapists. The construct of Pathogenesis emphasizes content: the therapist's assumptions about how people relate to one another (Karon, personal communication).

> The general criteria for scoring are twofold: (1) Is there an interaction between a dominant and a dependent person, both with somewhate conflicting needs? If not, the story cannot be scored. (2) If there is such an interaction, does the dominant person take the dependent person's needs into account? If not, the story is scored as "pathogenic." If the dominant person does take the dependent person's needs into account, the story is scored "benign." (Meyer and Karon, 1967, p. 176.)

Thus, each story receives one score, either benign, neutral (unscorable), or pathogenic. Meyer and Karon (1967) include a section entitled "Scoring Criteria Used in Judging," which lists and categorizes 56 typical themes. The following exemplifies each category (Meyer and Karon, 1967, pp. 178-79):

Pathogenic themes

1. Murder
2. Boss driving worker hard
3. Parents make boy study or practice when he doesn't want to

Neutral themes

1. No interaction between two people, though somewhat conflicting needs
2. One person enjoying himself
3. No people or living things

Benign themes

1. Parents force child to do something; he is unhappy, they change
2. Teacher consoling a problem child; helping a gifted child
3. Guides leading animals across difficult area, etc.

The judges are instructed to ignore the raltionalization for behaviors in the story, and consider only the behavior and relationship described (Karon and Vandenbos, 1975).

Procedures for the Pathogenesis Scale

Karon and Vandenbos (1975) in their unpublished monograph on scoring procedures recommend use of the Meyer and Karon (1967) scoring system. In the present study, two advanced graduate students (other than the author) experienced in the use of the TAT serve as the judges. Their training materials consisted of scale descriptions and practice TAT stories.

The scale descriptions include the monograph on scoring procedures (Karon and Vandenbos, 1975), and the initial publication of the scoring system (Meyer and Karon, 1967).

The training procedure consisted of having the judges discuss the scale descriptions together. Then they jointly rated ten stories from therapist TATs that were not part of the experimental sample. The judges continued to jointly rate blocks of ten stories until they were satisfied that they were using the Pathogenesis scale in the same way. The reliability of their judgments was checked by having them rate blocks of ten stories until they reached a criteria of exact agreement in at least 90% of the stories.

At this point they were given the stories from the sample of the present study, presented in random order as in the previous studies using the Karon and Meyer (1967) scale. Both judges rated all stories by the therapists in the sample. As in previous studies, the summary score for each protocol in the present study is the number of stories with pathogenic themes, divided by the sum of all scorable stories, benign plus pathogenic themes. Following previous studies, reliability of the ratings is determined by Pearson product-moment correlations of

summary scores. In past studies, the reliability of the summary score ranged from .79 to .94, with a mean of .88 (Meyer and Karon, 1967; Mitchell, 1968; Mitchell, 1969; Melnick and Hurley, 1969; Vandenbos and Karon, 1971). The score used to test hypotheses is the average of the summary scores of the two judges.

Scale Description - The Pine Scale

The Pine (1960) system is used to assess the nature of the ego controls. In this system, each story receives three scores: presence of drive content (amount), directness of expression of drive content (modulation), and integration of drive content. The presence of drive content refers to "observable ideational derivatives of the inferred aggressive and libidinal drive (Pine, 1960, p. 33)." Only manifest content is scored. Drive content that is too far removed from aggressive or libidinal connections is not rated. Pine (1960) provides examples to indicate where the cut-off point is. For example, anger is scorable, but achievement motivation is not.

The directness of drive expression is scored for three levels of drive modulation or socialization.

> Level I (direct-unsocialized) includes those expressions of drive content where libidinal or aggressive impulses are directly expressed in a way contrary to conventional social practices. Murder, robbery, rape ... for example, are rated here ...
>
> Level II (direct-socialized) includes those expressions of drive content where libidinal or aggressive impulses are expressed directly but in socialized ways. Anger expressed without physical violence, arguments ... are all rated here ...
>
> Level III (indirect-disguised; weak) actually includes two kinds of drive content. The first, indirect and disguised drive expressions, includes those instances that are associated with (often relatively strong) drives, but where the underlying

> impulse is neither explicitly thought nor acted upon in the story. Mention of police, soldiers, rulers... are all included here.... The second type of content rated level III includes drive expressions which are weak and highly derived. For example, social expressions of aggression derivatives such as strikes and military unions are rated here as are highly formalized drive expressions such as familial affection. (Pine, 1960, pp. 34-35).

The integration of drive content is the final scoring category. Drive integration may be scored as thematic, incidental, or non-appropriate. The scores on drive integration were not used in the present study because they did not provide sufficient discriminatory power in past studies.

Procedures for the Pine Scale

The judges were two advanced graduate students (other than the author) with previous experience using the TAT who rated only the Pine scales. They were given the training manual (Pine, 1960) which they read independently and discussed extensively at the first training session. As with the Pathogenesis scale, the judges began by jointly rating blocks of ten stories randomly chosen from the protocols of therapists not involved in the present study. Given the complexity of the Pine system, the judges were required to jointly rate a minimum of 40 stories. When the judges felt confident that they were using the Pine system in identical ways, they began independently rating blocks of 10 stories. They continued to do so until they reached the following criteria: 80% agreement on drive presence; 90% agreement on directness of drive expression at each level.

Once the judges attained a high degree of reliability on the Pine system, they began to rate the stories of the sample in the present

study in random order. One judge rated all the stories, while the other judge rated the first third of the protocols. Reliability was computed on one third of the total sample of TAT responses. Reliability of ratings of drive presence was computed by percentage of agreement. Reliability of directness of drive expression was computed by percentage of agreement for each level. These procedures follow previous studies, in which the mean percentage of agreement for total drive presence was 79.3 (range: 69 to 85.6); the mean percentage of agreement for directness of drive expression was 88.1 (range: 79 to 96); and in which the mean percentage of agreement for thematic integration was 93.7 (range: 92 to 95.7) (Pine, 1960; Perkins, 1965; Dietzel and Abeles, 1971; Jones, 1975).

The summary scores used to test hypotheses are the frequency of drive content, the percentages of levels of drive expression, and a summary score that Pine finds useful (Pine, 1960). The scores used are those of the one judge who rated all the TAT stories.

Measurement of in-therapy variables

In the present study, the behavior of the therapist during the process of psychotherapy is measured using three constructs: Accurate Empathy, Nonpossessive Warmth and Specificity. All three of these measures follow the classical model of process analysis (Kiesler, 1963): units of measure are coded to categories descriptive of the content itself. Inferences about the meaning of the data are made by the experimenter. Kiesler (1973) recommends the use of this model because of its high reliability, ease of replication, and broad usage. Given the classical model shared by all three process measures in the present

study, the application of Accurate Empathy, Nonpossessive Warmth, and Specificity is sufficiently similar to warrant a common description. Any differences in application will be pointed out.

Scale Description - Accurate Empathy

Accurate Empathy (Truax and Carkhuff, 1967) involves the ability of the therapist to sense the patient's "private world" as if it were his (or her) own, to know what the patient means, in both affect and content, and to communicate this understanding in a language that is attuned to the patient's current state. The present study utlizes Truax and Carkhuff's (1967) 9-point anchored and annotated scale. At the lowest level, the therapist lacks understanding of the patient's most conspicuous feelings. At the midpoint of the scale, therapist and patient statements are interchangeable in manifest content and feelings with no attempt to respond to less obvious feelings. At the highest level of the scale, the therapist makes unfaltering, accurate responses to the patient's full range of expressed and underlying feelings.

Scale Description - Nonpossessive Warmth

Nonpossessive Warmth (Truax and Carkhuff, 1967) is also a five point annotated and anchored scale.

> The dimension of Nonpossessive Warmth or unconditional positive regard, ranges from a high level where the therapist warmly accepts the patient's experience as part of that person, without imposing conditions, to a low level where the therapist evaluates a patient or his feelings, expresses dislike or disapproval, or expresses warmth in a selective and evaluative way. Thus, a warm positive feeling toward the client may still rate quite low in this scale if it is given conditionally. Nonpossessive warmth...involves valuing the patient as a person, separate from any evaluation of his behavior or thoughts... The therapist's response to the patient's thoughts or behaviors is a search for their meaning or value within the

patient rather than disapproval or approval (Truax and Carkhuff, 1967, pp. 59-60).

Scale Description--Specificity

The Specificity scale (Siegman and Pope, 1967) measures the degree to which the statement of the therapist limits the range of possible patient responses using an empirically-derived scale anchored at 10 points. At low levels of Specificity (high ambiguity), the therapist's statement places very few constraints on possible patient responses. Such a statement contains little information in the sense of uncertainty reduction. To exemplify with the first two scale points:

1. Th uses a single word or syllable to indicate that he is listening and accepting. Scale value 1.7.

2. Th makes a brief remark to encourage pt to proceed. Scale value 3.0. (Siegman and Pope, 1962, p.517.)

At moderate levels of Specificity (moderate ambiguity) the therapist's statement places some limits on the range of possible responses. To exemplify from the middle of the scale:

5. Th asks pt to speak about a more limited subject area. Scale value 6.3.

6. Th labels or specifies the feeling implicit in the preceding pt remark, or makes some other limited inference regarding it. Scale value 6.9 (Siegman and Pope, 1962, p.517).

At high levels of Specificity (low ambiguity), the therapist's statement limits the patient's response to a specific matter or proposition. The highest level of Specificity is defined as "10." Th asks for specific factual information. Scale value 10.9. (Siegman and Pope, 1962, p. 517)."

Procedures for in-therapy measures

The scales of Accurate Empathy and Nonpossessive Warmth are designed to be used primarily with tape recordings of therapy sessions

(Truax and Carkhuff, 1967). The Specificity scale has been used exclusively with typed transcripts to date (Kiesler, 1973). Segments of tape-recorded therapy sessions were used in the present study. For all three scales, the judges were permitted to replay segments at their discretion when necessary to arrive at a rating with confidence. This procedure enabled the judges of Specificity to attain reliability that is comparable with earlier studies.

The scoring unit for all three scales has been the patient-therapist-patient sequence of statements. (Kiesler, 1973). In such an interactional unit, the last patient statement in one unit becomes the first patient statement in the next unit. This procedure was followed in the present study.

As Kiesler (1973) recommends, the decision of how to summarize the scoring units is made on the basis of the theoretical underpinnings of the present study. The personality of the therapist is hypothesized to have an effect on the quality of the therapeutic process. One aspect of this quality is the average level of functioning on the relevant scales of the therapist's behavior. Therefore, the scores on the patient-therapist-patient sequences were summed and divided by their frequency to yield the mean level of therapist functioning for a given segment. The means of all segments for a given session were averaged to yield a summary score of the session's mean level of therapist functioning.

However, Gurman (1973) and Karl and Abeles (1969) have shown that therapist behavior is highly variable during any given hour. Gendlin (1961, 1964) states that the therapist must time interventions so that they are attuned to the patient's moment-to-moment experiencing. This may account in part for the variability of in-therapy behavior. Thus, it

is of interest to investigate at what level the therapist is functioning when the therapist is making maximum effort to facilitate patient experiencing, and when this effort is minimal. Therefore, the highest score per segment was summed for all segmants of a given session and averaged to determine the peak levels of Accurate Empathy, Nonpossessive Warmth, and Specificity. The lowest score per segment was summed for all segments of a given sessions and averaged to determine the basal level of each in-therapy behavior. The summary score used to test hypotheses was the average of both judges ratings within each session for the relevant scale.

Two social work graduate students were the judges for the Accurate Empathy scale. They each had two years of therapy experience, and one had two years of experience using the Accurate Empathy scale. One clinical psychology and one family ecology graduate student were the raters for the Nonpossessive Warmth scale. Each had one year of graduate work. A teacher with a B.A. in English and a senior social work undergraduate were the raters for the Specificity scale, which was thought to demand the least in terms of previous therapy experience or work in related fields.

The training procedures were the same for Accurate Empathy, Nonpossessive Warmth, and Specificity. Each pair of raters was given the relevant scale descriptions and one or more reprints of primary references. The first training session for each pair of raters involved discussion of the scale descriptions, and joint ratings of a set of ten four-minute segments drawn from cases not involved in the present study. As recommended by Rogers et al. (1967), disputes about ratings were resolved between the judges themselves so that they established a mutual

scale conception and task set. Joint ratings of blocks of ten four-minute segments continued until the judges agreed that they were ready to attempt independent ratings. The pairs of judges independently rated ten segment units until their reliability, computed by product-moment correlations, reached or exceeded the levels of previous studies. The goal for the Accurate Empathy scale was .70 or more (Truax and Mitchell, 1971); for the Nonpossessive Warmth it was .70 or more (Truax and Mitchell, 1971); and for the Specificity scale, adequate pre-experiment reliability was .90 or more (Pope and Siegman, 1962).

Once these levels were attained, the pairs of judges started to rate the segments selected for the present study. These segments were presented on a master tape in a randomized order, as in previous studies (Truax and Carkhuff, 1967). Reliability for each pair of judges was computed by the product-moment correlation. The score used to test hypotheses for each scale is the average of the two judges' basal, mean, and peak scores for each session.

Sampling

Sampling was employed to reduce the 246 hours of recorded therapy sessions to manageable size. Truax and Carkhuff (1967) find that the four-minute segment can be reliabily and validly rated for Accurate Empathy and Nonpossessive Warmth. The Specificity scale was used with entire initial interviews, not with samples of interviews. The present study followed Truax and Carkhuff's procedure (1967) and therefore explored the issue of using the Specificity scale on four-minute segments of therapy. Given the well-defined scale points, no problems were anticipated from using the Specificity scale in this way.

The issue of how to sample within the hour of therapy must be considered from both an empirical and a theoretical point of view. Though client-centered theory emphasizes invariant, non-contingent functioning as optimal (Truax and Carkhuff, 1967), the evidence indicates that variability of therapist functioning is the rule (Karl and Abeles, 1969; Gurman, 1973). For the facilitative conditions there is a trend for higher levels to appear later in the hour (Gurman, 1973). The therapist personality variables are expected to exert an influence over the entire session. Intensive sampling within the hour of therapy is called for.

The scope of the present investigation places limits on the amount of laborious process rating that can be done. Given these limits, the number of therapist responses that are rated is small relative to the total number of therapist responses in all cases. To sample randomly with a small number of observations could lead to biased representation of an unknown degree, as Kiesler, Klein, and Mathieu (1965) have demonstrated. Sampling standard time periods in which the phenomena are likely to occur is recommended in the situation of a small number of observations (Kiesler et al., 1965; Karl and Abeles, 1969).

The evidence presented by Gurman (1973) indicates that the therapist's low, medium and high levels of functioning can be found in the early, middle, and late stages of each session, respectively. The present study follows this precident. Since the sessions vary in length, each is treated as a unit and divided into fourths. Four-minutes segments are extracted from the beginning of the 2nd, 3rd and 4th fourths of each session. In this manner, the functioning of the therapists is observed at the same stage relative to each session. Following the

practice of Truax and Carkhuff (1967), each segment begins with an uninterrupted statement by the patient which falls as close to the beginning of each fourth of the hour as possible.

A second sampling issue is raised when one considers how to select the sessions to be sampled. The purpose of the present investigation is to examine the relationship between the therapist's personality characteristics and in-therapy behavior. The previously reviewed studies in this area primarily concentrate on the early stage of therapy. However, the level at which the therapist functions is hard to predict from session to session at the early stage (Rogers, Gendlin, Kiesler, and Truax, 1967). The level of facilitative conditions stabilizes between the 7th to 11th sessions (Rogers et al., 1967). Therefore, the later stage of therapy may best represent the ability of the therapist to be effective. Carkhuff and Berenson (1967) state that the final rather than the initial level of the therapist's functioning is most strongly related to improvement. This implies that the effectiveness of the therapist lies in his continuing depth of understanding, rather than the rapidity with which it is attained (Carkhuff and Berenson, 1967).

The above suggests that the most important and characteristic levels of therapist functioning are found in the later stages of therapy. Therefore, the sessions that are sampled come from the second half of therapy. The rules for selecting a session from which to extract segments are as follows: the session closest to the midpoint of therapy is the first session to be sampled. When the midpoint falls between two sessions, the later session is selected. The second session sampled is the next to last session, in order to avoid the "good-by" effect that makes the last interview unrepresentative.

Control of covariables and statistical analyses

The present investigation is interested in the relationship between therapist personality characteristics and in-therapy behavior. In order to establish these relationships unambiguously, one must control for the effects of a number of other variables that have been shown to relate to in-therapy behavior. It must be noted that the influence of a moderator variable is relevant to the relationship between two other variables only when the moderator is significantly related to both variables.

Therapist experience level has been shown in some but not all studies to significantly relate to outcome (Luborsky, Auerbach, Chandler, Cohen, and Bachrach, 1971), with a suggestion that these differences are strongest in longer cases (Myers and Auld, 1955). With respect to in-therapy behavior, experienced therapists tend to show greater flexibility of behavior (Strupp, 1955), are less directive (Grigg, 1961), approach patient dependency with the same frequency (Schuldt, 1966), approach patient hostility with less frequency (Varble, 1968), and most importantly, are more empathic than inexperienced therapists (Mullen and Abeles, 1971; Bienenfeld, 1975; Steinitz, 1976). As noted earlier, the therapist level of experience effects the relationship between Accurate Empathy and Nonpossessive Warmth (Mullen and Abeles, 1971); between therapist need for nurturance and Nonpossessive Warmth (Mullen and Abeles, 1971); and between therapist need for nurturance and liking for the client (Mills and Abeles, 1965). Therapist experience level has been shown to relate to in-therapy behavior, and to mediate the relationship between process and therapist personality. Therefore, the variable of therapist experience level is taken into account.

The purpose of the present study is to determine the extent to which in-therapy behavior can be predicted from three therapist characteristics. It is clear from the above that therapist level of experience variables may also relate to in-therapy behavior. Thus, at least four variables can be used, singly or in combination, to predict criterion variables. Therefore, it is thought that a stepwise multiple regression analysis provides both the flexibility and the precision needed to deal with the problem of multiple predictors and their interactions (Nie, Hull, Jenkins, Steinbrenner, and Brent, 1975). A stepwise multiple regression equation will be derived for each of three criteria (Accurate Empathy, Nonpossessive Warmth, Specificity), for three types of scores (mean, peak and basal), at two stages in therapy (middle and late sessions). Therefore, a total of 3 x 3 x 2, or 18, stepwise multiple regression equations will be derived.

The stepwise format for the multiple regression will be utilized. This means that the best single predictor will receive a weight first, then the next best predictor will be correlated with the residual of the criterion and weighted accordingly, and so on until adding predictors fails to account for significantly greater variance.

CHAPTER V

RESULTS

Reliability of TAT measures - the Pine scale

The Pine scale presented the raters with a formidable task in terms of rating drive presence and directness of expression. Evidently, agreement upon what does and does not constitute an ideational derivative of a drive required more training than was provided for in the procedures outlined in the previous section. Two clinical psychology graduate students with experience on projective tests rapidly reached criterion levels of pre-experimental reliability on a training sample. However, they were unable to maintain this when rating the experimental sample. For example, the percentage of agreement on drive presence for the reliability sample of 67 stories was 57%.

After reviewing the procedures and consulting with another researcher who had used the scale (Dietzel, personal communication), a revised training procedure was implemented with two different clinical psychology graduate students. In order to overcome the problems of the original procedure, the new procedure emphasized the following points:

1. A longer training period of at least 15 hours.
2. Elimination of joint rating during training and substituting independent rating of blocks of 10 stories followed by a discussion to explore scoring issues highlighted by discrepancies.
3. Expanding the test of pre-experimental reliability from 10 to 30 stories.
4. Having both raters rate all stories in the experimental sample. The scores used to test hypotheses are the averages of two raters, rather than the scores of one rater.

The success of the revised procedure is evident from the satisfactory levels of reliability below. Since neither rater could be designated

as the criterion, the following formula was used to calculate separately the percentage of agreement for drive presence, drive absence, and for each category of the Pine scale (Feld and Smith, 1958):

$$\frac{\text{(the number of instances of agreement) X 2}}{\text{(total number of ratings by rater 1) + (total \# of ratings by rater 2)}}$$

From Table I below it is evident that drive presence, drive absence, and directness of drive expression are reliably rated, which are used in the present study. As expected, drive integration does not provide much discrimination as a rating, because the large majority of ratings fall in the Thematic category.

Table I. Inter-rater agreement for the Pine Scale Scores

Drive Presence	$\frac{2\ (341)}{408 + 370}$	= 88%			
Drive Absence	$\frac{2\ (32)}{38 + 42}$	= 80%			
Level I	$\frac{2\ (48)}{53 + 50}$	= 93%	Thematic	$\frac{2\ (318)}{400 + 349}$	= 85%
Level II	$\frac{2\ (134)}{146 + 156}$	= 88%	Incidental	$\frac{2\ (4)}{12 + 9}$	= 38%
Level III	$\frac{2\ (137)}{209 + 162}$	= 74%	Non-Appropriate	$\frac{2\ (11)}{16 + 12}$	= 79%
Overall Agreement on Directness of Drive Expression	$\frac{638}{778}$	= 82%	Overall Agreement on Drive Integration	$\frac{666}{798}$	= 83%

The reliability of the summary scores from the Pine scale that are used to test hypotheses is of primary concern. These summary scores are

derived from the total scores on each TAT protocol as a whole. The scores, their definition, and the reliability (Pearson r) appear below, in Table II.

Table II. Definition and Reliability of Summary Scores

Variable	Definition	Inter-rater Pearson r
Total drive	Total frequency of any drive content	.91
Percent Level I	$\frac{\text{Frequency of Level I}}{\text{Total drive}}$	.93
Percent Level II	$\frac{\text{Frequency of Level II}}{\text{Total drive}}$	.85
Percent Level III	$\frac{\text{Frequency of Level III}}{\text{Total drive}}$	.82
Combined Rank Order	Rank order Percent Level I from most to least; rank order percent Level III from least to most; add these ranks for each subject and rank order the total.*	.83
Percent Thematic	$\frac{\text{Frequency of Thematic}}{\text{Total drive}}$	.87
Percent Incidental	$\frac{\text{Frequency of Incidental}}{\text{Total drive}}$	.60
Percent Non-appropriate	$\frac{\text{Frequency of non-appropriate}}{\text{Total drive}}$	.91

* Thus, Combined Rank order ranges fro, highly unmodulated drive content at one extreme (high % Level I and low % Level III) to relatively more modulated drive content at the other extreme (low % Level I and high Level III). Spearman Rho is the inter-rater correlation.

From the above it is clear that after extensive training, the Pine scale was used with high degree of reliability. The rating of Percent

Incidental appears to less reliable, but is still significant at the .01 level.

Reliability of TAT measures - the Pathogenesis scale

Reliability for the Pathogenesis scale is determined by percentage of agreement for the rating of each story, and by inter-rater correlation of summary scores. From Table III below it is evident that the reliability achieved by the raters is adequate. However, a question arose concerning a difference between the way the TAT was administered, and the way that Karon recommends (Karon, personal communication). In the present study, inquiry was made by the examiner whenever an element in the instructions was omitted by the subject, and eleven selected cards were administered. On the other hand, Karon recommends that no inquiry be conducted, and that all twenty TAT cards be administered. The question raised concerned the effects on reliability and validity of applying the Pathogenesis scale to stories which included inquiry, and stories which did not. Therefore, an exploratory analysis was conducted. After rating all the TAT stories which included inquiry, the raters were asked to rate all the stories again and instructed to exclude from the rating any portion of the story prompted by the examiner's inquiry. Thus, in the table below one can compare the means, standard deviations, and reliability of rating I, which included any inquiry, and of rating II, which excluded any inquiry.

From the table it is clear that the raters achieve adequate reliability with the Pathogenesis scale. It makes little difference with respect to reliability whether the inquiry is included or not. However, the inter-rater correlation of .66 (Rating I) is somewhat lower in the

present study than the mean reliability of past studies, which is .88. It is not clear from these data why this is so. One hypothesis is that to administer twenty TAT cards as Karon recommends may be more reliable

Table III. Inter-rater reliability of the Pathogenesis scale. N = 209 stories.

Variable		Rating I	Rating II
Percentage of exact agreement on all stories		81.3%	75.1%
Number of pathogenic stories divided by the number of all scorable stories:	Rater 3 $\bar{x}$	.372	.369
	Rater 4 $\bar{x}$	.508	.528
	Rater 3 sd	.184	.211
	Rater 4 sd	.192	.183
	Inter-rater r	.66*	.63*
Number of benign stories	Rater 3 $\bar{x}$	4.64	4.58
	Rater 4 $\bar{x}$	4.11	3.95
	Rater 3 sd	1.77	1.84
	Rater 4 sd	1.88	1.87
	Inter-rater r	.81*	.79*
Number of pathogenic stories	Rater 3 $\bar{x}$	2.74	2.42
	Rater 4 $\bar{x}$	4.11	4.06
	Rater 3 sd	1.41	1.35
	Rater 4 sd	1.49	1.22
	Inter-rater r	.60*	.49
Number of unscorable stories	Rater 3 $\bar{x}$	3.58	4.00
	Rater 4 $\bar{x}$	2.79	3.00
	Rater 3 sd	1.54	1.80
	Rater 4 sd	1.44	1.33
	Inter-rater r	.91*	.56

*Significant at the .01 level.

than the eleven card administration used in the present study. One can easily determine this in a study for discriminating groups by scores on Pathogenesis.

Reliability of therapy process measures - Accurate Empathy

After a training period of twenty hours, the two raters for the Accurate Empathy scale achieved a very high degree of reliability. With an N=36 responses, the inter-rater correlation (Pearson r) was .97. Using the means of ten four-minute segments, the inter-rater r = .99. From Table IV below, one can see that this high level of reliability is maintained while rating the experimental sample. One factor in this is a set of conventions for how to deal with certain rating problems, such as how to rate questions. These conventions are mostly taken from Steinitz (1976), and appear in Appendix A.

Table IV. Inter-rater reliability - Accurate Empathy.

Reliability of the mean ratings of the sessions, N = 38				
Rater 5	$\bar{x}$	4.40	sd	.86
Rater 6	$\bar{x}$	4.46	sd	.84
Inter-rater reliability		.97		
Reliability of the peak ratings of the sessions				
Rater 5	$\bar{x}$	5.42	sd	.85
Rater 6	$\bar{x}$	5.36	sd	.81
Inter-rater reliability		.93		
Reliability of the basal ratings of the sessions				
Rater 5	$\bar{x}$	3.24	sd	1.09
Rater 6	$\bar{x}$	3.25	sd	1.01
Inter-rater reliability		.96		

Reliability of therapy process measures - Nonpossessive Warmth

The raters for the Nonpossessive Warmth scale needed twenty-four hours of training toreach acceptable levels of reliability pre-experimentally. With an N = 30 individual responses, they attained a

reliability (Pearson r) of .84. The reliability of mean rating of ten training segments was .94. The raters did not maintain this level of reliability when rating the experimental sample, but as can be seen below, their reliability is quite adequate, and comparable to previous studies. Conventions agreed upon to deal with rating problems are included in Appendix B.

Table V. Inter-rater reliability - Nonpossessive Warmth.

Reliability of the mean ratings of the sessions, N = 38				
Rater 7	$\bar{x}$	3.12	sd	.38
Rater 8	$\bar{x}$	3.09	sd	.38
Inter-rater reliability				.77
Reliability of peak ratings of the sessions				
Rater 7	$\bar{x}$	3.70	sd	.36
Rater 8	$\bar{x}$	3.76	sd	.47
Inter-rater reliability				.70
Reliability of the basal ratings of the sessions				
Rater 7	$\bar{x}$	2.40	sd	.71
Rater 8	$\bar{x}$	2.49	sd	.64
Inter-rater reliability				.84

Reliability of therapy process measures - Specificity

On the Specificity scale, the two raters trained for twenty-one hours before achieving an inter-rater reliability (Pearson r) of .94 for the mean rating of an N = 11 segments, and a reliability of .89 for an N = 65 responses. As can be seen from Table VI below, the scale is used with a high degree of reliability in the present study. Again, conventions were utilized to establish agreed-upon ways of dealing with problems,

and these conventions can be found in Appendix C. Evidently, the Specificity scale can be used reliably to rate tapes as well as transcripts.

Table VI. Inter-rater reliability - Specificity

Reliability of mean ratings of the sessions, N = 38				
Rater 9	$\bar{x}$	6.26	sd	.80
Rater 10	$\bar{x}$	6.19	sd	.80
Inter-rater reliability		.82		
Reliability of basal ratings of the sessions				
Rater 9	$\bar{x}$	4.13	sd	1.46
Rater 10	$\bar{x}$	4.00	sd	1.33
Inter-rater reliability		.88		
Reliability of the peak ratings of the sessions				
Rater 9	$\bar{x}$	8.09	sd	1.08
Rater 10	$\bar{x}$	7.97	sd	1.07
Inter rater reliability		.92		

Stepwise Multiple Regression of criteria on predictors

Stepwise multiple regression, hereafter referred to as "SMR," was selected to demonstrate the degree to which in-therapy behaviors are related to therapist personality variables and "demographic" variables (sex, experience, length of therapy). SMR provides a means of examining the most important predictors of in-therapy behavior when there are many predictors that are related to one another to varying degrees, and interact to predict the criteria in unknown ways.

Through the use of a series of semipartial correlations, known as "steps," SMR selects an optimal set of predictors for each criterion. To partial out the influence of any preceding predictors, the general

formula for each SMR equation is the following: $R^2 = r^2_{Y1} + r^2_{Y(2.1)} + r^2_{Y(3.21)} + r^2_{Y(4.123)} + r^2_{Y(5.1234)}$. R^2 is the total amount of variance in the criterion, Y, that is accounted for by the predictors. the first step of the regression equation utilizes the predictor with the largest correlation to the criterion. The second step is for the predictor with the second largest relationship to the criterion, once the variance accounted for by the first predictor has been removed from the second predictor but not from the criterion. The third step is for the predictor with the third largest relationship to the criterion, once the variance shared by the first and second predictors has been removed from the third predictor but not from the criterion, and son on through the fifth step.

Semipartial correlation enables one to statistically control for the influence of preceding predictors and demonstrate the amount of variance accounted for uniquely by the "kth" predictor at the "kth" step. Take for example the fifth step of Late Mean Accurate Empathy in Table VIII (p.68). The formula for any fifth step in an SMR equation is the following semipartial correlation: $r^2_{Y(5.1234)}$. Descriptively, this formula means that the variance of preceding predictors that is shared by Pine Level III is "partialed out," or removed statistically. What remains is the variance of Pine Level III that is NOT due to the preceding predictors entered in steps 1-4, which are Pine Level II, Therapist Experience II, Number of Sessions, and Pine Rank Order. The squared semipartial correlation is the amount of variance from this residual of Pine Level III that is shared by Late Mean Accurate Empathy. Step 5 shows when preceding predictors are controlled by partialling out their influence, Pine Level III accounts for .22 of the

variance of Late Mean Accurate Empathy. Step "k" indicates the proportion of the variance contributed uniquely by the "kth" predictor in addition to the preceding predictors. In effect, semipartial correlation orthogonalizes the predictors (Kerlinger and Pedhazur, 1973).

Semipartial correlation are well known for their instability across samples. Therefore, no attempt will be made in the present study to interpret the relative magnitudes of the semipartial correlation, given the small N and large number of predictors. In presenting the following SMR equations, two features of the analysis are utilized. The "Overall F Test" indicates the probability that these data are drawn from a population where the amount of variance accounted for by the five predictors, $R^2 = 0$. As in all F tests, the nature of this formula is to look at the ratio of the mean-square due to regression of the criterion on the predictors, divided by the mean-square due to error, or the mean-square of the residual. The formula $F_{observed} = \frac{R^2/k}{(1 - R^2)N-k-1}$ with 5 and 13 degrees of freedom. "R^2" is the total amount of criterion variance accounted for by the predictors; "k" is the number of predictors; and "N" is the number of subjects.

Second, note that "R^2 change" shows the amount of variance of the criterion that is uniquely accounted for by the particular step. The F test on R^2 change shows the likelihood that these data are drawn from a population in which the R^2 change = 0. The formula for this test on variable "i" is $F_{observed} = \frac{r^2_{Y(i.123. \ . \ .)/1}}{(1 - R^2_{Y.12 \ . \ . \ i \ . \ .})/N - k - 1}$ with 1 and N-k-1 degrees of freedom. One sees that the F test is equivalent to the mean-square due to regression of the criterion on the predictors, divided by the mean-square due to error. The following will examine

how often a significant amount of criterion variance could be accounted for by the five best predictors (Overall F test), and which predictors provide significant proportions of variance (F test of R^2 change).

One must also note that the significance of R^2 change is determined when the predictor is entered in the equation, in a stepwise fashion, rather than after all predictors have been entered, as in the regular multiple regression format. One advantage of a stepwise test of significance for R^2 change is that it indicates the importance of a predictor whether or not the overall SMR equation is significant. In addition, the significance of predictors tested in the stepwise way is less likely to be inflated by averaging in the non-significant and possibly random contributions of other predictors, as is done in the regular multiple regression format.

The stepwise significance test of R^2 change has a disadvantage in that a predictor whose contributions is large by chance may be labeled significant, and the null hypothesis may be falsely rejected. However, it is of importance to call attention to a variable making a contribution of 20% of the variance, for example, though the overall SMR equation with four other predictors is non-significant. Testing the significance of R^2 change when a variable enters the equation best implements the aim of identifying predictors of in-therapy behavior.

In evaluating these results for each SMR equation the "Adjusted R^2" is reported (Kerlinger and Pedhazur, 1973). The Adjusted R^2 corrects for inflation of the R^2 in the sample relative to R^2 in the population. R^2 in the sample is inflated by predictors whose contribution to criterion variance is zero in the population, but due to sampling

"error" are non-zero in the sample. The smaller the sample, and the more predictors, the greater the inflation, which is corrected by the Adjusted R^2 (see Appendix H).

The following criteria are used to determine the extent of support for the hypotheses found in the data. If a given predictor never contributes a significant amount of additional variance, never enters in a significant SMR equation, this indicates no support for the hypothesis in question. If a given predictor contributes a significant amount of additional variance once, and/or is entered in one or two significant SMR equations, this indicates partial support for the hypothesis in question. If a given predictor contributes a significant amount of additional variance two or more times, or is entered in at least three significant SMR equations, this constitutes full support for the hypothesis in question.

First order correlations

The definition of each predictor appears in Table VII below. Included in the definition are the numerical codes that were assigned to nominal variables, and the numerical definitions of ordinal variables. The first order correlations among predictors (Pearson r) and a discusion of the results are found in Appendix D, as well as the mean and standard deviation of each predictor. The results suggest that demographc, Pine-related, and Pathogenesis-related predictors are independent from one another. The first order correlations among the criterion variables and a discussion of these results, are found in Appendix E, as well as the mean and standard deviation of each criterion variable.

The results indicate that there is a small amount of variance that is shared by all three in-therapy behaviors.

The first order correlations between predictor and criterion variables are found in Appendix F. Out of 270 correlations, eight reach the .05 level of significance, which is less than 3% of the correlations. With respect to personality variables alone, seven out of 162 correlations reach the .05 level of significance, which is about 4% of the correlations. The lack of large first order correlations is apparent. In-therapy behavior is not predictable from looking at any single variable by itself in the present study. A multivariate approach proved more successful. The actual values, for each subject, of the predictors and the criteria are found in Appendix G.

Table VII. Definitions of predictors

VARIABLE
Therapist sex: 0 = female, 1 = male
Client sex: 0 = female, 1 = male
Dyad sex: 0 = same sex, 1 = opposite sex
Therapist Experience I: 0 = practicum or intern, 1 = senior staff
Therapist Experience II: 0 = practicum or senior staff, 1 = intern
Pine Total: the average of both raters' total number of drive units for each protocol.
Pine Level I: the average of both raters' ratios of direct, unsocialized drive units divided by the total number of drive units.

Table VII. (cont'd)

Pine Level II: the average of both raters' ratios of direct, socialized drive units divided by the total number of drive units.

Pine Level III: the average of both raters' ratios of indirect, weak drive units divided by the total number of drive units.

Pine Rank Order: a combination of both raters' rank orders of each subject on Level I and Level III which is averaged for the two raters. Low rank (1, 2) implies unmodulated drive expression; High rank (18, 19) implies well modulated drive expression.

Pathogenesis Total I: the average of both raters' ratios of pathogenic stories divided by the number of pathogenic plus benign stories, with the rating <u>including</u> the inquiry.

Pathogenesis Total II: the average of both raters' ratios of pathogenic stories divided by the number of pathogenic plus benign stories, with the rating <u>excluding</u> inquiry.

Pathogenesis Benign I: the average of both raters' number of benign stories, <u>including</u> inquiry.

Pathogenesis Benign II: the average of both raters' number of benign stories, <u>excluding</u> inquiry.

Number of Sessions: the total number of sessions in each case.

<u>Stepwise Multiple Regression of Accurate Empathy on Predictors</u>

The results of the SMR of Accurate Empathy on the predictors are shown in Table VIII. The Overall F test is significant in one out of 6 equations, Middle Basal. The fact that one SMR equation is signficant

Table VIII. Accurate Empathy variance accounted for by Stepwise Multiple Regression

MIDDLE MEAN

Step	Variable	R^2 change	Simple r
I	Ther Sex	.12	.35
II	Pine Lev I	.17	-.26
III	Ther. Exp. II	.05	.09
IV	Path. Ben. I	.02	-.11
V	Path. Tot. I	.12	-.10

Sum R^2 = .49, Overall F = 2.45
Adj R^{2d} = .34

MIDDLE PEAK

Step	Variable	R^2 change	Simple r
I	Path. Tot. I	.09	-.29
II	Path. Ben. I	.10	.09
III	Ther. Sex	.07	.23
IV	Pine Lev. II	.02	.20
V	# Sessions	.04	-.01

Sum R^2 = .31, Overall F = 1.15
Adj R^2 = .11

MIDDLE BASAL

Step	Variable	R^2 change	Simple r
I	Pine Total	.25*	.50+
II	Client Sex	.14	.07
III	Pine Lev. I	.14	-.38
IV	Ther. Exp. I	.06	.28
V	Ther. Exp. II	.06	.07

Sum R^2 = .64, Overall F = 4.68@
Adj R^2 = .51

Table VIII (cont'd)

LATE MEAN

Step	Variable	R^2 change	Simple r
I	Pine Lev. II	.06	.24
II	Ther. Exp. II	.04	-.22
III	# Sessions	.06	-.04
IV	Pine R.O.	.09	-.12
V	Pine Lev. III	.22*	-.06

Sum R^2 = .47, Overall F = 2.26
Adj R^2 = .32

LATE PEAK

Step	Variable	R^2 change	Simple r
I	Pine R.O.	.05	-.22
II	Pine Lev. I	.06	.01
III	# Sessions	.13	-.11
IV	Ther. Exp. I	.07	.14
V	Pine Total	.03	.16

Sum R^2 = .34, Overall F = 1.34
Adj R^2 = .15

LATE BASAL

Step	Variable	R^2 change	Simple r
I	Pine Lev. I	.12	-.35
II	Path. Ben. I	.05	-.19
III	Path. Ben. II	.15	.06
IV	Dyad Sex	.06	.01
V	Pine Lev. III	.07	.19

Sum R^2 = .46, Overall F = 2.24
Adj.R^2 = .26

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* Indicates that R^2 change is significant at the .05 level. See Appendix H for explanation of this and the F tests below.

+ Indicates that the simple (first order) r is significant at the .05 level.

@ Indicates that the Overall F is significant at the .05 level.

d See Appendix H for Adjusted R^2 formula

suggest that Accurate Empathy is more predictable using a multivariate approach, than by taking one variable at a time and looking at first order correlations.

> Hypothesis 1 - Total amount of drive content will significantly relate to mean, peak, and basal levels of Accurate Empathy.

Total amount of drive content, referred to as Pine Total, is the average of both raters' total number of drive units for each protocol. Pine Total is the only variable in the significant SMR equation adding a significant amount of variance (R^2 change = .25). Pine Total adds .03 variance to Late Peak. The first order correlations for Middle Basal (r = .50) and Late Peak (r = .16) are both positive. This suggests that the greater the total amount of drive content, the higher the level of Accurate Empathy. Thus, total amount of drive content may have a small but significant relationship to Accurate Empathy. Hypothesis 1 is partially supported.

> Hypothesis 2 - Directness of drive expression will significantly relate to mean, peak, and basal levels of Accurate Empathy.

Directness of drive expression is measured by the average of both raters' ratio of each level of directness divided by the total number of drive units: Pine Level I (% direct/unsocialized drive); Pine Level II (% direct/socialized drive); Pine Level III (% indirect/weak drive). Directness of drive expression is also measured by Pine Rank Order, which is a summary score for Levels I and III. Low Pine Rank Order (1, 2) represents unmodulated drive expression (High % Level I and Low % Level III), while high Pine Rank Order represents relatively more modulated drive expression (Low % Level I and High % Level III). Variables related to directness of drive expression add an amount of variance that

ranges from .05 to .20 and averages .11. These variables contribute a significant amount of additional variance in one equation: Late Mean. Pine Level III is the only significant predictor, contributes .22 additional variance to Late Mean, and .07 additional variance to Late Basal. Pine Level I appears in five SMR equations. In the one significant SMR equation (Middle Basal) when Pine Total and Client Sex are controlled, Pine Level I contributes .14 additional variance. Pine Level I and Pine Level III may have a small but significant relationship to the level of Accurate Empathy. Hypothesis 2 is partially supported.

Pine Level I is negatively correlated with Accurate Empathy in the significant SMR equation, Middle Basal ($r = -.38$) and negatively related in four out of the remaining five first order correlations with Accurate Empathy. This means that the greater the percentage of direct/unsocialized drive, the lower the level of Accurate Empathy. Pine Level II is positively correlated in every first order correlation, suggesting that the higher the percentage of direct/socialized drive content, the higher the level of Accurate Empathy. Pine Level III is negatively correlated ($r = -.06$) when it contributes a significant amount of variance to Late Mean Accurate Empathy, but his correlation is low, and two out of the remaining five first order correlations are positive. The correlations of Pine Rank Order and Accurate Empathy are low, and not consistent. The direction of relationship between indirect/weak drive expression and Accurate Empathy, and between Pine Rank Order and Accurate Empathy, are not clear.

However, one can tentatively conclude that under-control (Pine Level I) of drive expression is associated with low levels of Accurate Empathy.

A non-significant trend suggest that modulated but direct expression of impulse (Pine Level II) is associated with high levels of Accurate Empathy. The less modulated the expression of impulse, the lower the level of Accurate Empathy.

Hypothesis 3 - Scores on the Pathogenesis scale will significantly relate to mean, peak and basal levels of Accurate Empathy.

Pathogenic interpersonal attitudes are measured by the average of both raters' number of pathogenic stories divided by the number of scorable stories including the inquiry for Pathogenesis Total I, excluding the inquiry for Pathogenesis Total II; and by the average of both raters' number of benign stories including inquiry in Pathogenesis Benign I, and excluding the inquiry in Pathogenesis Benign II.

Pathogenesis scale variables add an additional amount of variance that ranges from .02 to .15, averaging .09 across three equations, but do not reach a significant level. No Pathogenesis scale variables are entered into the one significant SMR equation. The trends in the first order correlations with Accurate Empathy are not clear for Pathogenesis Benign I and II. The two negative first order correlations for Pathogenesis Total I (-.10, -.29) suggest that the greater the pathogenic interpersonal attitude, the lower the level of Accurate Empathy. Pathogenesis does not appear to significantly relate to Accurate Empathy. Hypothesis 3 is not supported.

Stepwise Multiple Regression of Nonpossessive Warmth on Predictors

The results of the SMR of Nonpossessive Warmth on the predictors is shown in Table IX. Four out of six SMR equations account for a significant amount of the variance of Nonpossessive Warmth: Middle Peak, Late

Table IX. Nonpossessive Warmth variance accounted for by Stepwise Multiple Regression

MIDDLE MEAN

Step	Variable	R^2 change	Simple r
I	Pine R.O.	.22*	.47+
II	# Sessions	.11	-.41
III	Ther. Sex	.07	-.11
IV	Path. Ben. I	.04	.19
V	Path. Tot. I	.09	.18

Sum R^2 = .53, Overall F = 2.88
Adj R^2 = .39

MIDDLE PEAK

Step	Variable	R^2 change	Simple r
I	Ther. Exp. I	.27*	.51+
II	Pine R.O.	.21*	.51+
III	Pine Lev. I	.10	-.22
IV	Pine Lev. III	.20*	.36
V	Ther. Sex	.02	-.02

Sum R^2_2 = .80, Overall F = 10.69@
Adj R^2 = .74

MIDDLE BASAL

Step	Variable	R^2 change	Simple r
I	Ther. Exp. I	.06	-.25
II	Ther. Exp. II	.05	-.06
III	# Sessions	.03	-.22
IV	Ther. Sex	.04	-.01
V	Pine Lev. I	.07	-.16

Sum R^2 = .25, Overall F = 0.86
Adj R^2 = .00

LATE MEAN

Step	Variable	R^2 change	Simple r
I	Dyad Sex	.28*	.53+
II	Pine Lev. I	.12	-.20
III	Ther. Exp. I	.02	-.07
IV	Pine Lev. III	.06	-.05
V	Pine R.O.	.16*	-.09

Sum R^2 = .64, Overall F = 4.69@
Adj R^2 = .54

LATE PEAK

Step	Variable	R^2 change	Simple r
I	Pine Lev. I	.17	-.42
II	# Sessions	.17	-.33
III	Ther. Sex	.16*	.01
IV	Ther. Exp. II	.08	.15
V	Ther. Exp. I	.03	.05

Sum R^2 = .61, Overall F = 4.08@
Adj R^2 = .50

LATE BASAL

Step	Variable	R^2 change	Simple r
I	Dyad Sex	.18	.43
II	Pine Lev. III	.13	.14
III	Ther. Exp. I	.07	-.03
IV	# Sessions	.12	.30
V	Pine R.O.	.07	-.19

Sum R^2 = .57, Overall F = 3.44@
Adj R^2 = .41

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* Indicates that R^2 change is significant at the .05 level. See Appendix H for explanation of this and the F tests below.

+ Indicates that the simple (first order) r is significant at the .05 level.

@ Indicates that the Overall F is significant at the .05 level.

d See Appendix H for Adjusted R^2 Formula.

Mean, Late Peak, and Late Basal. The trends within the equations can be examined, keeping in mind that two-thirds of the SMR equations are significant. The significance of the SMR equations suggests that in-therapy behavior is indeed predictable from participant characteristics, when multiple, rather than single, predictors are utilized.

> Hypothesis 4 - Total amount of drive content will significantly relate to mean, peak, and basal levels of Nonpossessive Warmth.

Pine Total refers to the total amount of drive content. It does not appear in any SMR equation. The fact that it does not appear indicates that Pine Total is redundant with the previously entered predictors, such as Pine Level III (see Appendix IV), and adds no unique variance. Therefore, Hypothesis 4 receives no support in these data. Total amount of drive content is not related to Nonpossessive Warmth.

> Hypothesis 5 - Directness of drive expression will significantly relate to mean, peak, and basal levels of Nonpossessive Warmth.

Variables related to directness of drive expression include Pine Rank Order (low to high modulation of impulse expression), Pine Level I (% direct/unsocialized), Pine Level II (% direct/socialized), and Pine Level III (% indirect/weak). Pine variables related to directness of drive expression make a contribution of additional variance that ranges from .06 to .22, and averages .14. Directness of drive expression is present in all four significant SMR equations, and contributes a significant amount of additional variance in Middle Mean (R^2 change = .22) and Middle Peak (R^2 change = .21) sessions, with the latter being a significant SMR equation overall. Directness of drive expression is significantly related to level of Nonpossessive Warmth. Hypothesis 5 is fully supported.

In middle sessions, Pine Rank Order correlates positively with Mean (r = .47) and Peak (r = .51) levels of Nonpossessive Warmth. The higher the Pine Rank Order, the higher the level of Nonpossessive Warmth. This suggests that the more modulated the expression of drive, the higher the level of Nonpossessive Warmth in middle sessions. Pine Level I in middle sessions is correlated negatively with Peak (r = -.22) and Basal (r = -.16) levels of Nonpossessive Warmth. Pine Level III in middle sessions contributes a significant amount of additional variance in Middle Peak (R^2 change = .20) and is correlated positively (r = .36) with the criterion. Thus, two additional variables related to directness of drive expression also suggest, by the direction of their first-order correlations, that in middle sessions, the more modulated the expression of drive, the higher the level of Nonpossessive Warmth.

The trends in the direction of first order relationships is not as clear in late sessions. Pine Rank Order correlates negatively with Mean (r = -.09) and Basal (r = -.19) levels of Nonpossessive Warmth, the reverse of the direction in middle session. Pine Level I remains negatively correlated to Mean (r = -.20) and Peak (r = -.42) levels of Nonpossessive Warmth. Pine Level III is negatively related to Mean (r = -.05) and positively related to Basal (r = .14) levels. Thus, for late sessions, the direction of the relationship between drive expression and Nonpossessive Warmth is not clear. For middle sessions, the more modulated the expression of drive, the higher the level of Nonpossessive Warmth. The relationship is also stronger in middle than in late sessions, judging from the two significant amounts

of additional variance in middle sessions, compared to none in late sessions.

Hypothesis 6 - Scores on the Pathogenesis scale will significantly relate to mean, peak, and basal levels of Nonpossessive Warmth.

Variables consisting of scores from the Pathogenesis scale include Pathogenesis Total I (# of pathogenic stories divided by # scorable stories including inquiry), Pathogenesis Total II (same as I but excluding inquiry), Pathogenesis Benign I (# benign stories including inquiry), and Pathogenesis Benign II (# benign stories excluding inquiry). They do not appear in any significant SMR equations, nor do they ever make a significant contribution of additional variance. The direction of the first order correlation is not easily interpretable. Pathogenesis scale scores do not appear to be significantly related to level of Nonpossessive Warmth. Hypothesis 6 is not supported.

Stepwise Multiple Regression of Specificity on Predictors

The results of the SMR of Specificity on the predictors is shown in Table X. Using a combination of demographic and personality variables, three out of six SMR equations account for a significant amount of the variance: Middle Peak, Late Mean, and Late Basal. The trends within the equations can be examined, keeping in mind that half the equations are significant. Once again, when one contrasts the significance of the SMR approach with the general non-significance of first-order correlations between predictors and criteria, in-therapy behavior is more readily predictable from multiple, rather than single characteristics of the participants.

Table X. Specificity variance accounted for by Stepwise Mulitple Regression

MIDDLE MEAN

Step	Variable	R^2 change	Simple r
I	Pine Total	.16	-.40
II	Pine R.O.	.08	-.23
III	Pine Lev. III	.06	.16
IV	Pine Lev. II	.06	-.18
V	Ther. Exp. II	.13	.03

Sum R^2 = .48, Overall F = 2.43
Adj R^{2d} = .35

MIDDLE BASAL

Step	Variable	R^2 change	Simple r
I	Pine Lev. II	.21*	.46+
II	Dyad Sex	.03	.03
III	Path. Tot. II	.04	-.30
IV	Path. Tot. I	.06	-.05
V	Pine R.O.	.03	-.05

Sum R^2 = .61, Overall F = 1.58
Adj R^2 = .20

MIDDLE PEAK

Step	Variable	R^2 change	Simple r
I	Pine Total	.35*	-.60+
II	Pine Lev. I	.11	.38
III	Ther. Sex	.12	-.30
IV	Ther. Exp. I	.07	.15
V	Ther. Exp. II	.07	.04

Sum R^2 = .72, Overall F = 6.55@
Adj R^2 = .61

Table X (cont'd)

LATE MEAN

Step	Variable	R^2 change	Simple r
I	Path. Ben. I	.14	-.38
II	Ther. Exp. II	.13	-.31
III	Path. Tot. I	.09	.16
IV	Dyad Sex	.06	-.07
V	Pine R.O.	.14	.28

Sum R^2 = .56, Overall F = 3.34@
Adj R^2 = .43

LATE BASAL

Step	Variable	R^2 change	Simple r
I	Ther. Exp. II	.15	-.39
II	Pine Total	.13	.19
III	Path. Ben. I	.26*	-.30
IV	Path. Tot. II	.06	-.02
V	# Sessions	.06	.10

Sum R^2 = .66, Overall F = 5.03@
Adj R^2 = .56

LATE PEAK

Step	Variable	R^2 change	Simple r
I	Pine Total	.25*	-.50+
II	Ther. Exp. I	.13	.43
III	Path. Ben. II	.04	-.38
IV	Path. Tot. I	.08	.00
V	Pine R.O.	.02	.18

Sum R^2 = .53, Overall F = 2.92
Adj R^2 = .35

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* Indicates that R^2 change is significant at the .05 level. See Appendix H for explanation of this and the F tests below.

+ Indicates that the simple (first order) r is significant at the .05 level.

@ Indicates that the Overall F is significant at the .05 level.

d See Appendix H for Adjusted R^2 formula.

Hypothesis 7 - Total amount of drive content will significantly relate to mean, basal, and peak levels of Specificity.

Pine Total refers to the total amount of drive content. The contribution of Pine Total ranges from .13 to .35 additional amount of variance, and averages .22. It appears in two out of three significant SMR equations, and adds a significant amount of additional variance twice. Total amount of drive content, therefore, is significantly related to level of Specificity. Hypothesis 7 is fully supported. In three out of four equations in which it appears, Pine Total correlates negatively with level of Specificity. This suggest that the greater the total amount of drive content, the lower the level of Specificity.

Hypothesis 8 - Directness of drive expression will significantly relate to mean, basal, and peak level of Specificity.

Pine variables related to directness of drive expression include Pine Level I (direct/unsocialized), Pine Level II (direct/socialized), Pine Level III (indirect/weak), and Pine Rank Order (ranging from unmodulated to well-modulated impulse expression). Pine variables related to directness of drive expression appear in five out of six SMR equations, and in two of the three significant SMR equations. Pine variables related to directness of impulse expression make a contribution of additional variance that ranges from .02 to .21, and averages .08. Only once does such a variable make a significant contribution of variance; Pine Level II ads .21 unique variance to Middle Basal. Pine variables related to directness of drive expression may have a small but significant relationship to level of Specificity. Hypothesis 8 is partially supported.

In middle sessions, the only clear direction of first order correlations exists for Pine Rank Order, which is negatively related to Specificity in three out of three cases. In late sessions, both Pine Level III and Pine Rank Order are positively related to Specificity in all cases. Thus, in middle sessions, the more modulated the expression of drive, the lower the level of Specificity; while in late sessions, the less modulated the expression of drive, the lower the level of Specificity.

Hypothesis 9 - Scores on the Pathogenesis scale will significantly relate to mean, basal, and peak levels of Specificity.

Pathogenesis scale scores include Pathogenesis Total I (the number of pathogenic stories divided by total number of scorable stories, with the inquiry), Pathogenesis Total II (same as Path. Tot. I but excluding inquiry), Pathogenesis Benign II (number of benign stories including inquiry), and Pathogenesis Benign II (number of benign stories excluding inquiry). Pathogenesis scale scores appear in four out of six SMR equations, and in two out of three significant SMR equations. Pathogenesis scale scores contribute an amount of additional variance ranging from .04 to .26, and that averages .10. Pathogenesis scale scores add a significant amount of variance once. When one considers Pathogenesis Total I, Total II, and Benign II only, the average contribution of additional variance is .06, and the trends in the direction of the first order correlations are not clear. Clearly these variables are not significantly related to level of Specificity. However, in three out of six cases, these Pathogenesis scale scores are entered after therapist experience variables. Their contribution in terms of R^2 change is

greater than the square of the first-order correlation in all instances. This implies that the strength of the relationship between Pathogenesis and level of Specificity is attenuated by the interaction of therapist experience variables.

Pathogenesis Benign I is entered in two of the three significant SMR equations, Late Mean and Late Basal. Pathogenesis Benign I contributes .14 additional variance to Late Mean, and .26 additional variance to Late Basal, which is a significant amount of additional variance. In Late Basal, Pathogenesis Benign I shows the same pattern of suppression of the relationship between Pathogenesis scale scores and level of Specificity by Therapist Experience II as described above. Here again the R^2 change exceeds the square of the first-order correlation.

The direction of the first-order correlations is negative in Late Mean and Late Basal for Pathogenesis Benign I, which means that the higher the number of benign stories, the lower the level of Specificity in late sessions. Thus, one Pathogenesis scale score may have a small but significant relationship to level of Specificity. Hypothesis 9 is partially supported. The relationship is stronger in late sessions. The relationship between Pathogenesis and Specificity may be attenuated by therapist experience variables.

Validity of Pathogenesis scores including vs. excluding inquiry

With respect to the issue of the validity of Pathogenesis ratings including vs. excluding inquiry, scores including the inquiry are entered three times in significant SMR equations across all criteria, while scores excluding the inquiry are entered only once. Considering all SMR

equations regardless of significance, scores including inquiry show up twelve times, while scores excluding inquiry are entered three time. This suggests that giving the TAT with an inquiry is more helpful than omitting inquiry, when one is trying to discriminate between groups of therapists on the dimensions of Accurate Empathy, Nonpossessive Warmth, and Specificity.

As noted earlier, one major difference between the previous studies using the Pathogenesis scale and the present one is the use in the study of 11, rather than 20 TAT cards. An issued worth exploring in research would be to find out if the longer verson of the TAT, with its greater sample of fantasy behavior, generates higher validity correlations than the shorter version of the TAT, as it appears to have done in the Vandenbos study (1969).

Demographic variables

The demographic variables include Number of Sessions, Therapist Sex, Client Sex, Dyad Sex (same vs. opposite), Therapist Experience I (senior staff vs. senior staff and practicum students), and Therapist Experience II (intern vs. senior staff and practicum students). With respect to Accurate Empathy, none of these variables are significantly related. Their importance rests in the fact that after they are controlled for, the unique contribution of personality variables is enhanced. After Therapist Sex and Therapist Experience II have been controlled for in Middle Mean (see Table VIII), the contribution of additional variance made by Pathogenesis Total I (R^2 change = .12) exceeds the square of its first order correlation (r = =.10). This suggests that demographic variables suppress the strength of the relationship between

personality and Accurate Empathy. On the other hand, in Middle Basal, when Pine Total is controlled for, the contribution of variance by Client Sex (R^2 change = .14) is enhanced (r = .07). Thus, there is mutual suppression between demographic and personality variables, with respect to their relationship to Accurate Empathy.

The pattern of mutual suppression obtains to Nonpossessive Warmth also which can be seen from inspection of Table IX. Number of Sessions does not relate significantly to Nonpossessive Warmth. Therapist experience variables may have a small, significant relationship to Nonpossessive Warmth, though the direction of the relationship is not clear. Of the variables related to sex of the participants, Dyad Sex may have a small but significnat relationship to level of Nonpossessive Warmth. It is entered in two significant SMR equations, and makes a significant contribution to Late Mean. The direction of first order correlations suggest that towards the end of therapy, opposit sex dyads have a higher level of Nonpossessive Warmth than same sex dyads.

Number of Sessions and variables related to sex of participant do not relate significantly to level of Specificity, nor does Therapist Experience I. However, Therapist Experience II appears in all three significant SMR equations, though the direction of the relationship is not clear. Therapist Experience II is significantly related to level of Specificity. Again, inspection of Table X reveals the pattern of mutual suppression between demographic variables and personality variables with respect to their relationship to Specificity.

CHAPTER VI

DISCUSSION

First order correlations vs. SMR and prediction of criteria

Less than 3% of the 270 correlations between predictors and criteria are significant. Clearly, with the measures and sample of the present study, one cannot predict in-therapy behavior by taking demographic or personality variables one at a time. The lack of strong first order correlations suggests that optimal in-therapy behavior is achieved in different ways by different types of personality organizations (Allen, 1967). As Kiesler puts it (1971), the uniformity of the therapist is a myth.

Gardner (1964) notes the lack of linear relationships between personality variables and the therapeutic relationship, and suggests that curvilinear relationships would fit the date better. Neither simple correlations nor SMR can identify significant curvilinear relationships. Therefore, it is recommended that future research should use statistics like eta squared to explore further the possibility of curvilinear relationships between therapist personality variables and in-therapy behavior.

In contrast to the results of first order correlations, eight out of eighteen, or 44% of the SMR equations are significant. This implies that in-therapy behavior is more readily predictable from multiple than from single characteristics of the participants. As noted earlier, demographic, Pine-related, and Pathogenesis-related variables are independent to one another. When their unique contributions to

the variance of the criteria are added together, they amount to a significant portion. When corrected for inflation by false non-zero correlations, the average adjusted R^2 for each criterion is:

Accurate Empathy	.23
Nonpossessive Warmth	.43
Specificity	.47

The results for Nonpossessive Warmth and Specificity are comparable to any attempt to predict behavior from personality variables. This supports the use of a multivariate approach to the problem of the relationship between behavior and personality in furture research. The SMR format is a flexible tool for incorporating any element of the context of psychotherapy that might effect in-therapy behavior.

Another uniformity myth is indentified by the composition of the SMR equations. Within a given type of in-therapy behavior, different predictors are entered depending on the stage of therapy (middle vs. late), and on the variability (mean, peak, basal). This suggests a radical specificity, rather than uniformity of in-therapy behavior. The same is suggested when one notes that different sets of predictors are selected for different types of in-therapy behavior. The differences across SMR equations suggests that each facet of in-therapy behavior comes about in different ways, in terms of antecedent variables.

Such results should put to an end attempts to identify the optimal therapist, or the optimal in-therapy behavior. Future research in the area of process and personality of participants must ake specific questions that are framed in a multivariate manner. The precise pattern of results in the present study will not be replicated in a different sample. However, it is likely that the determinants of

different aspects of the therapy process will be equally different depending on the aspect in question. This can be confirmed by further studies.

Tests of Hypotheses

Hypothesis - Total amount of drive content will significantly relate to mean, peak, and basal levels of Accurate Empathy.

The results suggest that the greater the total amount of drive, the higher the basal level of Accurate Empathy in middle sessions. The fact that this relationship is significant only once makes one cautious about the level of support for the hypothesis.

Truax and Carkhuff (1967) define Accurate Empathy as it is used in the study: the ability to perceive and communicate accurately and sensitively the patient's feelings, experiences and their meaning. The major construct for understanding the means by which empathy is achieved is that of adaptive regression (Bachrach, 1968). Empathy is viewed as a two stage process. The first stage involves intentionally relaxing defense secondary process in order to freely generate hypotheses about the patient's behavior. This regression is used to form a trial identification (Greenson, 1967; Fliess, 1942); and to sustain the affective reaction to the patient's behavior (Fromm-Reichmann, 1050). In the second stage, secondary process and ego controls are restored to evaluate the hypothese generated by the trial identification and awareness of one's affective responses.

The relationship between total amount of drive content and level of Accurate Empathy is relevant to both stages of adaptive regression. It was though that the therapist who is able to allow the free play of associations and fantasies, and who was able to step back from these

associations and evaluate them, would be likely to differ in amount of drive content on the TAT from the therapist who lacked this freedom by virtue of too much or too little ego control.

The results of the present study suggest that therapists with a high amount of drive content are more empathic than therapists with a low amount of drive content. Pine (1960) finds that subjects with a high amount of drive content are more expressive than subjects with a low amount of drive content. The link between these two findings is found by analysis of the behaviors associated with high levels of Accurate Empathy (Wenegrat, 1974) which concludes that therapists who label client feelings in an assertively way get the highest Accurate Empathy ratings. Perhaps the more expressive the therapist, the more likely are they to actively deal with the affect of the client. Expressive therapists who are more accepting of their own impulses may be more likely to deal directly with the impulses of the client than inhibited therapists who are less accepting of their own impulses. To study this further, measures of therapist ego control could be related in future studies to process measures emphasizing stylistic variables such as freshness of language or intonational pattern.

As noted earlier, the data suggest that some therapists are able to attain high levels of Accurate Empathy in ways not predicted by the model. This means that other models must be developed to explain the diverse ways that different therapists can achieve optimal in-therapy behavior (Allen, 1967). One way could be though training. Truax and Mitchell (1971) state that 100 hours of training can significantly raise one's level of Accurate Empathy, but this training

capitalizes on early childhood experiences. Future research can be directed at separating the components of professional training and character structure. This would have great value in both theoretical and applied contexts.

Hypothesis 2--Directness of drive expression will significantly relate to mean, peak, and basal levels of Accurate Empathy.

The results of the present study suggest that the less modulated the expression of drive, the lower the level of Accurate Empathy. The convergence of these results with Bachrach (1968) is noteworthy. If direct, unsocialized drive expression can be taken as analogous to defense demand, then both studies demonstrate a negative relationship between unmodulated drive expression and empathy. The reason for this is suggested by the adaptive regression model. Empathy calls for both the relaxation and the renewal of ego controls. A therapist with an excess of unmodulated impulse is likely to rigidly refrain from relaxing controls and avoid empathy; or to abandon controls, identify with the patient, and not reinstitute ego controls sufficiently for accuracy of empathy.

The appropriateness of the adaptive regression model is further supported by the present results when one considers total amount of drive and directness of drive expression. High levels of Accurate Empathy are associated with high total amount of drive as well as with the absence of unmodulated drive expression. This suggests that the empathic therapist has access to impulse, which is thought to facilitate the stage of empathy that calls for relaxation of control. The empathic therapist also has control of impulse expression, which is thought to facilitate the stage of empathy that calls for renewal of control.

On the other hand, the results of the present study are at variance with the literature previously reviewed in the following respect. Bachrach (1968) finds adaptive regression (defense effectiveness X defense demand ÷ total number of primary process responses) and defense effectiveness to be significantly and positively related to empathy. The Pine variable roughly analogous to adaptive regression is Pine Rank Order, which ranges from unmodulated (High % Level I and Low % Level III) to well-modulated (Low % Level I and High % Level III) drive expression. Pine Rank Order does not significantly relate to Accurate Empathy in the present study. Furthermore, the negative direction of the first order correlations is the reverse of Bachrach's results. The meaning of the difference in results are not clear, due to differences in the samples, predictors, and criteria of the two studies. It is suggested that future studies strive for better replication, or vary at most one characteristic, in order to be relevant to previous studies.

Theoretically speaking, the results of the present study are suggestive but not conclusive. They suggest that the more insufficient the ego control (direct/unsocialized drive content) the lower the basal level of Accurate Empathy. However, the partial, rather than full, support of such relationships likely reflects the crude personality theories that are being used (Korner, 1965). Whitely (1966) states that the antecedents and nature of the quality of adaptive ego functioning is one of the least understood aspects of ego psychology. The present study concentrates on the freedom to use both primary and secondary processes. Another relevant dimension would have been freedom from conflict (Whitely, 1966). A number of studies show that therapist behavior is to some extent related to the patient bringing

up material about which the therapist is conflicted (Bandura, Lipsher, and Miller, 1960; Cutler, 1958; Rigler, 1957; Munson, 1960). The quality of ego functioning may vary as a function of the extent to which the therapist is in conflict at a particular point in therapy. Future studies are likely to produce more definitive results if the dimension of conflict is taken into account. The therapist's projective responses could be classified by area of conflict, as could the patient's behavior, which would enable one to examine the role of the therapist's ego functions with greater specificity in future studies.

> Hypothesis 3--Scores on the Pathogenesis scale will significantly relate to mean, peak, and basal levels of Accurate Empathy.

The results suggest that there is no significant relationship between Pathogenesis scale scores and level of Accurate Empathy. It has often been stated, and demonstrated in the research, that the therapist's attitude of respect, and his altruistic sense that he has the best interests of the patient at heart, are necessary for effective psychotherapy (Freud, 1912; Fromm-Reichmann, 1950; Rogers, 1957; Snyder and Snyder, 1961; Strupp, 1973). In particular, the Vandenbos and Karon study (1971) demonstrates that therapists with low Pathogenesis scores have more success with schizophrenic patients than therapists with high Pathogenesis scores. Six other studies with the Pathogenesis scale show that it can successfully differentiate between psychologically benign and destructive individuals (Meyer and Karon, 1967; Mitchell, 1968; Mitchell, 1969; Mitchell, 1971; Melnick and Hurley, 1969; Nichols, 1970; Vandenbos and Karon, 1971). Both Pathogenesis and Accurate Empathy are well validated scales.

The lack of significant results in the present study can be understood in a number of ways. As was pointed out earlier, Gardner (1964)

states that the relationship between personality variables and therapeutic relationship variables may well be curvilinear, which calls for the use of eta squared.

Another reason could be that Pathogenesis scores are representational for some therapists, and therefore positively related to behavior; and compensational for other therapists, and therefore negatively related to behavior (Dana, 1972). This in turn would depend on defense, anxiety, and expectations associated with dependent interpersonal relationships (Zubin, Eron, Schumber, 1965; Rosenwald, 1972). The TAT alone does not provide sufficient information about the characterological context of Pathogenesis scores. Batteries of psychological tests are called for to make such assessments.

Perhaps Accurate Empathy is not a sufficiently direct measure of the extent to which the therapist has the best interests of the patient at heart. To continue the study of the relationship of Pathogenesis to in-therapy behavior, a more relevant criterion might be the quality of the working alliance, or the amount of hostile behavior by the therapist (Mueller and Dilling, 1968).

Hypothesis 4 - Total amount of drive content will significantly relate to mean, peak, and basal levels of Nonpossessive Warmth.

The present study suggest that total amount of drive content is not significantly related to level of Nonpossessive Warmth. Curvilinear relationships may exist between total amount of drive content and level of Nonpossessive Warmth, as Gardner (1964) suggests, which bears investigation in subsequent studies. On the other hand, Abeles (1967) finds a linear, negative relationship between amount of hostile content on the HIT and degree of liking for clients. Such a result argues strongly for modifying the Pine summary scores so that aggressive and libidinal

content appear separately as well as together. Nonpossessive Warmth might relate strongly, and in a linear fashion, to either aggressive or libidinal drive content, when examined separately.

> Hypothesis 5--Directness of drive expression will significantly relate to mean, peak, and basal levels of Nonpossessive Warmth.

The present study strongly suggests that directness of drive expression significantly relates to level of Nonpossessive Warmth. The trends in the first order correlations indicate that for the middle sessions, the more modulated the expression of drive, the higher the level of Nonpossessive Warmth. The trends are not clear for late sessions, nor are the relationships as strong. These results agree with Holt and Luborsky (1958) who investigated the correlates of supervisor-rated quality of therapeutic relationship in psychiatric residents. They conclude that appropriate ego controls are associated with good therapeutic relationships, while over- or under-control is associated with poor therapeutic relationships. Their conclusions are based on non-significant trends, whereas the present study strongly supports this notion.

The direct relationship between modulation of drive expression and Nonpossessive Warmth can be understood in a number of ways. One must keep in mind that the scale of Nonpossessive Warmth contains two major dimensions: warmth, which refers to non-evaluativeness, acceptance, concern, and caring; and nonpossessiveness, which refers to a clear sense of boundaries between the therapist and patient such that the therapist does not view the client's behavior as a reflection on himself (the therapist). Previous research suggests that when the client behaves in a way that is conflictful for the therapist, the facilitativeness of the responses will suffer (Cutler, 1958; Rigler, 1957; Munson, 1960). One

can speculate that modulated drive expression reflects a freedom from conflict, while unmodulated drive expression reflects unresolved conflicts. Thus, the therapists with modulated drive expression, who are relatively free of conflict, will be less likely than therapists with unmodulated drive expression to encounter client behavior which they find so distressing that it could manifest itself in overt dislike and negative evaluation of the patient. In addition, the therapist with modulated drive expression who does encounter anxiety-provoking client behavior is less likely to act that out in therapy than the therapist with unmodulated drive expression.

To pinpoint this process by research, content will have to received more attention in future studies. One must indentify content-related conflicts in personality tests of therapists, and track the variation in therapist behavior as a function of content in the interveiw. In this way one can test directly the hypothesis relating higher levels of warmth to freedom from conflict.

With respect to nonpossessiveness and maintenance of a sense of individual boundaries, much theory has been previously cited which states that unmet needs disrupt the course of therapy (Freud, 1912; Greenson, 1967; Chessick, 1969). This might be particularly true in the realm of nonpossessiveness. The therapist who experiences chronic frustration in his personal like is likely to turn to his clients for sources of direct and vicarious gratification. When the client becomes instrumental to the therapist's self-esteem and satisfaction, the boundary between therapist and client is blurred, and the therapist becomes overly involved in the client's behavior. The therapist who lives a sufficiently gratifying life outside of therapy does not need to seek inappropriate gratification from the client, and is likely to

maintain the boundaries and the distance necessary for the non-possessiveness.

One can speculate that the degree to which the therapist's needs are met is reflected in the dimension of modulation of drive expression. Excessive frustration may lead to unmodulated impulse expression as well as possessiveness in therapy. Adequate extra-therapy gratification may be associated with more modulated impulse expression which facilitates nonpossessiveness because the client is not viewed as an instrument for gratification. Thus the direct relationship between modulation of impluse and Nonpossessive Warmth can be explained by the hypothetical association between poor controls and unmet needs.

Freud (1912) warns the young, overzealous therapist to refrain from pushing the patient too hard in the desire to acheive a dramatic cure that is in the therapist's, rather than the patient's interests. Freud pointed out that such a need on the therapist's part would cause him to overestimate the capacity of the patient and interfere with the course of therapy. Fromm-Reichmann (1950) asserts that the therapist who does not respect himself is not likely to respect others, including the patient. On the other hand, the insecure therapist tends to try to get the patient to admire and depend on him, which often alienates the patient, or succeeds to the detriment of transference resolutions.

Future research in this area is complicated by the insufficient knowledge concerning the relationship of needs, projective test responses, and overt behavior (Korner, 1965). It is widely accepted

that needs interact with socially learned expectations, and with characterologically based defenses and anxieties (Rosenwald, 1972; Zubin, Eron, Schumer, 1965). In this area, further research must be accompanied by further development of personality theory that unravels these complex interactions (Korner, 1965).

> Hypothesis 6--Scores on the Pathogenesis scale will signi ficantly relate to mean, peak, and basal levels of Non-possessive Warmth.

The data from the present study suggest that Pathogenesis does not relate significantly to level of Nonpossessive Warmth. The lack of significant results is puzzling. A great deal of theory (Freud, 1912; Fromm-Reichmann, 1950; Greenson, 1967; and Chessick, 1969) and research (Abeles, 1967; Mills and Abeles, 1965; Mueller and Dilling, 1968; Whiteley, et al., 1967) suggests that there is a significant relationship between the attitude of the therapist and his behavior in therapy. The work with the Pathogenesis scale demonstrates that this particular interpersonal attitude (the extent to which a dependent person's needs are taken into account by a nurturant person) is significantly related to psychologically destructive behavior in therapists (Vandenbos and Karon, 1971), and in parents (Meyer and Karon, 1967; Mitchell, 1968; Mitchell, 1969; Mitchell, 1971; Melnick and Hurley, 1969; Nichols, 1970). Perhaps criteria that are conceptually closer to Pathogenesis, such as approach to client dependency, or the quality of the working alliance, would show stronger relationships to Pathogenesis than Nonpossessive Warmth in future research.

The weakness of current personality theory lies at the root of the failure to specify the relationship between Pathogenesis and

overt behavior (Korner, 1965). When the issue of the interaction of responses on a projective test with needs, expectations, defenses and anxiety is resolved, one might be able to give therapists a battery of personality tests to clarify the correlates of Pathogensis in therapy. Of particular interest is whether high levels of Pathogenesis serve a representational or compensational function (Dana, 1972), which affects the direction of the relationship between fantasy and behavior. If Pathogenesis serves a representational function for some therapists and a compensational function for others, then when one averages together the positive and negative correlations, the overall correlations would approach zero. Further research can shed light on these issues.

> Hypothesis 7--Total amount of drive content will significantly relate to mean, basal, and peak levels of Specificity.

The results of the present study suggest that the total amount of drive content is significantly related to level of Specificity. The direction of the first order correlations suggests that the higher the total amount of drive content, the lower the level of Specificity. Specificity refers to the degree to which the therapist's statement limits the range of the client's possible responses (Siegman and Pope, 1962). Its importance lies in the contention that the less the therapist's statements constrain the client's responses, the greater will be the influence of the client's internal experience of affect, defense, and conflict (Bordin, 1955). A review of the research, done mostly with therapy analogues, states that low Specificity is associated with increased verbal productivity that deals with psychologically meaningful material (Kiesler, 1973).

The negative relationship between total amount of drive content and level of Specificity supports the contention that the degree to which the therapist structures the process is to some extent related to personality variables. Pine (1960) finds that high total amount of drive content is associated with observer descriptions of expressiveness and emotionality, while low total amount of drive content is associated with observer-rated inhibition and rigidity. From Pine's results, one would expect the therapist with high total amount of drive to be very active in the interview and to "put a lot of himself in", which would introduce structure and high levels of Specificity.

On the contrary, the present study finds that the higher the total amount of drive, the more veiled the therapist, and the less structured the interview. Future research could measure activity (% of time therapist speaks) and emotionality (self-report or a relevant physiological index) more directly and examine the validity of predictions from the early Pine study (1960). Rigler's (1957) work bears integration into future studies. When investigating the correlates of Specificity, if possible one should take into account client variables such as resistance and diagnosis, as well as therapist variables such as area of conflict, which Rigler finds to be related to Specificity.

Hypothesis 8--Directness of drive expression will significantly relate to mean, basal, and peak levels of Specificity.

The results of the present study suggest that directness of drive expression may have a small but significant relationship to level of Specificity. The trends in the direction of the first order

correlations suggest that in middle sessions, the more modulated the expression of drive, the lower the level of Specificity; while in late sessions, the less modulated the expression of drive, the lower the level of Specificity. Therapists with more modulated expression of drive tend to have the lower levels of Specificity in middle sessions and the higher levels of Specificity in late sessions. Therapists with less modulated expression of drive tend to have the higher levels of Specificity in middle sessions and the lower levels of Specificity in late sessions.

The meaning of the interaction with the stage of therapy is not clear. One wonders if this finding reflects two different modes of helping clients deal with separation and termination. Further research needs to be done on the variety of termination experiences, on the kind of working through in which the client must engage, and on how the therapist can be helpful at this point.

The results are not consistent with Pine's (1960) earlier work. Modulated drive expression is associated with a balance between expressiveness and control (Pine, 1960). It is not clear why therapists with modulated drive expression should have a high level of Specificity, because they should be able to "keep themselves out" of the therapy and leave it unstructured. Nor is it clear why therapists with unmodulated drive expression should ever have a low level of Specificity. One possible explanation is that therapists who respond unconventionally in that TAT situation with direct/unsocialized drive expression may be likely to respond unconventionally in the therapy situation and be very ambiguous (Freed, personal communication).

In another divergent finding, Pine Level II, percent of direct/socialized drive expression, relates significantly to level of Specificity, which is the second time in the present study that Pine Level II has been a significant predictor. In the Pine (1960) study, percent of direct/socialized drive expression never relates significantly to criteria. The nature of the sample of the present study may well have to do with the unexpected findings. Only further research on the correlates of drive modulation in different samples can shed light on such anomalies. For example, high percentages of direct/unsocialized drive in a group of miners and in a group of ministers may differ in meaning. Additional research on the correlates of Specificity should measure the amount of training, the type of training, therapist conflict, and client variables such as resistance and diagnosis, in order to clarify the role of personality variables in this particular sample.

Hypothesis 9 - Scores on the Pathogenesis scale will significantly relate to mean, basal, and peak levels of Specificity.

The results suggest that the number of benign stories may have a small but significant relationship to the level of Specificity. The negative direction of the first order correlations suggests that the higher the number of benign stories, the lower the level of Specificity. In earlier discussions of the results of the Pathogenesis scale, the point was made that criteria more relevant to the theory of Pathogenesis need to be employed in order to assess the role of Pathogenesis in therapy process. Were one to offer Specificity as one such criteria, it would probably have been rejected as being too far removed in theory. However, in practice, Pathogenesis scale

scores are more stongly related to Specificity than to Accurate Empathy or to Nonpossessive Warmth.

The aspect of Pathogenesis scale scores that predicts level of Specificity is the number of benign stories, rather than the Pathogenesis Total Score itself. Evidently, the strength of benign interpersonal attitudes is more relevant to Specificity than the strength of pathogenic interpersonal attitudes. This suggests that the dimension of psychological destructiveness is less crucial than the dimension of psychological benevolence and altruism. Therapists with more benign interpersonal attitudes tend to have a lower level of Specificity than therapists with less benign interpersonal attitudes.

A benign story on the TAT means that the nurturant figure places his or her own needs in the background and gives precedence to the needs of the dependent figure (Karon and Vandenbos, 1975). On the other hand, Bordin (1974) describes the ambiguous, low Specificity therapeutic stance as "self effacing". One can speculate that the tendency to allow the other person to be more prominent in interpersonal relationships manifests itself both in the TAT and in the therapeutic situation.

Specificity offers the only opportunity in the study to examine the interaction between Pine and Pathogenesis variables that are both significantly related to in-therapy behavior when taken by themselves. In Late Mean Specificity, Pine Rank Order is entered after Pathogenesis variables, and its contribution (R^2 change) exceeds the square of its first order correlation. This indicates suppression of the relationship between Pine Rank

Order and Level of Specificity by the Pathogenesis variables. On the other hand, in Late Basal Specificity, the pattern of suppression is reversed, and the contribution of Pathogenesis Benign I is enhanced when Pine Total is controlled. This pattern of mutual suppression makes it clear that combinations of personality variables should be utilized when predicting in-therapy behavior from characteristics of the participants in future research. In this particular instance, one sees that drive modulation as well as interpersonal attitudes interact in complex ways to predict level of Specificity.

Demographic variables

The major implication of the findings concerning demographic variables has to do with their importance for future study of the antecedents of in-therapy behavior. Previous research suggest the following: level of therapist experience mediates the relationship between liking and Accurate Empathy (Mullen and Abeles, 1971), and between needs and Nonpossessive Warmth (Mills and Abeles, 1965); sex of therapist mediates the relationship between personality characteristics and rated competence (McClain, 1968); and duration of therapy effects the relationship between process and outcome (Crowder, 1972; Schauble and Pierce, 1974).

The results of the present study reveal that the importance of the demographic variables depends on the criterion being studied. For Accurate Empathy, level of therapist experience appears to be the one most important demographic variable, though it is not significant. For Nonpossessive Warmth, sex of dyad and level of therapist experience have the strongest relationship to the criterion.

For Specificity, only level of therapist experience affects the in-therapy behavior.

The sample of the present study is too small to enable one to infer the manner in which the demographic variables interact with personality variables to predict the criteria. However, the relationship to the citeria, though small, may be significant, especially in the case of level of therapist experience. The affect on the relationship between personality variables and in-therapy behavior is that of mutual suppression. This can be seen by the many times that the contribution of personality variables to predicting criterion variance is enhanced when demographic variables are controlled for, and the equal number of times that the contribution of demographic variables is enhanced when personality variables are controlled for. The personality variables are stronger predictors of in-therapy behavior than the demographic variables, but the influence of the demographic variables should be taken into account in future research. Special attention should be given to amount of therapist experience, but also to the kind of experience in terms of the nature of training, as noted earlier.

CHAPTER VII

SUMMARY AND CONCLUSIONS

The purpose of the present study is to investigate the relationship of therapist personality variables to therapist behavior in actual psychotherapy cases. The therapist's interpersonal attitudes, and the quality of the therapist's ego functioning, are hypothesized to relate to the way the therapist behaves with the client. Aspects of the therapist's personality are assessed by the TAT, which was completed while the case was in progress. Interpersonal attitudes are measured by the Pathogenesis scale (Meyer and Karon, 1967), which scores the plot of the stories for the extent to which nurturant figures ignore, or take into consideration, the needs of dependent figures. Ego functioning is measured by the Pine scale (Pine, 1960), which is a system for scoring the amount and directness of drive expression in the content of each story. Other predictors include the duration of therapy, the sex of the participants, and the level of experience of the therapists.

The in-therapy behaviors which serve as the criteria are Accurate Empathy (Truax and Carkhuff, 1967), Nonpossessive Warmth (Truax and Carkhuff, 1967) and Specificity (Siegman and Pope, 1962). The therapy sessions are tapes of nineteen clients who sought psychotherapy for interpersonal and emotional problems from the Michigan State University Counseling Center. All clients were screened for their appropriateness for psychotherapy. Each of the nineteen clients was assigned to a different therapist and seen for an average of twelve sessions.

The data is analyzed using first order correlations and stepwise multiple regression of predictors on criteria. Stepwise multiple regression provides a means of selecting the most important predictors. Through the use of semi-partial correlation, stepwise multiple regression enables one to statistically control for the influence of preceding predictors and demonstrate the additional amount of criterion variance accounted for by each predictor (Kerlinger and Pedhazur, 1973).

From the results, it is evident that in-therapy behavior is predictable by multiple, rather than by single, characteristics of the participants. The pattern of correlations strongly suggests that different personalities achieve optimal in-therapy behavior in different ways (Allen, 1964).

The stepwise multiple regression equations suggest that therapists with a high frequency of drive-related content on the TAT tend to have Higher levels of Accurate Empathy than therapists with a low frequency of drive-related content. Therapists with more modulated drive expression tend to have higher levels of Accurate Empathy then therapists with less modulated drive expression. One way to interpret these results is to say that therapists who are expressive but not impulsive are more empathic than therapists who are inhibited and/or impulsive. This supports the adpative regression model of empathy that emphasizes the ability to relax, and then to resume, ego control. Pathogenesis is not significantly related to Accurate Empathy.

With respect to Nonpossessive Warmth, the more modulated the expression of drive, the higher the level of Nonpossessive Warmth. It is thought that modulated impulse expression is associated with freedom

from conflict that promotes non-evaluativeness, and associated with lack of frustration that promotes nonpossessiveness. Neither total amount of drive-related content nor Pathogenesis are significantly related to Nonpossessive Warmth.

Therapists with a high frequency of drive-related content tent to have lower levels of Specificity that therapists with a low frequency of drive-related content. Therapists with more benign interpersonal attitudes tend to have lower levels of Specificity that therapists with less benign interpersonal attitudes. One might speculate that there is a self-effacing character style which manifests itself in allowing the other person to be more prominent both in the TAT stories and in psychotherapy. Directness of drive expression is related to level of Specificity in a difficult to interpret manner that interacts with the state of therapy.

Of the three kinds of demographic predictors in the present study (duration of therapy, sex of participant, therapist experience), only therapist experience is related in a small but significant way to all three in-therapy behaviors. Therefore, the variable of therapist experience should continue to receive attention in future studies.

Other recommendations for subsequent research include the use of test batteries to predict therapist behavior; studying the ways in which client variables interact with therapist variables; continuing a multivariate approach with larger samples; and developing a more multivariate approach to personality theory to guide such studies.

The final recommendation for future research is that the study of and relationship between personality characteristics of the participants and in-therapy behavior be extended to include outcome of psychotherapy.

In this manner one could determine the way that the "goodness of fit" between the therapist and the client acts to maximize or minimize the helpfulness of therapy. As Bergin and Strupp put it (1972), "Since therapists appear to be differentially successful in their ability to influence patients, the personality characteristics potentiating this influence are urgently in need of more exhaustive study (p.29)."

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APPENDICES

APPENDIX A

CONVENTIONS FOR RATING ACCURATE EMPATHY

1. "uh-huhs" were not rated.

2. If a therapist response followed another therapist response after a silence, two ratings were made.

3. Ratings segments always started and finished with client statements.

4. Appropriate questions of clarification by therapists were standardly rated level 5 (i.e., questions which did not "take away" from client affect).

5. When a question was made which significantly detracted from the client's statement, it was given a rating of Level 1.

6. Therapist responses reflecting strictly factual content or restating client's exact words were given a rating of Level 3.

7. Level 5 rating did not have to include a feeling word if the therapist response summarized the content as well as the meaning of the client statement.

8. Raters went back and listened to tape segments more than once if they felt they could hear more data.

9. A therapist statement interrupted by a client "uh-huh" was rated once as long as the therapist continued a thought (i.e., client said in effect "I'm listening.").

10. When the therapist expressed his feelings, generally a level 5 rating was given unless it significantly added or subtracted from ongoing material.

Most of the above rules are adapted from Steinitz (1976, Appendix C).

APPENDIX B

CONVENTIONS FOR RATING NONPOSSESSIVE WARMTH

1. "uh-huhs" were not rated.

2. If a therapist response followed another therapist response after a silence, two ratings were made.

3. Segments always started and finished with client statements.

4. Raters went back and listened to tape segments more than once if they felt they could hear more data.

5. A therapist statement interrupted by a client "uh-huh" was rated once as long as the therapist continued a though (i.e., client said in effect "I'm listening.").

6. A rating of Level "0" was given when the therapist's response indicated that he was active, interested, and encouraging client to continue without communicating either liking or disliking (Mullen, 1969). Therapist is gathering information.

7. The raters were instructed to rate separately the warmth and the nonpossessiveness, and then to give a combined rating following Truax and Carkhuff (1967). They developed the following system for separating and then combining the two dimensions.

Level 1 - Warmth: Very little, or non at all as well as negative regard.
Nonpossessiveness: Offers advice, highly evaluative, very possessive.

Level 2 - Warmth: Some warmth, negative regard entirely absent.
Nonpossessiveness: Moderately possessive, moderately evaluative, some advice.

Level 3 - Warmth: Moderately warm, appropriate.
Nonpossessiveness: Slightly possessive, slightly evaluative, no advice.

Level 4 - Warmth: Warmer that 3 but appropriate.
Nonpossessiveness: Slight possessiveness.

Level 5 - Warmth: Warmer than 4 but appropriate.
Nonpossessiveness: Possessiveness entirely absent.

APPENDIX C

CONVENTIONS FOR RATING SPECIFICITY

1. "uh-huhs" were rated level 1.

2. If a therapist response followed another therapist response after a silence, two ratings were made.

3. Segments always started and finished with client statements.

4. Raters went back and listened to tape segments more than once if they felt they could hear more data.

5. A therapist statement interrupted by a client "uh-huh" was rated once as long as the therapist continued a thought (i.e., client said in effect "I'm listening.").

6. When the level of Specificity shifted during a therapist remark, it was rated by latter part of the remark.

7. A dimension of asking for information was pointed out to the raters. Levels 4, 5 and 7 ask for information or elaboration on increasingly limited subject areas.

8. A dimension of giving information was pointed out to the raters. Level 3 is strictly repetition of content of client's statement. Level 6 labels meaning or affect implicit in client's statement of which client is aware. Level 8 labels meaning or affect in client's statement of which client is not aware.

APPENDIX D

FIRST ORDER CORRELATIONS AMONG PREDICTORS

The first order correlations among the predictors can be seen in the table below, as well as the mean and standard deviation of each predictor. Out of 105 correlations, nineteen reach the .05 level of significance. Twelve significant correlations occur within classes of variables that are formed when one considers their common source in the data. For example, there are six significant relationships among variables derived from the Pathogenesis Scale. Thus, seven significant correlations remain out of a total of 89 variables from different data sources, which is 8%. The small number of significant correlations suggests that predictors from different data sources are relatively independent of one another. Most importantly, the variables derived from the Pine Scale are not significantly related to any variables from the Pathogenesis Scale. Drive expression is relatively independent from interpersonal attitude as reflected in therapist TAT stories.

The consequences for the SMR analysis are as follows. When two or more predictors from the same data source are entered into the same equation, one must remember that although statistically they can be orthogonalized, in reality they vary together. On the other hand, when predictors from different data sources are entered in the same equation, the statistically achieved independence mirrors reality. For example, senior staff vs. non-senior staff therapists (Therapist Experience I) have equal ranges of modulation of drive expression (Pine Rank Order and Ther. Exp. I r = .10).

Appendix D. Inter-correlations of the predictor variables, and their mean and standard deviation

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ther. Sex															
Client Sex	.35														
Dyad Sex	.64	-.49													
Ther Exp I	.26	.23	.06												
Ther Exp II	.07	-.27	.29	-.54											
Pine Total	.19	-.50	.59	-.14	.37										
Pine Lev I	.36	.11	.25	-.12	.36	-.09									
Pine Lev II	.02	-.19	.17	-.13	-.05	.36	-.60								
Pine Lev III	-.23	.26	-.43	.41	-.45	-.37	-.26	-.58							
Pine R O	-.53	-.01	-.48	.10	-.33	-.12	-.78	.04	.62						
Path Tot I	.01	.39	-.31	.03	.13	-.11	.14	-.13	.10	-.02					
Path Tot II	.04	.35	-.25	.05	.17	-.23	.24	-.30	.11	-.02	.86				
Path B I	.02	-.46	.40	.10	-.12	.28	-.09	.08	-.04	.04	-.85	-.73			
Path B II	-.09	-.46	.29	-.01	-.16	.43	-.18	.22	-.08	.07	-.71	-.85	.86		
No. Sessions	.34	.04	.28	.25	-.17	.29	-.19	.52	-.23	-.19	-.06	-.33	.11	.20	

$\underline{r} = r \geq .46$ is significant at .05 level; t(.05) 17 = 2.135

Appendix D (cont'd)

Variable	Mean	Standard Deviation
Ther Sex	.68	.48
Client Sex	.21	.42
Dyad Sex	.47	.51
Ther Exp I	.53	.51
Ther Exp II	.21	.42
Pine Total	20.45	6.39
Pine Lev I	.13	.09
Pine Lev II	.39	.11
Pine Lev III	.48	.09
Pine R O	10.00	5.62
Path Tot I	.44	.17
Path Tot II	.45	.18
Path Ben I	4.39	1.74
Path Ben II	4.26	1.75
No. Sessions	11.95	6.79

$\underline{r} = r \geq .46$ is significant at .05 level; t(.05) 17 = 2.135

APPENDIX E

FIRST ORDER CORRELATIONS AMONG CRITERION VARIABLES

The mean, standard deviation, and the inter-correlation among the criterion variables are found in the table below. Forty out of 153 correlations are significant at the .05 level. However twenty-one of the forty significant correlations come from pairs of variables that are derived from the same scale. Out of 108 possible correlations between variables derived from different scales, nineteen are significant, which is 18%. Accurate Empathy and Specificity share the greatest number of significant relationships: eight out of thirty-six. All of the correlations are positive, suggesting that the higher the level of Accurate Empathy, the higher the level of Specificity. The correlations between Accurate Empathy and Nonpossessive Warmth (6/36 significant), and between Specificity and Nonpossessive Warmth (5/36 significant) show less clear-cut trends. The overall impression is that there is a small amount of variance that is shared by all three in-therapy behaviors.

Of concern to the present study is the degree to which regression equations created separately for each of the eighteen criterion variables are redundant. To attribute greater confidence to a pattern of results that repeats itself is legitimate when each replication is independent. However, when the same common variance among the criterion variables is being predicted again and again, "replication" is really repetition of the same finding that looks different because different names are being

given to the predicted variance. With respect to the present study, the above data suggest that the variance in common is small, and it is found without great consistency. When one considers the composition of the regression equations, it becomes clear from the unique predictors for each criterion variable, that the separate regression equations are not redundant.

Appendix E. Inter-Correlations among Criterion Variables, Means, Standard Deviation

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
AE Md Mn																		
AE Md Pk	.78																	
AE Md Bl	.78	.34																
AE Lt Mn	.60	.43	.55															
AE Lt Pk	.49	.47	.42	.87														
AE Lt Bl	.61	.24	.63	.79	.47													
NPW Md Mn	.05	.27	.03	.00	.08	.06												
NPW Md Pk	.12	.14	-.06	-.18	-.11	-.34	.65											
NPW Md Bl	.38	.37	.24	.28	.31	.36	.68	-.04										
NPW Lt Mn	.74	.55	.60	.44	.37	.54	-.04	-.30	.35									
NPW Lt Pk	.35	.27	.43	.38	.47	.15	.23	.31	.12	.38								
NPW Lt Bl	.53	.27	.42	.39	.24	.65	-.20	-.51	.32	.84	-.02							
SPC Md Mn	.11	.15	.04	.23	.25	-.01	-.06	-.05	.03	.06	.24	.01						
SPC Md Bl	.66	.55	.56	.61	.47	.55	-.03	-.28	.32	.49	.24	.32	.52					
SPC Md Pk	-.45	-.22	-.44	-.18	-.11	-.45	-.20	.16	-.47	-.51	.02	-.51	.62	-.09				
SPC Lt Mn	.32	.09	.26	.42	.32	.42	.06	.21	.01	.05	.39	.09	-.09	-.11	-.15			
SPC Lt Bl	.42	.05	.40	.50	.29	.71	-.05	-.13	.17	.39	.20	.56	-.25	.07	-.51	.67		
SPC Lt Pk	.07	.02	-.07	.03	.09	-.14	.11	.43	-.22	-.39	.14	-.41	.13	-.21	.37	.52	-.18	

$r = r \geq .46$ is significant at the .05 level, t (.05) 17 = 2.135

Appendix E (cont'd)

Variable	Mean	Standard Deviation
AE Md Mn	4.41	.84
AE Md Pk	5.44	.77
AE Md Bl	3.26	1.16
AE Lt Mn	4.35	.87
AE Lt Pk	5.33	.88
AE Lt Bl	3.23	.96
NPW Md Mn	2.97	.35
NPW Md Pk	3.63	.44
NPW Md Bl	2.33	.62
NPW Lt Mn	3.24	.33
NPW Lt Pk	3.84	.28
NPW Lt Bl	2.57	.69
SPC Md Mn	6.31	.87
SPC Md Pk	4.18	1.26
SPC Md Bl	8.15	1.20
SPC Lt Mn	6.13	.63
SPC Lt Pk	3.94	1.46
SPC Lt Bl	7.91	.93

$\underline{r} = r \geq .46$ is significant at the .05 level, t (.05) 17 = 2.135

Appendix F. Correlations between Predictors and Criteria

	Th Sex	Cl Sex	Dy Sex	Th Exp I	Th Exp II	No. Ses	Pi Tot	Pi Lev I	Pi Lev II	Pi Lev III	Pi R O	Pa Tot I	Pa Tot II	Pa Ben I	Pa Ben II
Acc Emp															
Md Mn	.35	.16	.19	.08	.09	.17	.22	-.26	.31	-.10	-.02	-.10	-.19	-.11	-.02
Md Pk	.23	.06	.16	.04	.07	-.01	-.09	-.07	.20	-.22	-.08	-.29	-.28	.09	.08
Md Bl	.28	.07	.20	.28	.07	.27	.50	-.38	.32	.08	.16	.08	.05	-.06	.05
Lt Mn	.07	-.06	.11	.12	-.22	-.04	.17	-.09	.24	-.06	-.12	.07	-.04	-.15	.02
Lt Pk	.13	-.08	.19	.14	-.12	-.11	.16	.01	.19	-.18	-.22	-.04	.03	.00	.02
Lt Bl	-.06	-.08	.01	.02	-.26	.14	.24	-.35	.24	.19	.14	.11	-.13	-.19	.06
Non Pos Wm															
Md Mn	-.11	.09	-.18	.11	-.15	-.41	-.09	-.20	-.14	.26	.47	.00	.18	.19	.05
Md Pk	-.02	.10	-.11	.51	-.25	-.26	-.22	-.22	-.18	.36	.51	.01	.20	.05	-.12
Md Bl	-.01	.15	-.13	-.25	-.06	-.22	.05	-.16	.03	.07	.20	.03	.11	.07	.04
Lt Mn	.37	-.23	.53	-.07	.17	.17	.35	-.20	.21	-.05	-.09	-.29	-.37	.24	.25
Lt Pk	.01	-.09	.08	.05	.14	-.33	.06	-.42	.19	.11	.35	.09	.20	-.12	-.20
Lt Bl	.38	-.09	.43	-.03	-.09	.30	.23	-.03	.00	.14	-.19	-.16	-.33	.14	.22
Spec															
Md Mn	.07	.37	-.24	.19	.03	-.10	-.40	.20	-.18	.16	-.23	.14	.14	-.17	-.19
Md Pk	-.30	.21	-.45	.15	.04	-.35	-.59	.38	-.50	.26	-.09	.13	.24	-.17	-.29
Md Bl	-.06	.04	-.10	-.03	.04	.27	.14	-.27	.46	-.16	-.05	-.05	-.30	-.02	.21
Lt Mn	.15	.27	-.07	.20	-.31	-.24	-.14	-.29	.03	.25	.28	.16	.20	-.38	-.35
Lt Pk	-.02	.24	-.22	.43	-.23	-.15	-.50	-.04	-.10	.24	.18	.00	.26	-.14	-.38
Lt Bl	.20	.14	-.07	.07	-.39	.10	.19	-.35	.12	.27	.19	.20	-.02	-.30	-.06

$r = r \geq .46$ is significant at the .05 level, t - observed t (.05) 17 = 2.14

Appendix G 1. Values of Demographic Variables for Each Subject

Ther. No.	Ther. Sex	Client Sex	Dyad Sex	Ther. Ex. I	Ther. Ex. II	No. Sess.
05	1	0	1	1	0	24
24	0	0	0	0	1	07
08	0	0	0	1	0	09
12	1	0	1	1	0	12
18	1	1	0	1	0	07
26	1	0	1	0	0	16
19	1	0	1	0	1	21
15	1	0	1	1	0	13
25	0	0	0	0	0	06
27	0	0	0	0	0	09
35	1	1	0	1	0	07
29	1	0	1	0	1	05
03	1	0	1	1	0	16
39	1	1	0	1	0	29
44	0	0	0	0	0	15
45	1	1	0	0	0	07
31	1	0	1	0	1	06
09	0	0	0	1	0	06
40	1	0	1	1	0	12

Appendix G 2. Values of Personality Variables for Each Subject

Th. #	Pi. Tot Dr	Pi. Lev I	Pi. Lev II	Pi. Lev III	Pi. R O	Pa. Tot I	Pa. Tot II	Pa. Ben I	Pa. Ben II
05	18.5	.110	.570	.325	04.0	.396	.313	4.0	4.5
24	21.0	.050	.405	.425	16.0	.285	.428	5.0	4.0
08	15.0	.200	.235	.565	12.5	.563	.563	3.5	3.5
12	27.0	.075	.345	.580	18.0	.141	.100	9.0	9.0
18	16.0	.095	.280	.625	17.0	.717	.792	1.5	1.0
26	30.5	.030	.570	.390	14.0	.455	.455	4.0	4.0
15	26.5	.150	.405	.450	05.0	.422	.400	5.5	6.0
25	20.5	.100	.415	.485	10.5	.214	.188	5.5	6.5
27	11.5	.000	.440	.560	19.0	.536	.486	3.0	3.0
35	15.5	.095	.465	.445	09.0	.607	.643	2.5	2.5
29	22.5	.310	.420	.265	01.0	.438	.563	4.5	3.5
03	21.5	.115	.380	.500	08.0	.072	.143	6.0	5.0
39	17.0	.090	.475	.530	10.5	.492	.378	4.0	4.0
44	21.5	.070	.510	.420	12.5	.423	.348	6.0	6.5
45	09.0	.330	.165	.495	03.0	.452	.450	3.5	3.5
31	20.5	.195	.290	.515	07.0	.536	.500	3.5	3.5
09	22.5	.110	.295	.595	15.0	.598	.622	3.0	3.5
40	16.5	.210	.275	.515	06.0	.350	.619	6.5	3.5
19	35.5	.225	.390	.380	02.0	.666	.528	3.0	4.0

Appendix G 3. Values of the Criteria for Each Subject: Accurate Empathy

Th #	Md Mn	Md Pk	Md Bl	Lt Mn	Lt Pk	Lt Bl
05	4.90	6.33	3.00	4.30	5.33	3.00
24	4.66	6.00	3.00	2.57	4.16	1.83
08	2.54	4.16	1.67	3.45	4.00	2.33
12	4.94	6.33	4.50	4.21	5.33	3.00
18	3.73	4.33	3.00	3.47	4.83	2.17
26	4.93	5.16	4.17	4.61	5.00	4.50
19	4.88	5.16	4.67	4.77	6.00	3.67
15	4.33	5.33	3.17	4.92	6.00	3.83
25	4.41	5.00	3.33	5.40	6.33	4.33
27	4.80	6.33	2.83	5.30	6.16	4.33
35	5.68	6.49	5.00	5.65	6.66	3.67
29	4.17	6.00	2.50	4.82	6.33	2.00
03	5.07	6.00	3.50	4.76	5.66	3.33
39	5.00	5.33	4.67	4.19	4.66	3.83
44	2.48	4.00	1.33	3.16	4.16	2.00
45	4.23	6.00	1.00	3.71	4.66	2.67
31	4.50	5.00	3.50	3.80	4.00	3.50
09	5.06	5.66	4.67	5.68	6.16	5.00
40	3.48	4.83	2.50	3.82	5.83	2.33

Appendix G 4. Values of the Criteria for Each Subject: Nonpossessive Warmth

Th #	Md Mn	Md Pk	Md Bl	Lt Mn	Lt Pk	Lt Bl
05	2.28	3.51	1.17	3.32	3.67	2.67
24	3.29	3.83	2.67	3.15	3.84	1.67
08	2.94	4.17	1.00	2.49	3.51	1.33
12	3.53	4.33	2.67	3.63	4.00	3.00
18	2.94	4.33	1.67	2.74	4.17	1.67
26	3.13	3.51	3.00	3.38	3.75	3.00
19	2.47	2.84	2.17	3.56	3.84	3.33
15	3.29	3.67	2.67	3.30	3.67	3.00
25	2.38	2.67	2.00	3.24	3.84	2.83
27	3.32	3.84	3.00	3.52	4.33	3.00
35	3.34	3.84	3.99	3.42	4.33	2.33
29	3.10	3.84	2.17	2.94	4.00	1.33
03	2.73	3.84	1.67	3.58	4.00	3.00
39	2.79	3.34	2.33	3.17	3.51	2.83
44	3.01	3.51	2.33	2.79	3.67	1.67
45	3.07	3.34	3.00	3.06	3.17	3.00
31	2.65	3.17	2.00	3.73	4.00	2.50
09	3.23	3.84	3.00	3.22	3.84	2.67
40	3.02	3.51	2.67	3.32	3.84	3.00

Appendix G 5. Values of the Criteria for Each Subject: Specificity

Th #	Md Mn	Md Pk	Md Bl	Lt Mn	Lt Pk	Lt Bl
05	6.02	4.66	7.84	5.97	3.66	8.00
24	5.47	3.83	7.84	5.60	1.66	8.00
08	5.16	1.66	10.00	5.89	3.00	8.84
12	5.64	4.33	7.00	5.78	3.83	7.33
18	6.59	2.00	9.33	7.51	5.33	9.17
26	3.75	3.00	4.50	6.90	6.50	7.50
19	5.94	4.99	7.33	5.33	5.00	5.67
15	6.20	4.16	6.67	6.69	5.66	7.84
25	6.16	4.66	8.67	6.80	4.99	8.17
27	6.55	5.33	8.00	6.75	5.49	8.33
35	7.32	5.83	8.33	6.41	4.66	7.84
29	6.95	4.33	9.33	6.06	1.00	9.17
03	6.99	4.73	8.84	6.33	4.50	8.00
39	7.22	5.99	8.17	6.07	3.33	9.17
44	6.86	4.49	8.84	4.72	2.00	6.33
45	6.53	3.33	8.67	5.80	4.00	7.17
31	7.06	4.00	8.50	6.03	3.83	7.17
09	7.14	5.83	8.67	6.17	4.00	8.00
40	6.34	2.33	8.33	5.64	2.33	8.67

APPENDIX H

For R^2 change, the .05 significance level of each step is determined by the following F tests, which vary for each step:

Step I $F_{(.05)1,17} = 4.45$

Step II $F_{(.05)1,16} = 4.49$

Step III $F_{(.05)1,15} = 4.54$

Step IV $F_{(.05)1,14} = 4.60$

Step V $F_{(.05)1,13} = 4.67$

For simple (first order) r, any simple r greater than or equal to .46 is significant at the .05 level, because the t test is greater than or equal to $t_{(.05)17} = 2.14$.

For Overall F test, the .05 level of significance is $F_{(.05)15,13} = 3.03$.

Adjusted $R^2 = R^2 - (N - 1/N - k)(1 - R^2)$ where k is the number of independent variables in the regression equation, N is the number of subjects, and R^2 is the unadjusted R^2.