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Mary Janice Gutfreund

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THERAPIST INTERVENTIONS: THEIR RELATION TO THERAPEUTIC ALLIANCE AND OUTCOME IN DYNAMIC PSYCHOTHERAPY

By

Mary Janice Gutfreund

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ABSTRACT

**THERAPIST INTERVENTIONS:
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IN DYNAMIC PSYCHOTHERAPY**

By

Mary Janice Gutfreund

The purpose of this study was to test causal models of relationships among symptoms, therapist interventions, patient alliance, and outcome in a sample of 46 cases seen at a university training clinic (median 29 sessions). For each case, four 20-minute samples, selected from the first and third sessions, and sessions in the middle and late phases of treament, were rated on the California Psychotherapy Alliance Scales (CALPAS) (Marmar & Gaston, 1989), and a scale of therapist interventions based on the Therapist Actions Scale (Hoyt, Marmar, Horowitz, & Alvarez, 1981) by teams of two raters each. Outcome was assessed through standardized gain scores on the SCL-90 GSI (Derogatis, 1977) and five items addressing dynamic outcome from the Post-Therapy Therapist Questionnaire (Strupp, Fox, & Lesser, 1969). Confirmatory factor analysis of the CALPAS revealed a three-factor structure, a positive and negative

patient factor and a positive therapist factor. Data were analyzed using a path analytic strategy.

Results from the path analyses were the following: level of symptom severity predicted positive alliance; transference interventions (first session) predicted early patient positive alliance (third session) and dynamic outcome, but were predictive of **poorer** symptom outcome. Patient positive alliance predicted symptom outcome only; patient negative alliance predicted worse dynamic outcome. Earlier alliance was not predictive of later alliance, and therapist interventions, with the exception of transference, were not predictive of other phenomena. Symptomatic and dynamic outcome scores were not significantly related. Post-hoc examination of bivariate correlations revealed some significant relations among variables which changed as therapy progressed. The discussion of these results included both methodological and theoretical considerations. It was felt that these findings were consistent with earlier studies; however, low inter-rater reliability probably attenuated what are usually weak positive results (e.g., alliance-outcome) in other studies. Recommendations for further research were made.

For Larry

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As I was nearing the completion of this work, my thoughts turned to the things I had thought I might be when I "grew up". Being a psychologist was not among them, but they all involved attending graduate school. In this context I see the completion of this dissertation as the fulfillment of a lifelong dream. It was not accomplished in a vaccuum: many people from both my personal and professional life nurtured and encouraged me.

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INTRODUCTION

The therapeutic alliance, the aspect of the patient-therapist relationship that permits therapeutic work to take place, has been cited by psychoanalytic theorists as crucial to therapeutic success. A stable alliance is necessary for the patient to accept the interpetations of the analyst (e.g., Freud, 1913; Zetzel, 1956). Although most agree that a positive alliance is necessary for positive outcome in therapy, there has been little agreement to both its nature and the role each participant plays. A few state that it is merely a form of transference (e.g. Brenner, 1979), others a patient disposition (e.g., Frieswyk, Colson, & Allen, 1984), and others a collaboration (Bordin, 1979). Even those who see alliance as a patient characteristic, however, note that the therapist has a role in building and maintaining a stable therapeutic alliance.

Empirical research on the therapeutic alliance has demonstrated a moderate relationship between alliance and positive outcome (e.g., Horvath & Symonds, 1991). However, the strength of alliance-outcome relationship varies with both method of measurement and type of outcome. Patient and therapist ratings of alliance, particularly the patient's, have been the best predictors of outcome. When observers

rate the alliance, usually only findings of a relationship between patient alliance and outcome is detected. This discrepancy among perspectives may be due to: the increased information participants have about their therapy, making them better predictors of outcome; bias on the part of participants (as outcome is often symptom change, which is rated by patients), or bias on the part of observers (who are therapists themselves) who may have difficulty rating other therapists. While these reasons must be taken into account, this study investigates a third perspective: whether or not the difficulty in measuring the therapist contribution to the therapeutic alliance and outcome is due to the absence of consideration of technique in most alliance measures. A review of the theoretical and empirical literature on dynamic psychotherapy suggests this may be the case.

The purpose of this study will be to determine whether one can demonstrate a causal relationship between therapist interventions and patient alliance factors in dynamic psychotherapy. We seek to investigate whether therapist strategies which aim at identifying and interpreting negative alliance or supportive strategies which seek to suppress it improve therapeutic alliance, thus addressing a controversy among practitioners of psychodynamic psychotherapy (e.g. Luborsky, 1984). In addition, we seek to investigate the relationship of therapist interventions

to outcome, particularly the role of transference interventions.

These phenomena will be studied using path analytic models. A path analytic strategy, using correlations corrected for unreliability, has been chosen in order to test a time-sequence model. In this model, alliance influences earlier interventions which in turn influence later alliance. We also wish to investigate relationships among patient characteristics, alliance, therapist interventions, and outcome.

LITERATURE REVIEW

Psychonanalytic Conceptualizations of the Therapeutic Alliance: A Brief Overview

Nearly every paper on the therapeutic alliance begins with a discussion of Freud's conceptualization of the relationship between analyst and patient. Issues such as the nature of the therapeutic alliance (e.g., alliance as an individual versus a joint creation), the analyzability of patients who could not form stable alliances, and techniques for facilitating alliances, were all first addressed by Freud. In spite of later innovations in theory these issues as Freud stated them are still subjects of great interest in psychoanalysis and psychodynamic psychotherapy.

Freud considered the establishment of a stable relationship between analyst and patient crucial for analytic success. It formed the background upon which interpretations could be made and heard:

> When do we begin our disclosures to the patient? The answer to this can only be: not until a dependable transference, a well-developed rapport, is established in the patient. The first aim of the treatment consists in attaching him to the treatment and the person of the physician. To ensure this one need do nothing but allow him time. If one devotes serious interest in him, clears away carefully the first resistances that arise and avoids certain mistakes, such an attachment develops in the patient of itself, and

> the physician becomes linked up with one of the imagos of those persons from whom he was used to receive kindness. It is certainly possible to forefit this primary success if one takes up from the start any standpoint other than that of understanding, such as a moralizing attitude, perhaps,or if one behaves as the representative or advocate of some third person, maybe the husband or wife, or so on. (Freud, 1913, p. 139-140)

Freud, particularly in his earlier writings, seemed to place the responsibility for the formation and maintenance of the therapeutic alliance with the analyst. This was communicated to the patient through interest, nonjudgmental listening, restraint, and clearing away of initial resistances. In spite of this, however, Freud also felt that in order for analysis to occur, there needed to be a portion of the patient's psychic structure that could regard the analyst as a good and stable object. Freud felt this positive transference was unanalyzable, and separate from the unconscious erotic and hostile transference which was the source of resistance. He speculated that those who could not form such a positive relationship under these conditions (such as individuals with severe character disorders or psychoses) were unsuitable for analysis.

In his later writings, Freud (1937) re-emphasized the role of transference as primary motivator in a patient's commitment to analysis. A variant of this most extreme position has a minority of contemporary psychoanalytic theorists as adherents, whose most articulate spokesperson is Brenner (1979). In contrast to psychoanalytic theorists

(who are reviewed below) who draw on the developments of ego psychology and object relations psychology to develop a concept of therapeutic alliance, Brenner and his colleagues maintain that an emphasis on an alliance concept obscures the transference-based influence on all the patient's behavior in an analysis.

Richard Sterba (1934) developed a theoretical model for the basis of analytic "rapport" within Freud's structural theory and was the first widely read analyst to write about the therapeutic relationship. In Sterba's view, analysis was possible because part of the patient's ego, based on reality, allied with the analyst against repression and the id. This took place on the basis of:

> a certain amount of positive transference, on the basis of which a transitory strengthening of the ego takes place through identification with the analyst. This identification is produced by the analyst...each separate session gives the analyst various opportunities of employing the term 'we' in referring to himself and to the part of the patient's ego which is consonant with reality Sterba, 1934, p. 120).

This identification with the analyst through a dissociation of ego processes permitted the patient to examine his/her impulses and conflicts on the basis of adult reality. Through the use of interpretation, the portion of the ego tied up in instinctual conflict and defense decreased. This permitted increasing identification with the analyst in his/her reality function, and therapeutic change thus occured. Although not placed explicitly within the

terminology of therapeutic alliance, this implied that the working relationship can be seen as separate from the transference neurosis, which forms the basis of resistance. The therapeutic alliance, according to Sterba, may therefore be seen as a conflict-free ego function. Fenichel (1941), with a view similar to Sterba, postulated that the ego had both observing and experiencing aspects. The ability to use both these faculties was essential to the successful formation of a relationship sufficient to carry out analytic work.

Greenson (1965) continued Sterba's and Fenichel's attempts to differentiate aspects of the analytic relationship. Greenson maintained the analytic relationship was composed of three parts: the working alliance, the transference neurosis, and the real relationship. He saw the working alliance much as Sterba saw it -- a split in the ego of the patient which permits both the observation and experience of regression. But, in his model, the working alliance and the transference neurosis were not always well-differentiated, as often aspects of the working alliance required analysis. All of this was well within traditional psychoanalytic theory. But Greenson added a third dimension -- the real relationship, the portion of the analytic relationship based on the real qualities of the analyst. As with all "real relationships," the real relationship often grows and changes during the course of the analysis, and can form a realistic basis for the working

alliance. He discussed this in reference to a clinical example:

> In addition to these transference reactions, however, Mr. C. also indicates some realistic awareness of me as a person to whom he is relating. He knows that I like him, that I keep trying to understand him, and that I am persistent and patient. He is also aware that I can be fooled, I can be wrong, and at times harsh. Yet he senses I have a good grasp of his underlying feelings and impulses, I must resemble him in some way; I am warm, not weak, and also not afraid of choosing words which get to the heart of the matter. Furthermore, he also realizes that psychoanalysis has no absolute standards for right and wrong. I submit that these are not distortions, but accurate perceptions and judgments based on his observations of me and my work during the 18 months of treatment. They coexist with the transference reactions and do not negate them. (Greenson, 1971, pp. 225).

Zetzel's classic paper on transference and therapeutic alliance in the analysis of more disturbed patients (1956) is notable for her skillful contrast of the classical and the object relations view of the relationship of transference and alliance. She used this contrast to outline the reasons she explicitly advocated the use of ego-supportive interventions to bolster the positive alliance in more disturbed patients. Zetzel herself held the classical view that a therapeutic alliance needed to be established before interpretation of transference phenomena could be made. Without this relationship, the patient was susceptible to excessive regression in the analytic relationship, which she saw as a form of resistance. The ability to maintain a therapeutic relationship somewhat

separate from the transference neurosis is based on the presence of at least some mature ego functions. Zetzel was one of the first to advocate explicit use of supportive interventions in analyses of more disturbed patients with the aim of increasing ego strength. This represented a departure from traditional notions of the analyst never providing "gratification" (that is, never offering anything except interpretations and comments prepatory to them). Eissler (1953), writing about the same time, also created a theoretical basis for the use of what he termed "parameters", interventions which were aimed at bolstering the therapeutic relationship in more disturbed patients. Greenson (1967) writes of the use of "nonanalytic" interventions to help patients overwhelmed by affect to recover ego functioning, but he did not refer to the use of these interventions to bolster alliance.

In contrast, as Zetzel reviewed it, (cf. Klein, 1965) the object relations view was that there is no clear separation between transference as part of the therapeutic alliance, and transference as transference neurosis. Transference is a form of object relationship, and even in its most adaptive form linked to the unconscious; furthermore, the structure of the ego is determined by its external and internal objects. Interpretation of the transference brings about change by changing the nature of object relationships within the ego. Therefore, preanalytic ego strength was not a prerequisite for analysis and

formation of a working relationship, and supportive interventions would not necessarily be alliance-building.

Other modern psychoanalytic theorists have written on the concept of the therapeutic alliance as a collaborative process that includes transference as well as reality-based elements. Dickes (1975) considered alliance to be "all the elements favorable to the progress of therapy" (p. 1). Among these would be included the motivation for treatment to relieve the patient's suffering, the transference (both positive and negative), and the real, rational relationship between analyst and patient. The working alliance, he maintained, is only one portion of the therapeutic alliance. Hatcher and Hansell (1990) have conceived of the therapeutic alliance as a real entity, but having a shifting relationship to transference and therefore not easily separable. Sandler, Dare, and Holder (1973) wrote that the therapeutic alliance is based on "the patient's conscious or unconscious wish to co-operate and accept the therapist's aid in overcoming internal difficulties" (Sandler, Dare, & Holder, 1973, p. 30). They differentiated this from the wish to get better, which would likely be based on the patient's hopes for gratification, not insight.

The most explicit advocate of the collaborative theory of therapeutic alliance is Bordin. Bordin, while coming originally from a psychoanalytic tradition, asserted that therapeutic alliance (or working alliance) is common to all types of therapy. He further asserted that the <u>strength</u> of

the working alliance is most important to positive therapy outcome, but different therapeutic approaches made different demands on patient and therapist (Bordin, 1979). Three features were characteristic of this working alliance: (1) an agreement on goals, as the examination of the role of the patient's childhood events in present adaptation in psychoanalytic therapy or target behaviors in behavior therapy; (2) an assignment of tasks, as homework in cognitive therapy or free association in psychoanalytic therapy; and (3) the development of bonds appropriate to a specific therapy, as the strength of bond for long-term intensive therapy might differ from that needed for short-term behavioral treatment.

While the major thrust in alliance theory has been on its collaborative aspects, others have renewed their focus on therapeutic alliance as a patient variable. The most articulate spokespersons for this position have been Frieswyk and his colleagues. Frieswyk, Colson, and Allen (1984) defined the therapeutic alliance as the degree of the patient's active collaboration in the work of analysis. Other factors, such as the alliance with the analyst's ego, the real relationship, and the level of object relations which the patient brings to treatment are seen as <u>contributory</u> but not part of the therapeutic alliance per se. Their original idea was to render the therapeutic alliance more amenable to investigation, but clearly their

theoretical position that alliance is something that the patient brings.

In summary, the history of the therapeutic alliance concept in psychoanalysis contains an unresolved debate as to its nature, although all attest to its necessity to the success of analytic therapy. They differ to which alliance is wedded to transference; whether it is a patient variable, a patient variable facilitated by the therapist, or a collaborative process; or whether it even exists as all. All of these, of course, have different technical implications for the conduct of psychoanalysis and psychoanalytic psychotherapy. Empirical researchers have taken upon themselves the task of defining the nature of the therapeutic alliance, its course in treatment, and relation (if any) to outcome.

Empirical Research on the Therapeutic Alliance

Scales to Measure Therapeutic Alliance and Related Processes

As discussed in the previous section, the therapeutic alliance as a concept grew out of psychoanalysis. However, the effort to study the therapeutic relationship -- even to consider the therapeutic relationship as a relationship per se -- was begun by practitioners of client-centered therapy. Although these theorists (e.g. Rogers, 1957) did not use the phrase "therapeutic alliance," they engaged in the study of process variables thought essential to therapeutic success, such as empathy or level of respect for the other.

Later researchers have been engaged in an effort to conceptualize the therapeutic alliance itself in such a way that it can be measured accurately and interpreted meaningfully. Most of these investigators have been from the psychoanalytic and client-centered tradition, but many of these workers have taken Bordin's (1979) theoretical position that the therapeutic alliance exists and can be measured in all types of therapies.

Two teams of investigators, one with a client-centered orientation, the other with both client-centered and psychoanalytic orientations, developed scales to study aspects of the therapeutic relationship thought to be related to successful outcome. Barrett-Lennard developed the Relationship Inventory (Barrett-Lennard, 1962), a scale which measures relationship aspects thought to be curative in client-centered therapy (Level of Regard, Empathic Understanding, Congruence, Unconditionality, and Willingness to be Known). He found that patients whose therapists who rated them more highly on these scales had better outcomes. Another scale, the Vanderbilt Psychotherapy Process Scale (VPPS) was designed to measure process variables distinguishing psychoanalytic, experiential, and alternate (nonprofessional helpers) modalities of therapy. Seven factor-derived scales appeared to measure three process dimensions: Exploratory Processes, Patient Involvement, and Therapist-Offered Relationship. Patient Involvement and Therapist-Offered Relationship have been found to be related

to outcome (Hartley & Strupp, 1983). (These studies are reviewed in the section on therapeutic alliance and outcome.)

Other groups of investigators engaged in the study of psychodynamic psychotherapy have developed scales to measure the therapeutic alliance directly from session data. Despite a shared perspective, each group has a somewhat different focus in their conceptualization of what they believe to be the most salient aspects of the therapeutic alliance, paralleling the controversies about the nature of the alliance that were reviewed in the section on psychoanalytic theory. Some have focused on patient factors; others on patient and therapist factors; still others on factors unique to the interaction. Most seek to exclude considerations of technique in alliance formation, but the system from the Vanderbilt group includes it explicitly.

Luborsky and his colleagues (Luborsky, 1976) originally conceptualized the helping alliance, their term for the therapeutic alliance, as having two components: Type 1, which consists of the patient feeling s/he has received help from the therapist, and Type 2, where the patient feels s/he is working in collaboration with the therapist against what is troubling him/her. The original scale measured patient behaviors only; therapist behaviors, labeled "facilitating behaviors," were added to a later revision and were rated separately. Like many researchers, Luborsky's group have

taken the theoretical position that the helping relationship exists separate from transference and from psychotherapeutic technique.

A more explicit measurement of alliance as a patient factor has been attempted by the Menninger group (Allen, Newsom, Gabbard, & Coyne, 1984; Frieswyk, Allen, Coyne, Gabbard, Horwitz, & Newsom, 1986; Frieswyk, Colson, & Allen, 1984), who also sought to differentiate alliance from both transference and from therapist technique. To that end, the group measured only the patient's collaboration, that is, "the extent to which the patient makes active use of the treatment as a resource for constructive change" (Frieswyk et al., 1986). Separate scales measuring "transference-based dimensions" of trust, acceptance, and affect expression have also been developed. These elements, which the authors labeled "mediating variables", are hypothesized to be those which contribute to the formation and maintenance of the alliance.

In the following therapeutic alliance systems, the alliance is conceived as containing both therapist and patient factors. Marziali, Marmar, and Krupnick (1981) developed the first version of the Therapeutic Alliance Rating System (TARS) (later revisions known as the California Therapeutic Alliance Rating System, or CALTARS). This scale was specifically designed to exclude items involving technique, action, and specific response, and to include items focusing on the "affective, attitudinal

aspects" of the therapeutic relationship. Both positive and negative factors for therapist and patient were included. A factor analytic study done with the CALTARS (Marmar, Weiss, & Gaston, 1989) found five factors, which they named: Therapist Understanding and Involvement, Patient Hostile Resistance, Patient Commitment, Therapist Negative Contribution, and Patient Working Capacity.

Based on the results of the previous study and in an effort to broaden the applicability of the CALTARS to other modalities of psychotherapy, the Marmar group has developed the California Psychotherapy Alliance Scale (CALPAS), which seeks to measure four theoretical dimensions of therapeutic alliance: Therapist Understanding and Involvement, Patient Working Capacity, Patient Commitment, and Working Strategy Consensus, the latter being a scale of collaboration and a direct outgrowth of Bordin's (1979) theory. The scale comes in a therapist, patient, and rater version.

The Vanderbilt group (Hartley & Strupp, 1983; O'Malley, Suh, & Strupp, 1983) developed the Vanderbilt Therapeutic Alliance Scale (VTAS). In their system, in contrast to the others, the therapeutic alliance was conceived as the interaction of both relationship and technical factors rather than a product of relationship elements alone. Although they originally proposed three a priori relationship factors for the alliance composed of therapist items, patient items, and interaction items, factor analytic techniques grouped and redistributed these items into six

factors, each related to specific patient and therapist factors.

Therapeutic Alliance and Outcome

Before the development of formal scales to measure the therapeutic alliance, investigators studied relationships between process variables related to alliance and outcome. Many of these variables were derived from client-centered theory; but as can be seen from the following they have some robustness as predictors of patient outcome, particularly as rated by participants. Strupp, Fox, and Lesser (1969) used post-therapy questionnaires to assess therapists' perceived warmth and understanding, and quality of relationship. These were related to patients', therapists', and judges' evaluation of positive outcome. Saltzman, Luetgert, Roth, Crease, and Howard (1976) measured helping relationships in client-centered therapy through the use of self-report forms. By the third session, ratings of clients' felt level of improvement correlated significantly with ratings of feelings of being understood by the therapist and seeing the therapeutic relationship as unique. Therapists' assessment of change was related to clients' ratings of felt respect, understanding, openness, security, movement, sense of continuity, and expression of affect related to treatment. For therapists, level of respect for the patients correlated with their assessment of change. First session ratings had little predictive significance.

Three studies using the Vanderbilt Psychotherapy Process Scale (VPPS), an observer-rated scale, showed relationships between process variables and positive outcome. Gomes-Schwartz (1978) demonstrated differences in successful and unsuccessful cases of college student patients undergoing either brief psychodynamic or experiential therapy. Level of Patient Involvement was related to outcome as measured by clinicians and therapists, and therapists' ratings of target complaints, whereas Therapist-Offered Relationship was only related to therapist ratings of outcome target complaints. This relationship was similar across therapy modalities.

Using the same sample and the VPPS, O'Malley, Suh, and Strupp (1983) found that the predictive association of the VPPS and outcome went from virtually none in the first session to a consistent association in the third. Overall therapist ratings of outcome were predicted by Patient Involvement, Exploratory Processes, and Therapist-Offered Relationship at a statistically significant level. Clinician and patient ratings of improvement were also predicted by ratings of Patient Involvement.

A third study used the VPPS in a sample of adult outpatients in psychodynamic psychotherapy (Windholz & Silberschatz, 1988). Patient Involvement as measured from a session at the middle of treatment (session eight) was related to therapist ratings of patient outcome and decreased scores on the Global Assessment Scale (GAS).

Therapist-Offered Relationship was related to decreased scores on the GAS and reduction in target complaints. Patient and evaluator ratings of outcome were not related to these outcome dimensions, although evaluator ratings of global change and reduction in target complaints approached statistical significance.

The Luborsky group (Luborsky, 1976) demonstrated a positive relationship between therapeutic alliance and outcome. In their initial study, they compared the ten most-improved and ten least-improved patients in the Penn Psychotherapy Project. Those patients seen for more than 25 sessions were selected for study, resulting in seven in the most-improved category and eight in the least-improved. Four 20-minute transcript excerpts from each patient were rated by external judges for signs of a helping alliance. Both positive and negative signs were counted. They found that helping relationships developed in six of seven most improved patients and in none of the least-improved. Patients who developed helping alliances did so quite early, by the third to fifth session. These were Type 1 alliances (the patient's sense that s/he is being helped); Type 2 alliances (the patient's sense of working jointly with the therapist) developed only toward the end of treatment and in only two patients.

A later study utilized a global rating form rather than counting signs form of the Helping Alliance Scale (Morgan, Luborsky, Crits-Christoph, Curtis, & Solomon, 1982). Level

of alliance correlated significantly with outcome as measured by a composite of pre-and post-therapy measures including the Health-Sickness Rating Scale and the MMPI (Residual Gain), and with ratings of change reported by both therapist and patient (Rated Benefits). Contrary to predictions, the two types of helping alliances were not differentially predictive, but a trend toward an increase in Type 2 helping alliance toward the end of therapy was noted in the most improved patients. Surprisingly, observer measures of patient insight and resistance were not correlated with outcome. A further study with the Helping Alliance Scale (Luborsky, McLellan, Woody, O'Brien, & Auerbach, 1985) found ratings of helping alliance significantly related to outcome in brief (3-24 sessions) psychotherapy of methadone-maintained, drug-dependent patients.

Hartley and Strupp (1983), using the Vanderbilt Therapeutic Alliance Scale (VTAS), studied the individuals from the Vanderbilt Psychotherapy Project. They were divided into three categories: high outcome, low outcome, and premature terminators (less than five sessions). Scores on the original subscales which defined therapist actions, patient actions, or interactions on the empirically-derived scales distinguished outcome groups, although there was more variance within groups than between them. However, by using the empirically-derived subscales, differences in the pattern of the therapeutic alliance across time among

outcome groups were discovered. In the dropout group, Positive Climate as well as Therapist Intrusiveness were significantly higher in the last session, while in the high outcome group, only Positive Climate was significantly higher. Additionally, in the high outcome group, all indices of therapeutic alliance peaked to about the 25% point in treatment, and trailed off as therapy progressed. For the low outcome group, there was a slight decrease in all variables at the 25% point. At the 25% point, high outcome patients tended to be less resistant, more motivated, and more anxious. End-of-treatment outcome effects reached significance, but there was a trend for low outcome patients to score higher on the Resistance and Anxiety scales.

The authors believed the drop in therapeutic alliance scores was the failure of study therapists to deal with termination issues in a brief (25-session) therapy. They felt that the increase in Therapist Involvement scores seen in the therapists in the dropout group may have been in response to the slight trend of the patients to be more defensive and less involved in treatment.

Several studies using the Therapeutic Alliance Rating System (TARS/CALTARS) (Marmar, Marziali, & Krupnick, 1981) demonstrated a relationship between alliance and outcome. The original validation sample was selected from a sample of 25 patients treated in 12-session brief therapies for reactions to severe life stress, such as the death of a

parent or spouse. Ten subjects, five with good outcomes and five with poor outcomes, were selected for study. Raters based their ratings on listening to audiotapes of the second, fifth, eighth, and eleventh sessions of each therapy. Intercorrelations between scales in this study were such that Therapist and Patient Positive and Negative scales were collapsed into a Therapist Total Contribution Scale and a Patient Total Contribution Scale. While the Therapist scale did not distinguish between outcome groups, the Patient scale did. Patients who formed poor therapeutic alliances had poor treatment outcomes as measured by both self-report and by clinical judges. The authors felt the study results indicated that the patient's negative disposition seemed to determine the course of treatment and that the therapist's efforts to offer a positive relationship with the patient were not helpful in this regard.

A second study (Marziali, 1984a) compared therapeutic alliance from the viewpoint of therapist, patient, and clinical judge and its relation to outcome in an effort to provide further validation of the observer-rated measures. Forty-two patients who met Malan's criteria for suitability for brief psychotherapy and who completed a 20-session treatment were chosen for study. Therapist and patient completed therapeutic alliance measures immediately following sessions 1, 3, 5, 10, 15, and 20; these sessions were also rated by judges. Outcome was measured by patient

self-report scales, therapist scales, and clinician ratings. Therapists' and patients' alliance responses were associated with positive therapeutic change. Patient and therapist ratings of positive alliance were associated with decreased symptoms. Judges' ratings of patient positive alliance were associated with patient and therapist evaluations of change and clinical evaluations of dynamic outcome. Averaged rater responses on the Patient Positive and Therapist Positive Alliance contributions were significantly lower in the first and third sessions in contrast to the final session, although a significant relationship between alliance and outcome was established.

The relationship between participants' ratings of therapist alliance and outcome constituted the major new finding of this study, contrasting with the first study in which only patient alliance was associated with positive outcome. Raters may have had less sensitivity to the effects of the therapist on the therapy relationship, which may have influenced the decision to collapse scales in the first study. In this study therapist and patient positive and negative alliance factors were relatively non-correlated, supporting theory that predicts they are to a degree independent of each other.

This inconsistency in results using the CALTARS prompted the Marmar group to conduct studies which might further delineate the relationship between therapeutic alliance and outcome (Marmar, Weiss, & Gaston, 1989). A

sample of 52 partcipants who underwent a 12-session therapy for pathological grief was studied. Ratings of therapeutic alliance for sessions 2, 5, 8, and 11 were obtained from trained observer-judges and averaged. Again, only patient factors affected outcome: Patient Working Capacity was found to be related to increased interpersonal functioning at termination. In a further study with this same group of patients, Horowitz, Marmar, Weiss, DeWitt, and Rosenbaum (1984) found the only zero-order correlation to be association between patient negative alliance and lessened symptom change. The patient's positive alliance was not directly predictive of outcome but only in interaction with other variables.

Two other studies using the observer form of the CALTARS drew opposite conclusions concerning the relationship between alliance and outcome. Klee (1986) found, also using the observer version of the CALTARS, studying a sample of 32 outpatients selected from cases seen at a university-based clinic, that alliance factors were not directly related to outcome but interacted with both prognosis (as measured by alliance measured in the first 10% of treatment) and phase of treatment. In contrast, Eaton, Abeles, and Gutfreund (1988) studied 40 cases of dynamic psychotherapy selected from a general outpatient sample. Alliance levels were established early in treatment and remained relatively stable throughout therapy. For the entire sample, positive patient alliance was associated with

decreases in symptomatology as reported by the patient. When patients were grouped by length of treatment, however, some differences emerged, particularly in the relationship between alliance and participant ratings of outcome. There was a trend for therapist positive alliance to be lower in the short length group (less than 20 sessions). Therapist ratings of positive outcome were associated with high scores on Patient and Therapist Negative Alliance and negatively associated with Patient Positive Alliance in the long length group (greater then 40 sessions). In the medium-length group scores on the Patient Positive Alliance scale were associated with positive outcome as rated by both participants.

In an attempt to study therapeutic alliance comparatively, Marmar and his colleagues studied elderly depressed outpatients who underwent behavioral, cognitive, or brief dynamic therapy (Marmar, Gaston, Gallagher, & Thompson, 1989). Ratings were made using the therapist and patient versions of the California Psychotherapy Alliance Scale (CALPAS), the revision of the CALTARS specifically designed to be applicable to a broad range of therapies. Therapist's ratings of Patient Commitment and Patient Working Capacity were related to decreased scores on the Beck Depression Inventory and the Hamilton Rating Scale for Depression. When outcomes of the three different modalities were compared, alliance-outcome relationships were strongest in the cognitive therapy condition. In this sample,

alliance and outcome was not related for brief dynamic therapy. This suggests that different treatment modalities may possess different relationship between alliance and outcome.

In summary, these studies suggest therapeutic alliance is generally associated with positive outcome. This relationship appears to be absent at the very beginning of treatment but emerges very early; most studies demonstrated measurable effects at the third session. The findings of the studies vary largely with the method used to study alliance and outcome; observer-rated measures tend to find relationships between patient alliance and outcome only, particularly for global outcome and dynamic factors; participants's ratings of alliance are more predictive of their assessment of outcome, including symptomatic outcome. This conclusion was similar to that drawn by Horvath and Symonds (1991) from their meta-analysis, which demonstrated a moderate but consistent relationship between positive therapeutic alliance and outcome, with the strongest relationships shown by patient ratings. The latter suggests that the perspective of the rater is an important factor to consider in evaluating these results. It could be that participants are more accurate observers of the therapeutic process; or they could share a bias which also distorts their judgment of outcome. Observer-raters may escape this but perhaps at the cost of some information. The near-absence of a relationship between observer-rated therapist

alliance and outcome may reflect a bias on part of raters (who, by the nature of the scales, must also be clinicians) which render the judgment of therapists' alliance less reliable; or it could suggest that something other than therapist alliance influences the outcome of therapy, particularly dynamic psychotherapy. Additionally, the relationship between alliance and outcome may be mediated by other factors. Some of these are considered in the next section.

Therapeutic Alliance and Pretreatment Characteristics

Level of interpersonal functioning. Traditional clinical lore maintains that successful psychotherapy is dependent upon a certain history of attainment one or more satisfactory interpersonal relationships prior to therapy. Freud's concept of "unanalyzable" positive transference centers on this principle. Hence, it would follow that pretreatment interpersonal functioning should have significant effects on the therapeutic alliance. Empirical research is mostly supportive of this finding; however, other factors, such as type of alliance variable, and sample, seem to affect this relationship.

Moras and Strupp (1982) found clinicians' judgments of pretherapy interpersonal functioning was related to level of patients' involvement in psychotherapy for college students. Similarly, clinicians' ratings on the Health-Sickness Rating Scale was related to the formation of a strong helping

alliance (Morgan, Luborsky, Crits-Christoph, Curtis, & Solomon, 1982). Piper, deCarufel, and Szkumelak (1985) noted, in a group of 21 prescreened outpatients who were seen in brief dynamic therapy, that quality of defensive processes and object choice were related to process measures. Quality of defensive processes (based on Vaillant's hierarchy of defenses -- see Vaillant, 1977) and of object choice were strongly predictive of processes favorable to the development of a therapeutic alliance (measured here as judges' evaluation of revealing of private material and degree of understanding the therapist's interventions, as rated by the patient) averaged across therapy. These variables were also associated with positive outcome. In a sample of patients seeking psychotherapy for bereavement reactions, higher relationship composite scores on the Patterns of Interpersonal Change Scales (PICS) measured pre-treatment were related to higher scores on the Patient Working Capacity Scale of the CALTARS (Marmar, Weiss, & Gaston, 1989).

However, three further studies, using subjects from the same sample found no association between PICS interpersonal functioning and the four main subscales of the CALTARS. Two of these studies, however, demonstrated a relationship between a scale measuring developmental level of the self-concept, an object relations scale (a correlate, presumably, of quality of interpersonal relationships) and Patient Positive Alliance (Horowitz et al., 1984; Marmar et al.,

1986). In a sample of elderly patients seeking psychotherapy for depression, no relationship was found between interpersonal functioning as measured by the Young Loneliness Inventory and alliance as measured by the CALPAS (Gaston, Marmar, Thompson, & Gallagher, 1988). The authors felt that sample factors accounted for the lack of relationship, that is, elderly patients seeking treatment for depression may not demonstrate the same range of difficulties in interpersonal relationships as younger patients. This is similar, the authors pointed out, to the lack of association between these variables generally found in the sample of bereaved patients who do not present for psychotherapy because of interpersonal or character problems. They speculated different samples may yield different relationships among these variables.

Motivation. Motivation for psychotherapy appears to affect the therapeutic alliance and its relation to outcome. Marmar et al. (1986) demonstrated a positive relationship between pretreatment motivation and outcome. A more detailed analysis by Marmar, Weiss, and Gaston (1989) showed motivation related to the Patient Working Capacity on the CALTARS. Horowitz et al. (1984), using the same sample, took a somewhat different approach using multiple regression. They regressed level of motivation, alliance, and an interaction term composed of these two variables on symptomatic outcome (SCL-90). They found that Patient Positive Alliance was positively related to outcome at low

levels of motivation. As motivation increased, the relationship between Patient Positive Alliance and outcome went from positive to negative. A similar finding was discovered with the Patient Negative Alliance scale.

Coping. Gaston, Marmar, Thompson, & Gallagher (1988) studied the relationship between defensiveness as measured by Avoidance Coping Strategies and therapeutic alliance. Patients high in defensiveness had lower scores on the scales Patient Working Capacity and Patient Commitment, showing less commitment and less ability to engage in the self-reflection necessary for psychotheraputic work.

Expectations for treatment. Gaston, Marmar, Gallagher, and Thompson (1989) studied the relationship between patients' expectations for therapy and the therapeutic alliance. Decreased therapist ratings of Patient Commitment (on the CALPAS patient version) were associated with the patient's feelings of being helped by insight and support in brief dynamic therapy. This contrasted with cognitive therapy where the relationship was positive.

Pretreatment symptomatology. Many studies of therapeutic alliance have found no relationship between pretreatment symptomatology and therapeutic alliance (Hartley & Strupp, 1983; Marmar et al., 1986; Marmar, Gaston, Thompson, & Gallagher 1988; Marmar, Marziali, & Krupnick, 1981; Piper et al., 1985). However, this is not a uniform finding. Marmar, Weiss, and Gaston (1989) found

Total Pathology Scores on the SCL-90 were associated with decreased scores on Patient Working Capacity of the CALTARS. An association was also found between level of stress from recent life events and decreased Patient Working Capacity and Patient Commitment. Eaton, Abeles, and Gutfreund (1988) also found therapeutic alliance to be adversely affected by pretreatment symptomatology. Luborsky et al. (1983) found a similar association using the Helping Alliance Questionnaire. They also demonstrated a relationship between a clinician-rated measure of somatic symptoms on the Klein Somatic Scale and lower scores on the Helping Alliance Scales.

There are two possible explanations that may account for the divergent findings. It may be that the disorganization caused by intense affect (one source of which may be multiple life stressors) impairs alliance formation, particularly a capacity to engage in the self-reflection and exploration required by dynamic therapy. Another explanation is suggested from a study by Rosenbaum, Horowitz, and Wilner (1986). Patients who reported increased symptomatology on the SCL-90 were perceived by their evaluators as being more difficult, and therefore may present more of a challenge to the therapist.

Therapist Influence on the Therapeutic Alliance

As discussed previously, much research to date on the therapeutic alliance has shown patient factors to have a

direct influence on the alliance. Fewer studies have concluded similarly for therapist factors. However, the preponderance of psychoanalytic (as well as client-centered) theory has emphasized the therapist's role in creating and maintaining a therapeutic alliance, while taking patient factors into account. This role of the therapist has been emphasized particularly for more disturbed patients. The discrepancy between theory and empirical research will be considered in the following section. While most alliance systems attempt to eliminate technical considerations, the following review of the literature on the role of the therapist suggests that technical factors must also be considered in understanding the therapist's contribution to the therapeutic alliance.

Luborsky et al. (1986) analyzed results from several outcome studies such as the Penn Psychotherapy Project, the Vanderbilt Psychotherapy Project and found that individual therapist effects accounted for significant amounts of the variance in outcome. Additionally, this difference held across individual patients. He concluded that who one's therapist was did make a difference in outcome no matter what the treatment modality. Additionally, good therapists worked equally well with a variety of patients, not just certain ones. Sachs (1983) found that level of errors in technique in psychodynamic psychotherapy was significantly related to outcome. In the Menninger Psychotherapy Project (Kernberg et al., 1972), therapist skilfullness, rated by

judges, was associated with outcome. This was particularly true for patients with low ego strength.

Luborsky, McLellan, Woody, O'Brien, and Auerbach (1985) demonstrated that personal qualities of the therapist significantly affected alliance and outcome. Qualities such as "interest in helping patients" and "unusually psychologically healthy" and "very capable and skillful therapist" were highly related to helping alliance (r=.74) but not to outcome. However, helping alliance itself was related to treatment outcome (r=.65). The authors drew the following conclusion: *"The therapist's ability to form an alliance is probably the most crucial determinant of his effectiveness*...(authors' emphasis)... On the other hand, there is some evidence that the helping alliance is also influenced by the predisposition that the patient brings to treatment... On balance then, the helping alliance appears to be an interactive product of therapist and patient qualities." (Luborsky, McLellan, Woody, O'Brien, & Auerbach, 1985, p. 610).

Five studies have examined the role of therapist interventions on the therapeutic alliance. O'Malley et al. (1983) examined the relationship of process to outcome in patients designated as high and low prognosis based on first session scores on the Patient Participation scale of the Vanderbilt Psychotherapy Process Scale. High prognosis patients were defined as those individuals who had high scores on this scale at the first session, and low prognosis

as those who had low scores on this scale. Scores on therapist factors -- Warmth and Exploration -- increased over the first three sessions for patients with high outcome and decreased for patients with low outcome, regardless of prognosis. For patients with low outcome there were decreases in Therapist Warmth and increases in Negative Therapist Attitude. For low prognosis-high outcome cases, there was a significant increase in Patient Participation. Positive outcome across measures was associated with both the absolute level of Patient Participation and rate of increase; positive outcome was also associated with increases in Therapist Warmth and Exploration over the first three sessions.

Foreman and Marmar (1985) examined videotapes of six patients in therapy who demonstrated initially high levels of negative alliance; three subsequently had lowered negative alliances and positive outcomes and three did not. The authors made up a list of potential actions to observe from "general psychoanalytic interpretive techniques... identifying the patient's defense against anxiety or about an underlying feeling or impulse, as well as interpreting defense before impulse...the patient's conflict should be interpreted in relation to others in his everyday life, in relationship to the therapist (in the here-and-now) and in relation to the parents (usually in the past)." (Foreman & Marmar, 1985, p. 925). Therapist actions that distinguished between the two groups were: 1) addressing defenses the

patient used to deal with feelings in relationship to the therapist and to others; 2) addressing problematic feelings in relationship to the therapist; 3) linking the patient's problematic feelings about the therapist with the patient's defenses; and 4) addressing the "triangle of punishment," that is, the patient's need for self-punishment to assuage the guilt over anger or responsibility for the patient's suffering. The authors noted that substantial interpretive work was done in all six cases, but only those interventions that addressed difficulties in the relationship with the therapist brought about results and those that avoided it did not.

A second study utilized a new scale, the Alliance Building Action Scale (ALBAS) (Gaston, Marmar, & Ring, 1988) developed from the results of the previous study and with the addition of items taken from the literature on the difficult patient in cognitive therapy. This scale was then used to assess the relationship between therapist actions and alliance in cognitive therapy of depression in a sample of elderly depressed outpatients. Five patients were selected -- three with improved alliances and better outcomes, two with continuing problematic alliances (defined as continuing high levels of patient negative alliance). In contrast to the previous study, therapists' addressing of the patients' interpersonal relationship difficulties was related to increased alliance and improved outcome. The patient's problems in relationship to the

therapist were rarely addressed in either group. The authors were surprised at the latter finding and suggest further research with more diverse patient samples is necessary to explain it.

Gabbard, Horwitz, Frieswyk, Allen, Colson, Newsom, & Coyne (1988) studied the effect of therapist interventions in the therapy of one hospitalized borderline patient. They selected six widely-spaced sessions from over three hundred completed at the time of the study. Therapeutic alliance was measured by shifts in the patient's collaboration with the therapist using the Frieswyk et al. (1984) scale. Therapist interventions were rated using Gill's Process Coding Categories. Shifts in collaboration were associated with therapist interventions which focused on the therapeutic relationship, particularly transference interpretations. In 11 of 13 instances there was a shift toward increased collaboration. In the two instances where a downward shift occured, subjective examination of the clinical material revealed possible technical difficulties in the timing and depth of the interpretation which may have accounted for the shift away from the therapist. The authors suggest the use of this technique with other borderline patients and those in other diagnostic categories to determine if this phenomenon is true across patients.

Luborsky (1984) has identified what he terms "therapist facilitative behaviors" which have been shown to be highly correlated with the presence of a helping alliance and have

a low to moderate correlation with outcome (Luborsky, McLellan, Woody, O'Brien, & Auerbach (1985); Luborsky, Crits-Christoph, Mintz, & Auerbach, 1988) As can be seen from the following list of therapist facilitative behaviors, Luborsky advocates bolstering the helping alliance through positive support:

Helping Alliance 1: (the patient's sense s/he is being helped):

1) Convey through words and manner support for the patient's wish to achieve the goals of therapy;

2) Convey a sense of understanding and acceptance of the patient;

3) Develop a liking for the patient;

4) Help the patient maintain vital defenses and activities which bolster the level of functioning;

5) Communicate a realistically helpful attitude that the therapy goals are likely to be achieved;

6) Recognition, on appropriate occasions, that the patient has made some progress toward the goals;

7) Encouraging some patients to express themselves on some occasions;

Helping Alliance 2 (the patient's sense of working jointly with the therapist):

1) Encourage a "we bond";

2) Convey respect for the patient;

3) Convey recognition of the patient's growing ability to do what the therapist does in using the basic tools of treatment;

4) Refer to experiences that the patient and therapist have been through together;

5) Engage in a joint search for understanding (Luborsky, 1984, pp. 82-89, partial).

This list of behaviors is quite similar to those in the Therapist Positive Alliance Scale on the CALTARS, with two exceptions: the prescription of specific measures, and the emphasis on support of vital existing defenses. The latter is explicitly a supportive technique. Luborsky's technique for strengthening the therapeutic alliance emphasises maintaining and supporting areas of competence, and directly supporting the positive alliance rather than confronting the negative alliance. Luborsky states that such alliance-strengthening techniques are needed either when an otherwise well-functioning patient is overwhelmed by stress or anxiety, or with severely disturbed patients who show low anxiety tolerance and poor control over impulses. This view contrasts with that of Foreman and Marmar who suggest confrontation of difficulties in the therapeutic relationship is essential for improvements in the alliance. Luborsky prefers to view this confrontation not as alliance-bolstering but the work of the therapy itself, enabled by the presence of a positive helping alliance. Here it can be

seen that Luborsky takes the classical psychoanalytic view that a stable alliance is necessary for therapeutic work (that is, interpretation of transference) to take place, and like Zetzel advocates the use of supportive techiques.

An explanation of the differences among these studies may be partially explained by Luborsky's understanding of the effect of the presence of positive and negative helping alliances on treatment. He noted that the presence of a positive helping alliance was most predictive of therapeutic success. Patients who had successful outcomes in psychotherapy possessed **both positive and negative** helping alliance signs. The presence of negative helping alliance signs in the absence of positive ones was most predictive of therapeutic failure. He would, therefore, be more likely to focus on building the more positive aspects of the helping alliance first.

One may conceptualize the therapist's role in fostering the therapeutic alliance as containing two aspects; the provision of an atmosphere conducive to developing a positive attachment, and a way to identify and discuss what patient attitudes may be preventing the formation of a stable therapeutic alliance. The relevant issue involved is: how does one reduce disruption in the therapeutic relationship, particularly that due to negative affects? Does one consider it a manner of ego weakness and act in a supportive manner? Does one treat it through clarification and interpretation? This dilemma is theoretically difficult

to separate from analysis of both resistance and transference; indeed some would identify it as a subset of resistance. A brief review of relevant analytic literature follows.

Greenson (1967) in his work on standard psychoanalytic technique, enumerates the classical view of the analysis of resistance and transference in the analysis of neurotic patients. He points out that resistance, an effort to avoid a painful affect such as anxiety, guilt, or shame, is present at all points in a psychoanalysis. This painful affect is a result of a traumatic event where the ego was overwhelmed by conflict between reality and an instinctual impulse. Analysis of resistance involves these steps: confrontation, clarification, interpretation, and working through. Greenson suggests that beginning work on resistances is in association with elaborating the nature of the resistance (e.g., discussion of sexual issues in treatment cannot take place until the patient's difficulties about talking about sex are addressed). These resistances usually involve transference phenomena but Greenson would not advocate interpretation until it is both apparent as a resistance and *when its genetic origins become apparent*.

Gill and Muslin (1976) suggest that transference is present from the beginning of treatment, and that transference manifested in the here-and-now must be addressed early in treatment. A failure to do so, particularly with negative transference, may lead to a

distortion of the therapeutic relationship and/or premature termination. They also state that it is not necesary to know genetic origins of transference in order to work meaningfully with it. They advocate an interpretive approach to early alliance difficulties, presumably caused by negative transference phenomena.

These theorists have written about their analytic work with neurotic patients. More disturbed patients, such as patients with borderline personality, present for therapy with more negative transference and a disinclination to form an alliance with the therapist around the tasks of therapy. Kernberg (1986), from his work with borderline patients, suggests that transference be confronted and interpreted as soon as it becomes clear and presents as resistance. He maintains that interpretation has an ego-strengthening effect and opens the way for feelings of being understood and accepted by the therapist. Kernberg also advocates interpretation of idealizing transference as well. However, he also notes that psychoanalysis proper does not work with these patients as they are unable to withstand the regression inherent in the analytic situation. They require the structure of expressive psychotherapy, which includes the introduction of support by means of a treatment contract as well as occasional non-analytic "parameters" which provide structure to the treatment. He does eschew the use of supportive manuevers and cautions the therapist to

analyze with the patient any non-analytic intervention for its transference-inspired meaning to the patient.

Masterson (1978), in his approach to borderline patients, maintains that setting parameters of treatment, that is, maintenance of a set hour and a reasonable fee and the confrontation, within session, with reality factors, builds a stable therapeutic alliance. This strategy has clear supportive implications. Only then, when the therapist is experienced as a real object, can interpretive work on the patient's central issues take place.

Horwitz (1985) maintains that the divergent styles of technique -- interpretation versus relationship-building and noninterpretation of negative transference -- may represent treatment techniques applicable with different types of borderline patients. Those who are symbiotic in their tie with the therapist and rigidly defend against it may not be amenable to classical transference interpretation, while those who alternate between extremes of distance and closeness may be able to withstand the rigors of transference analysis.

Examination of this brief review illustrates the controversy among practitioners of psychoanalysis and psychodynamic psychotherapy about the relative roles of support versus interpretation of negative affects toward the therapist as a method to improve the therapeutic alliance. Luborsky, and to a certain extent Masterson, suggests that it is the supportive aspects that are most necessary to

building the alliance in fragile patients and that negative factors be best left to the latter stages of treatment. In other words, only a stable alliance forms the groundwork for effective interpretations. Horwitz maintains that type of severe pathology may influence selection of supportive versus interpretive technique. Kernberg, on the other hand, maintains that interpretation of negative transference is crucial to the development of the therapeutic alliance even in severely disturbed patients and support is only a necessary adjunct. Thus Kernberg advocates a method more along the lines of psychoanalytic technique for patients with neurotic symptoms and "character neuroses." However, it is of note that all of these authors do maintain that the therapeutic alliance contains aspects of transference, so that working with alliance of necessity involves working with transference.

Transference Interpretation and Psychotherapeutic Process

In classical psychoanalytic theory, interpretation is the mechanism through which therapeutic change takes place. The most powerful interpretation is the transference interpretation, in which behavior and emotions experienced by the patient toward the analyst are understood and interpreted as a re-enactment of unresolved conflicts in the patient's past, most importantly, to the patient's parental figures. All analytic theorists, including such non-

Freudian analysts as Kohut (1977) recognize the central importance of interpretation in producing change.

There has been some research on the effects of interpretations on the therapeutic process. Garduk and Haggard (1972) found that psychoanalytic interpretations (that is, an explanation of relationships between conscious and unconscious phenomena) increased affect expression, production of transference-based material, understanding and insight, and defensive and oppositional associations. Interpretations decreased production of conscious (secondary process) material.

Luborsky, Bachrach, Graff, Pulver, and Christoph (1979) examined the immediate effects of transference interpretations and outcome. In their sampling from the analyses of three patients, who varied in severity of psychological problems, they found that reactions to transference interpretations varied with level of pathology. Patient A consistently responded to interpretations with an increase in resistance. Patient B reacted with increased involvement with the analyst, increased transference, and a gradual decrease in resistance. Patient C, the most healthy of the three, reacted with increased affect, involvement, understanding, and transference. Resistance remained approximately the same. Patients B and C had positive outcomes, the latter the most positive. In their discussion, the authors noted that Patient A showed only negative helping alliance signs, while Patients B and C

showed both positive and negative helping alliance signs, implying that patients benefit from transference interpretations only in the presence of a positive helping relationship.

The Menninger Psychotherapy Project (Kernberg et al., 1972) concluded that initial ego strength and the related quality of interpersonal relationships modified the relationship between supportiveness and outcome of psychotherapy in nonpsychotic patients. Patients with initial high scores on both factors benefited from both supportive psychotherapy and psychoanalysis, with psychoanalysis achieving the most benefit. Patients with low initial scores (many of these patients would be considered to have psychopathology in the borderline personality spectrum) benefited most from a supportive-expressive approach with a focus on the transference with use of hospitalization if necessary to control acting out. They benefited less from both supportive psychotherapy and psychoanalysis. The investigators concluded that interpretation of the transference, particularly the negative transference as it impedes the psychotherapeutic relationship, was necessary to strengthen the therapeutic bond, and support necessary to control transference acting-out and stem regression (that is, formation of a psychotic transference). Piper, Debbane, DeCarufel, and Bienvenu (1987) found that total therapist interpretive activity was related to therapist ratings of positive outcome.

Malan (1976), in his classic study of brief psychotherapy, found that the proportion of therapist-parent/sibling (T/P) interpretations was associated with more successful dynamic outcomes. The proportion of T/P interpretations increased up to a point, and then leveled off. In sessions 1-5, T/P consists of only 4.35% of the interpretations made. This percentage peaks in the block of 16-20 sessions, where T/P interpretations peak at 9.27%. The proportion steadily decreases thereafter. It is of note that the total number of interpretations decreases steadily as therapy progresses.

Marziali (1984b) replicated Malan's study using the audiotaped sessions of 25 patients treated in brief dynamic therapy (20 sessions). Patients were selected using Malan's criteria for suitability for brief dynamic therapy. Three months after termination, follow-up interviews were conducted by another clinician who rated the patient on a revised version of Malan's Global Outcome Scale. At that time, patients completed the Derogatis Behavior Symptom Index. Presence of T/P and T/P/O (therapist-patient-other) interpretations were significantly associated with global dynamic outcome. There was overlap between measures of dynamic change and symptomatic change but dynamic change clearly measured improvement separate from the symptomatic dimension.

Other investigators have taken a different approach to the study of transference interpretation. One of these is

the Core Conflictual Relationship Theme (CCRT) (Luborsky, Crits-Christoph, Mintz, & Auerbach 1988) defined as a repeating "relationship episode" which contains elements of: a) a wish, need, or intention toward another person; b) the other person's response; and c) the response of the self. This approach to the transference is succinctly characterized as a recognition that "the transference is the reactivation in the here-and-now of internalized object relations...unconscious intrapsychic conflicts always involve the relationship of an aspect of the self relating to a significant object" (Kernberg in Luborsky, Crits-Christoph, Mintz, & Auerbach, 1988, p. xiii).

In a pilot study relating accuracy of interpretation according to the CCRT and patient resistance using the data from the Penn Psychotherapy Project, it was found that accurate interpretation decreases resistance in patients with high outcome and increases it in patients with poorer outcomes (Crits-Christoph, Schuller, & Connolly, 1988). When observing general levels of resistance, therapies with high accuracy on the Wish and Response from Other aspects of the CCRT produce higher resistance in the form of vagueness and doubting, where those with high accuracy in the Response from Self aspect were associated with decreased vagueness and doubting following interpretations. The authors interpret these findings in the following manner: patients confronted with their wishes and responses from others are unsettled and therefore think in more vague and doubting

ways; accurate interpretation of affective states make the patient feel understood and therefore more comfortable.

In using the same data, it was found that the accuracy of the therapist in interpreting the Wish and Response from Others was significantly predictive of outcome. This finding, surprisingly, was not related to or interactive with the strength of the helping alliance, nor was it related to level of errors in technique. The authors state that caution should be taken with these findings, however. They noted that there was a significant lack of both poor alliances and severely disturbed patients in their sample. They also noted that the general accuracy of interventions was low and reliability of rating errors in technique was also low. On the other hand, the relationship between accuracy of interpretation and outcome appeared as early as the fifth session. This finding was similar to that of Silberschatz, Fretter, and Curtis (1986) who found a significant correlation between interpretations consistent with a patient's unconscious "plan" (cognitive schema) and psychotherapy outcome. However, the views of the Luborsky group and the Silberschatz group differ somewhat to the nature of the phenomenon they have been studying. While Silberschatz et al. differentiate their "plan" concept from transference, the Luborsky group sees, as mentioned above, the CCRT as a manifestation of transference. They cite as evidence their findings, in addition to the accuracy factor, that reductions in the pervasiveness of relationship

conflicts as measured by the CCRT are related to outcome. They also relate the CCRT to Freud's 10 concepts of transference: the presence of one main pattern, the specificity and distinctiveness for each person, its prominence in erotic relationships, that part of the pattern is unconscious, is consistent over time, changes slightly over time, becomes evident in relation to the therapist, its resemblance to early relationships with parental objects, the resemblance of in-treatment patterns to out-of-treatment patterns of behavior, and the presence of positive and negative components to the pattern.

Supportive Interventions and Psychotherapeutic Process

Although it was originally believed that supportive techniques exerted only a stabilizing function, primarily through the use of suppression, recent theoretical developments and research suggest that supportive techniques also have an insight-producing and a structure-building effect. Developmental psychoanalytic theorists such as Blanck and Blanck (1974) maintain that supportive techniques such as ego support, where the therapist helps the patient engage his/her own strengths (that is, their highest functional level), build autonomous ego functions in the patient. They further point out such techniques are increasingly inappropriate for neurotic patients, as they can perform these functions themselves. Deficit theorists such as Kohut (1977), would also concur, maintaining that

so-called "supportive" interventions were essential in resolving earlier developmental failure and enabling the patient to then approach oedipal conflicts.

Kernberg (1985), who advocates supportive psychotherapy only when psychoanalysis or expressive psychotherapy is unfeasible or in character-disordered patients with antisocial features, notes that supportive psychotherapy does promote psychotheraeputic change, even though the material for psychotherapeutic work is conscious and preconscious. A recent review of technique in supportive psychotherapy notes:

> Even the most supportive treatment has the objectives of increasing the patient's awareness of the relationship between his behavior and the responses of other people, his ability to sort out cause-and-effect relationships, and his appreciation on a manifest level of the connection between past and current patterns." (Winston, Pinsker, & McCullough, 1986, p. 113)

Two empirical studies have addressed the relationship among pretreatment factors, therapist interventions, and outcome. Horowitz et al. (1984) found, in his sample of patients undergoing psychotherapy for bereavement reactions, that therapist interpretive work focusing on meanings of the stressful event, and transference interpretations benefited patients with high pretreatment motivation and high developmental level of self-concept and did not benefit those scoring low on these measures. Emphasis on

stabilization of the self-concept, a supportive intervention, benefited patients in the opposite manner.

Jones, Cumming, and Horowitz (1988), used the Psychotherapy Process Q-Sort (composed of items related to psychotherapy process) to study the same sample of patients mentioned above. For patients with high pretreatment disturbance levels (high symptom level, high experience of stress, poor psychological functioning) benefited most from interventions that were of a supportive nature. The patients expressed dependency wishes quite readily in therapy and appeared to desire a restorative relationship with the therapist. Patients relatively low in pretreatment disturbance benefited most from treatment which focused on the patient's affective experience and relationship to the therapist. The expression of dependency wishes vis-a-vis the therapist was much more conflicted. Only the item "Patient achieves new understanding or insight" was predictive of outcome regardless of pretreatment disturbance.

The authors note that "successful therapy with more severely disturbed patients had a more external focus, one aimed away from emotional conflicts and personal meanings of experience and toward a more reality-oriented construction of the patient's problem. The constellation of findings clearly represents an anxiety-suppressive or supportive psychotherapy." (Jones, Cumming & Horowitz, 1988, p. 52).

In contrast, this was precisely the focus for the less-disturbed patients.

In attempting to explain these data, the authors suggest they show that therapist actions strongly define the character of interactions in psychotherapy. They feel the skillful clinician fosters the therapeutic alliance and eventual outcome by the careful selection and execution of proper psychotherapeutic technique. This application is tailored to the patient's needs, level of psychopathology, external circumstances, as well as to the style of the therapist.

In summary, supportive techniques appear to play a role in psychotherapeutic change, particularly with more disturbed patients. How they work is not as clear as for the transference interpretation. Some maintain they suppress anxiety and strengthen reality testing; some that they provide the necessary structure for psychotherapeutic work; and others maintain that they, in and of themselves, build psychic structure and foster psychological development.

HYPOTHESES

The major hypothesis in this study is that therapist interventions significantly affect both alliance and outcome in psychotherapy. Part of the influence of therapist interventions on outcome relates to the impact of the therapist's contribution to the therapeutic alliance. In particular we are interested how the therapist's interventions affect the patient's ability to form a therapeutic alliance.

Although the therapeutic alliance may be thought of as a joint endeavor, patient and therapist contribute to it differently. The patient's contribution to the alliance is measured directly -- the patient's capacity to work in treatment, a patient's commitment, and negative and/or problematic attitudes that might directly impede therapeutic work. These have been shown to predict outcome. These ratings of patient alliance will be used in this study.

However, as noted in the literature review, studies utilizing clinical raters have not found consistent relationships between therapist alliance and outcome. This may be due in part to the difficulty judges have in rating therapists' attitudes; but it may also be that specific therapist interventions are the most important contribution

to the success of psychotherapy, especially dynamic psychotherapy. The therapist must convey a sense of warmth, empathy, and serving the patient's interest. But the technical aspect of the therapist's activity -- interventions directed at furthering the work of therapy -- are unique to the therapist and the therapeutic situation. Although warmth, empathy, and understanding can be demonstrated by the therapist's demeanor, they can be demonstrated through accurate interpretations, providing appropriate support and directing self-exploration of salient conflicts in a manner that takes into account both the patient's capacity and inclination to do such work.

Much study concerning the role of therapist interventions for furthering the work of therapy and the therapeutic alliance has been theoretical. The notable exceptions have been: Malan's (1976) study demonstrating a relationship between transference interpertations and dynamic outcome, and its replication by Marziali (1984a); Foreman and Marmar (1985) and Flasher (1988) on interventions concerning negative attitudes early in therapy improving alliance and outcome. A replication of these findings is one of the aims of this study. This latter finding, the clarification and discussion of negative attitudes toward treatment, has also been described by Kernberg (see the earlier review of his work). Other writers on the therapeutic relationship, most notably Freud (1912), Zetzel (1956), Greenson (1967), and Luborsky (1984)

have written on the importance of support and clarification for patients with poor ego strength (i.e., less ability to work in therapy, less positive alliance). This study will test the hypothesis that supportive interventions will improve the alliance in such patients, and be ineffective for patients who already have a high positive alliance. Included in the study there will be attempts at replication of findings of other studies of alliance and outcome, such as the association of pretreatment symptoms and alliance and association of alliance and outcome.

The following hypotheses of the effect of patient factors, therapist interventions on alliance and outcome will be addressed:

1) Patients' level of psychopathology adversely affects their ability to form a therapeutic alliance.

2) Patients who present for treatment with low positive alliance will benefit from supportive interventions -- that is, their alliance will improve with more support. However, those patients who come to therapy demonstrating a capacity to work and a commitment to therapy will find supportive interventions either unhelpful or detrimental to their positive alliance. Therefore, there is an interaction between positive alliance and supportive interventions.

3) The major effect of supportive interventions on outcome is through their interaction with positive alliance. One of these effects is to help the patient hear and understand interventions dealing with the transference.

4) Patients presenting for therapy with negative and/or defensive attitudes toward therapy (negative alliance) will benefit from interventions aimed at clarification and exploration of these attitudes. This will be associated with decreased defensive attitudes.

5) Interventions relating to transference (here broadly defined as interventions including the therapist-patient relationship as well as the traditional therapist-parent-other link) will be associated with increased positive alliance and increased outcome. Outcome measures related to dynamic change will be most affected.

6) Interventions relating to transference will be associated with positive outcome in conjunction with the use of other therapist interventions. a) Patients with low positive alliance will benefit from supportive interventions which will be related to the incidence of transference interventions.

7) Expressive interventions (aimed at increased exploration of thoughts and feelings) will positively effect therapeutic outcome.

These hypotheses will be tested with three path models. A path analytic approach was chosen for two reasons. Clinical theory is at bottom a theory of causation; path analysis permits an assessment of causality. Also, clinical theory about change is complex, and involves the interaction of many factors; again, path analysis permits the testing of complex models of change. Scales will be analyzed using the

multiple groups confirmatory factor analytic technique (Hunter, undated) which will ensure both scale homogeneity and correct for attenuation of correlations due to unreliability of the measures.

Path Model #1: Alliance Changes Early in Therapy The first of these, shown in Figure 1, presents a model for the relationship among pretherapy patient symptoms, initial patient alliance, therapist interventions and alliance in the third session of therapy. This path model, and all others subsequent to it, displays both the observed variables (the actual items administered, represented here by squares) and the latent variables (the underlying concepts thought to be measured by the observed variables), here illustrated by ellipses). Dark arrows represent causal paths between latent variables.

Going from left to right: Initial psychopathology, as demonstrated by the General Severity Index, (or GSI), leads to decreased capacity to work in therapy (Patient Working Capacity-Positive Aspects, or PWC-POS) as demonstrated in previous studies and in other work with this sample. On an experimental basis, we also will link symptomatology to negative alliance (Patient Working Capacity-Negative Aspects, or PWC-NEG). Initial alliance variables are intercorrelated as has been shown in previous work. Initial alliance is also associated with third session alliance. The relationship between initial alliance and third session alliance is affected by therapist interventions. Positive

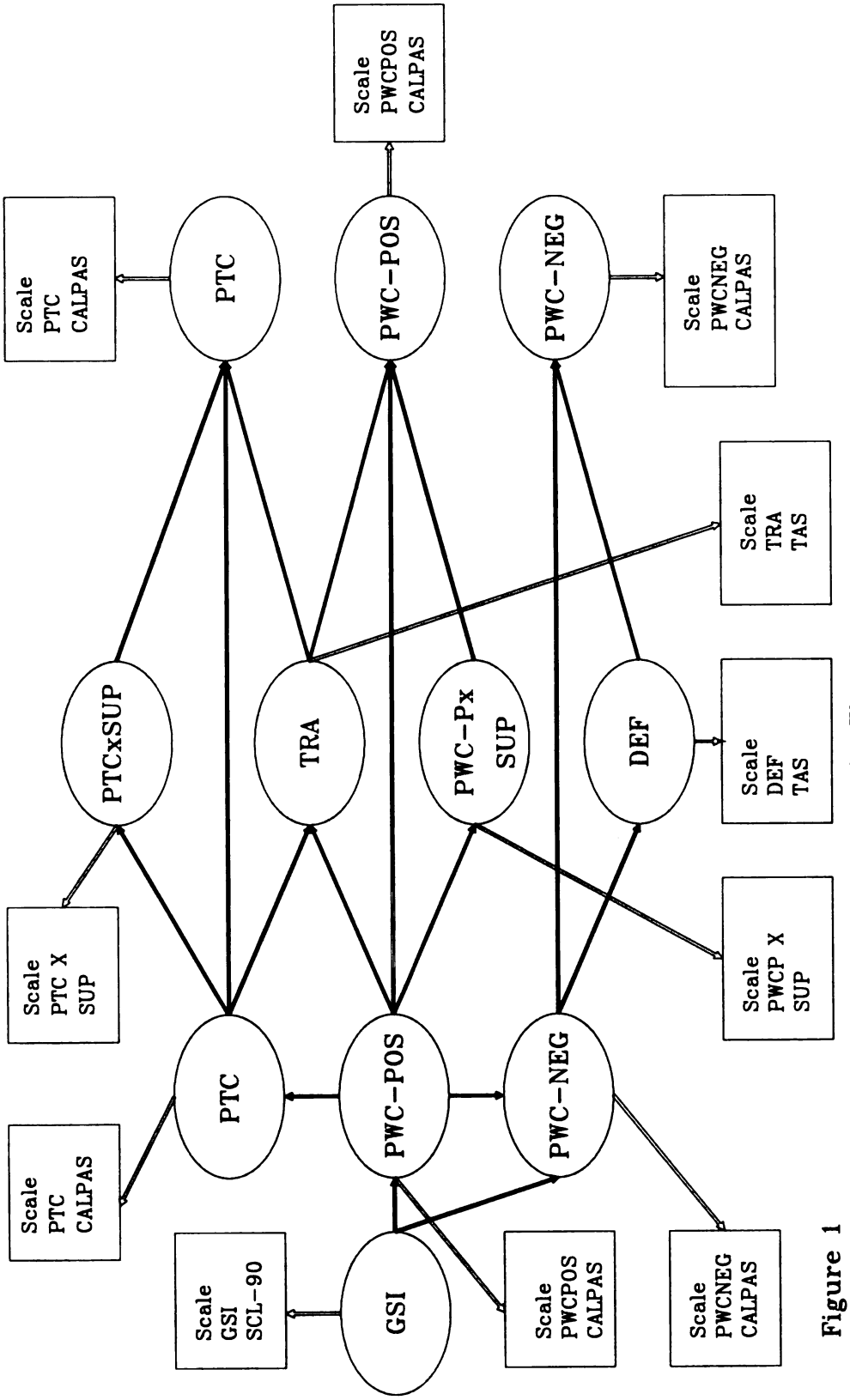

Figure 1
Path Model #1: Alliance Changes Early in Therapy
Observed variables are squares; latent variables ellipses
Table A1 lists items composing the observed variables

alliance (both PWC-POS and Patient Commitment, or PTC) is affected by Transference Interventions (TRA) and an interaction of positive alliance (both PWC-POS and PTC) and supportive interventions (SUP). Negative alliance in the third session (Patient Working Capacity-Negative Aspects, or PWC-NEG) will be decreased by Clarification and/or Confrontation of Defensive Attitudes (DEF) in the first session of psychotherapy.

Path Model #2: Alliance, Transference Interventions, and Dynamic Outcome The second model, shown in Figure 2, assesses the relationship among change in the patient's symptoms (General Severity Index, or GSI), rated dynamic change (DYN), positive alliance (PWC-POS and PTC), and transference (TRA). This model tests the hypotheses that positive alliance affects outcome and that transference interpretations affect outcome, that is, show a unique contribution to dynamic outcome.

Going from left to right: PWC-POS and PTC (average throughout treatment) are related. The relationship of PWC-POS (capacity to work in treatment) relationship to outcome is affected by the emphasis on transference interventions. Transference interventions lead to better dynamic outcome (DYN). Dynamic outcome is related to symptomatic outcome, measured as the standardized gain score on the GSI (PGSI). Positive alliance contributes directly to positive symptomatic outcome.

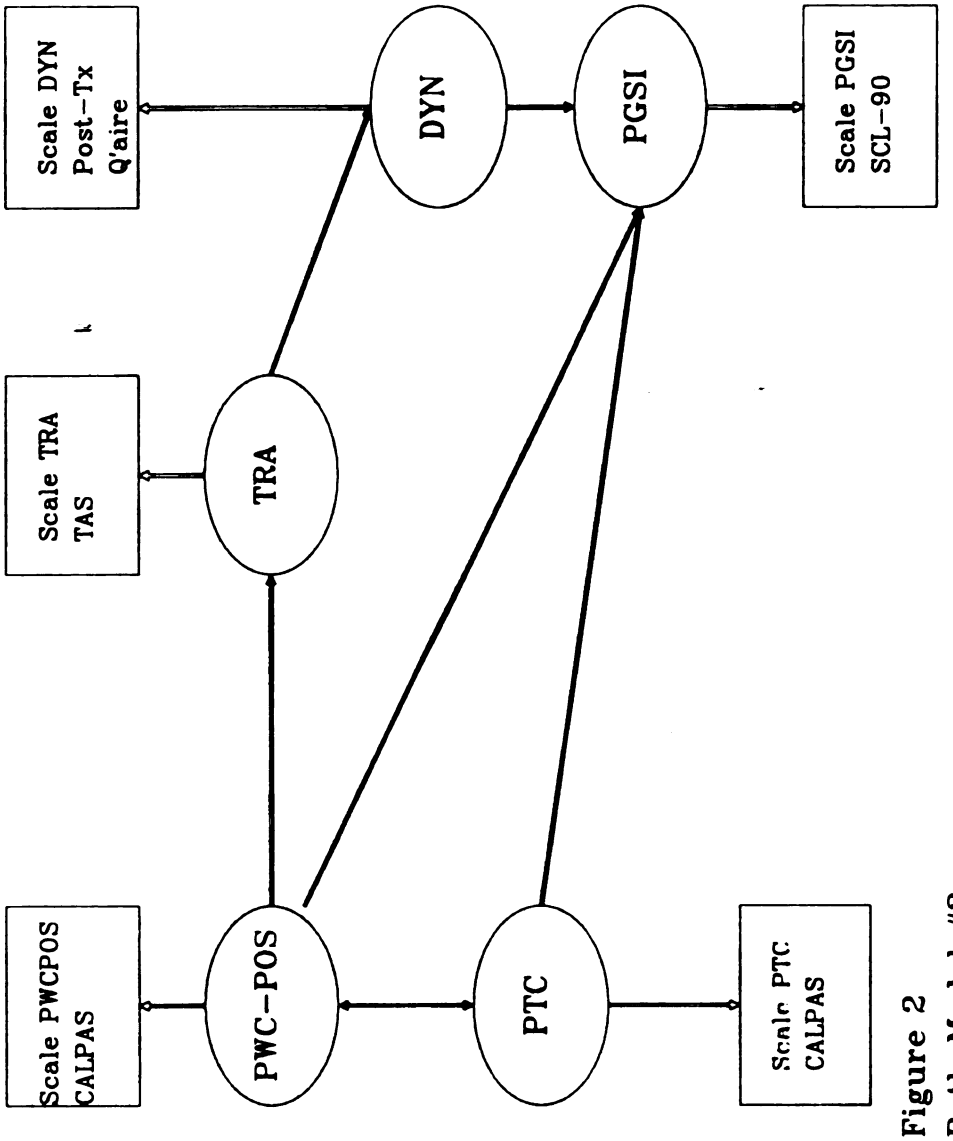

Figure 2
Path Model #2:

Observed variables are squares; latent variables ellipses
Table A1 lists items composing the observed variables

Path Model #3: Alliance, Interventions, and Outcome

This path model aims to show the relationship among alliance, therapist interventions, and combined outcome. It is illustrated in Figure 3. Alliance in the beginning, middle and late phase of therapy influences therapist interventions which in turn predict outcome. In this model, interaction of supportive interventions (SUP) and positive alliance (PWC-POS and PTC) and interventions addressing defensive attitudes of the patient (DEF) influence therapists' work on the transference and its prediction of outcome. Expressive interventions (EXP), as they encourage the patient to reflect and explore, will be correlated with outcome. Alliance predicts outcome.

Going from left to right: Patient alliance factors (PWC-POS, PWC-NEG, and PTC) are all related. Alliance factors directly affect outcome. Positive alliance factors (PWC-POS and PTC) influence, in interaction with supportive interventions (SUP) the effect of the therapist addressing the transference (TRA). Through this, positive alliance affects outcome (here, combined outcome, an average of dynamic and symptomatic outcome). For negative alliance (PWC-NEG), interventions (DEF) that address defensive attitudes in the sessions influences the therapist's work on the transference and positively affects outcome.

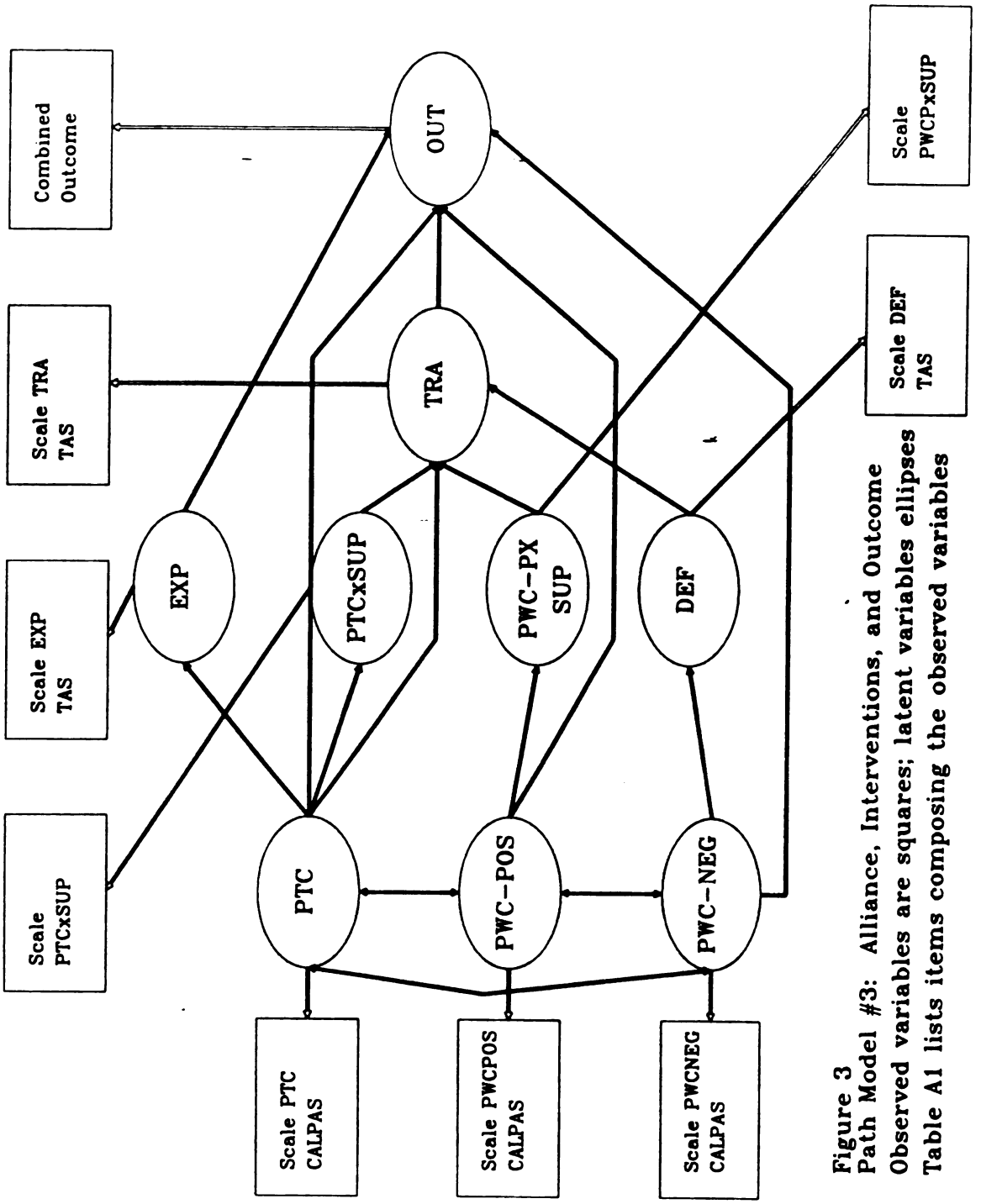

Figure 3
Path Model #3: Alliance, Interventions, and Outcome
Observed variables are squares; latent variables ellipses
Table A1 lists items composing the observed variables

METHOD

Subjects

Subjects for this study were patients who sought and received psychotherapy at the Michigan State University Psychological Clinic between 1978 and 1986. They had volunteered to take part in an ongoing psychotherapy research project at the Psychological Clinic. The Clinic provides low-cost services to adults, children, and families in the nonstudent community surrounding the university.

Selection of Cases for Analysis

Over the period from 1978 to 1986, there were approximately 121 terminations of adult patients for which at least some research data were collected. Of these, approximately 100 cases included sufficient tapes and pre- and post- therapy measures pertinent to the study. Cases of less than ten sessions were eliminated. Fifty cases were then randomly selected. Due to poor quality of some tapes, four cases had to be eliminated from analysis, leaving 46 cases in the final sample.

Characteristics of the Study Sample

Of the 46 subjects, 24.4% (11) were male and 75.6% (34)

were female. Their average age at intake was 29.8 years. All were Caucasian. There were 47.8% (22) who were single, 32.6% (15) who were married or living with a significant other, and 17.4% (8) divorced. Median income (in 1990 dollars) was $12,640. All subjects completed high school, and most were college graduates; average years of education was 15.57. In terms of occupational status, 29.5% (13) were professional or semi-professional; 34.8% (16) were clerical workers; 13.0% (6) were blue collar or service workers; 6.5% (3) were homemakers; and 13.0% (6) were students. Their mean GSI at intake was 1.33.

Data Collection

Original collection of pre- and post-therapy data was handled by the Clinic staff during the time treatment was performed. Each prospective patient was informed of the Psychotherapy Research Project at the standard intake interview, and informed consent obtained for those who wished to participate. Participants were given a pretreatment research packet consisting of the written consent form, Hopkins Symptom Checklist (SCL-90), and a demographic information sheet. They were asked to complete the material and return it to their therapist at the first psychotherapy session.

During the course of psychotherapy, audiotapes were collected at the first, third, and every fifth session thereafter including the termination session. If one of the

scheduled sessions was unavailable, the next session was included in the data library.

For planned terminations, the therapist gave the patient a prestamped post-therapy research packet consisting of the SCL-90 and a post-therapy questionnaire, with instructions to complete the forms and mail them back at their earliest convenience. For unplanned terminations, the post-therapy packet was mailed to the patient's residence with the same instructions. A post-therapy research packet consisting of a clinician's version of the Hopkins Symptom Checklist and a post-therapy therapist questionnaire was also distributed to therapists at termination. Follow-up letters with duplicates of the post-therapy forms were sent to those participants who did not return their packets for more than one month after termination.

Therapists

The therapist group was composed of all therapists who consented to take part in the clinic's research. Informed consent was obtained from participating therapists. They included the full range of professional staff from beginning practicum students (with little formal therapeutic experience, but considerable prior mental health volunteer service) to a few highly-experienced Ph.D. psychologists. The predominance of the caseload, however, was seen by Ph.D. candidates serving a half-time traineeship at the clinic. Many of these therapists had at least several years of

supervised psychotherapy experience. All trainees were directly supervised in their work by members of the Clinical Psychology faculty. The predominant theoretical orientation was psychodynamic, although client-centered and cognitive-behavioral modalities were represented as well. A prior study with this sample (Eaton, 1984) demonstrated that therapies in this database were from a broad dynamic orientation.

Raters

The raters were advanced graduate students or graduates in clinical psychology at Michigan State University. Years of experience in conducting psychotherapy ranged from four to ten years. Theoretical orientation was mainly psychoanalytic. Raters with similar backgrounds have been used in studies utilizing the study scales (Hoyt et al., 1981; Marmar, Horowitz, Weiss, & Marziali, 1986; Gaston, personal communication).

Measures

Therapeutic alliance. The California Psychotherapy Alliance Scales (CALPAS), the latest development of the Therapeutic Alliance Rating System, also known as the California Therapeutic Alliance Rating System (CALTARS), a scale designed to measure the "affective and attitudinal aspects" of the therapeutic alliance, was used to obtain ratings of therapeutic alliance in this study. This scale

is available in therapist, patient and observer-rated forms; only the observer-rated form, which will be used in this study, will be reviewed here.

The earliest version of the observer verion of this scale (Marizali, Marmar, & Krupnick, 1981) contained 42 items rated on a scale from 0 ("not present") to 5 ("intensely present"). Twelve positive and nine negative items made up the therapist subscale, and 11 positive and 10 negative items made up the patient subscale. The original raters were two psychiatric social workers with at least five years clinical experience. They received 12 hours of training in using the scale. In the initial study, on a sample of patients treated in brief dynamic psychotherapy, estimates of interrater reliability for individual items (estimated by Finn's r), were .82 for the therapist items and .76 for the patient items. As ratings of positive and negative alliance were highly intercorrelated within patient and therapist categories, the scales were collapsed, creating a Therapist Total Contribution Scale and Patient Total Contribution Scale. Internal consistency for these two scales was .88 and .94, respectively. A second study obtained interrater reliabilities measured by the intraclass correlation coefficient (ICC) (two-way ANOVA layout) for pooled ratings ranging from .50 to .72, with internal consistencies of .82 to .85.

Horowitz et al. (1984) used the CALTARS in their study of 52 subjects undergoing brief psychotherapy for grief

reactions. The 208 segments were rated by pairs of judges selected from a pool of seven. Each judge was paired with another an unequal number of times. Reliability at the session level, calculated by using the Spearman-Brown formula to adjust the Pearson correlation for the mean of the two jusges, was marginally acceptable for only three of the scales: Patient Hostile Resistance (.62), Patient Commitment (.49), and Therapist Negative Contribution (.55). The reliability of Therapist Understanding and Involvement (.25) and Patient Working Capacity (.19) was below acceptable levels. The authors posited several reasons for low reliability: limited training for judges; variations in clinical experience of raters; lack of recallibration sessions; and turnover of judges. Due to the rotating pairs of raters, a one-way ANOVA layout of the ICC was selected with judges randomly assigned to positions 1 and 2. The mean score of each judge over four sessions was calculated, and reliability was estimated at the treatment level. Using this scheme, reliabilities ranged from .76 to .81. Internal consistency, both at the session and treatment level, was high: .76 to .94, and .88 to .94, respectively. Eaton, Abeles, and Gutfreund (1988) reported interrater reliabilities for the mean of judges' ratings at the treatment level ranging from .54 to .73, using a Pearson correlation coefficient and the Spearman-Brown prophesy formula.

As demonstrated above, the CALTARS can be reliably rated at the treatment level by judges at the advanced trainee level. However, studies have shown the importance of selection of judges of a similar training level as well as the careful monitoring of judge performance.

Three dimensionality studies have been performed with the CALTARS. A principal components analysis was performed on the Marziali, Marmar and Krupnick (1981) sample. Six factors with eigenvalues greater than 1.0 emerged. Two factors, therapist positive and negative factors, were consistent with the conceptual scales. Four patient factors, two positive and two negative, were not consistent with the hypothesized factor structure. The patient positive factors reflected satisfaction with therapy or ability to work in therapy. The patient negative factors reflected dissatisfaction with therapy and a lack of commitment to treatment. A cross-validation study (Marmar, Horowitz, Weiss, & Marziali, 1986) factor analysis produced a structure similar to that mentioned above, but with only a single patient negative factor.

The third study was performed with the Horowitz et al. (1984) data (Marmar, Weiss, & Gaston, 1989), on 208 segments from 52 subjects. Their initial principal components solution yielded eight factors with eigenvalues greater than 1.0, so factor solutions with four, five, six, and seven components were forced. The five-factor solution was retained because of the pattern of item loadings, variance

accounted for (63.3%), and interpretability of these factors in terms of the alliance. These were developed into five component-based scales: Therapist Understanding and Involvement, Patient Hostile Resistance, Patient Commitment, Therapist Negative Contribution, and Patient Working Capacity. Patient Working Capacity had somewhat lower component loadings. Nine of the original items were eliminated either because they did not lead strongly on one dimension or loaded strongly on several dimensions. The correlations of the component-based scales with the component solution were: .97, .94, .94, .95, and .71. The fifth scale, Patient Working Capacity, has a lower correlation because the items loadings for this scale were somewhat lower. The authors felt that these results generally supported the original theoretical hypothesis of four domains of the alliance.

Study of the validity of the CALTARS has mainly been performed on the sample described above. High Patient Working Capacity was associated with level of education, motivation, and quality of interpersonal relationships, and adversely affected by stress. Therapist Understanding and Involvement was positively associated with education level.

To address concurrent validity, therapist actions addressing resistances were compared with alliance dimensions. Patient Hostile Resistance was associated with interventions addressing avoidance of important material and interventions by the therapist suppporting a more realistic

view of the therapist. The latter was also related to decreased scores on Patient Working Capacity. Low Patient Working Capacity and Patient Commitment were also related to interventions linking behavior towards the therapist with parental figures. Ratings on the Experiencing Scale, a widely used process measure, were positively associated with higher Patient Working Capacity and Patient Commitment.

As noted before, alliance measures have been moderately predictive of positive outcome (see p. 21-25 for a review of the CALTARS studies). Additional data from the Marmar, Weiss, and Gaston (1989) validation study indicated Patient Working Capacity to be associated with greater symptomatic improvement and higher interpersonal functioning at termination.

The CALPAS, the latest revision of the CALTARS series, is quite new and only preliminary reliability data are available. For the global judgments portion of the scale, intraclass coefficients (2,3) for the mean rating of three judges were 0.69 for the Patient Working Capacity (positive and negative) scale, 0.80 for the Patient Commitment scale, 0.71 for the Working Strategy Consensus scale, and 0.69 for the Therapist Understanding and Involvement scale. Ratings were made on 30 sessions by postdoctoral level clinical judges who underwent 10 hours of training on the instrument (Gaston, personal communication).

To obtain ratings suitable for analysis, two raters were trained in the use of the CALPAS-R. They received

instruction on the use of the scale and read the coding manual. They practiced on sample 20-minute segments until interrater reliability as measured by the intraclass correlation coefficient (Shrout & Fliess, 1979) for each subscale reached at least 0.70.

Raters overlapped in their ratings of tapes approximately 20% the time. Although retraining and recallibration was originally designed to be responsive to drift in reliability, (rcallibration to an ICC of 0.70 during the rating period) close monitoring was not possible due to difficulty in scheduling regular meetings. However, recallibration sessions were held by telephone conference call approximately five times. At that time, raters reviewed and discussed ratings on selected segments. For sessions where both judges contribute ratings, the mean rating was used for analysis.

As the latest version of the CALPAS is a new scale, the a priori factor structure was tested before path analyses are conducted. Confirmatory factor analyis, as described by Hunter (undated), was performed on the CALPAS data. (See Results section for a detailed explicaition of this analysis.)

Symptomatic change. The Global Severity Index (GSI) of the Hopkins Symptom Checklist (SCL-90) (Derogatis, 1977) was used to measure patient symptoms before and after therapy.

The present version of the SCL-90 was revised from an earlier version, the Hopkins Symptom Checklist (Derogatis,

Lipman, Rickels, Uhlenuth, & Covi, 1974), although the origin of the scale dates back to the 1950's. The HSCL contained 58 items and five symptom dimensions (depression, obsessive-compulsive, somatization, anxiety, and interpersonal sensitivity). The revision of the scale addressed several problems with the HSCL. The original item set included many which did not fit into the original symptom dimensions. Its usefulness as a clinical instrument was hampered by the limited range of symptomatology it covered, as well as its lack of a general scale of psychological distress. The revision involved the addition of 45 new items and deletion of 13 previous ones, the creation of six new subscales and validation of three summary scores.

The most current revision, the SCL-90, which was used in this study, is a 90-item self-report scale of common psychological symptoms. Individuals rate each item on a five-point scale of distress, from 0 ("not at all") to 4 ("extremely") as they have been experienced over the past week. These items have been grouped into nine symptom dimensions: Somatization, Obsessive-Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism. They also are used to generate three global measures of psychopathology: The Global Severity Index, the Positive Symptom Distress Index, and the Positive Symptom Total. The Global Severity Index (GSI), which measures both the

frequency and intensity of symptoms, was used as a general measure of psychopathology in this study.

The SCL-90 has been shown to be a valid and reliable measure of psychological symptomatology. Reliability at the subscale level calculated by coefficient alpha ranges from .77 (Psychoticism) to .90 (Depression). Test-retest reliability ranges from .78 (Hostility) to .90 (Phobic Anxiety) (Derogatis, 1977). Both SCL-90 subscales and global scales have been found to distinguish psychiatric outpatients from non-patient normals (Derogatis, 1977). The GSI is significantly correlated with the Global score on the Middlesex Hospital Questionnaire, which has been shown to be a reliable and valid measure of symptomatology (Boeloucky & Horvath, 1974, cited in Derogatis, 1977). Significant correlations between MMPI subscales and similar dimensions on the SCL-90 were found (Derogatis, Rickels, & Rock, 1976). The nine conceptually-derived symptom dimensions were shown to be similar to those derived using empirical factor-analytic techniques in a sample of 1,002 psychiatric outpatients (Derogatis & Cleary, 1977). A similar factor structure has been found using another outpatient sample (Evenson, Holland, Mehta, & Yasin, 1980). A change score was calculated by subtracting the standardized pretherapy score from the standardized post-therapy score.

Dynamic outcome. Dynamic outcome was assessed by using five questions on the Post-Therapy Therapist Questionnaire (Strupp, Fox, & Lesser, 1969). These questions assess

changes in levels of ego strength, capacity for insight, motivation, and degree of adjustment. Originally, an item assessing degree of change in basic personality structure was to be used, but factor analyses showed this item to be unsuitable for this scale. (A more detailed explanation of the factor analysis of this scale will be given in the Results section.) Therapists were asked, at the termination of therapy to rate these factors at the beginning and end of therapy on a scale from 1 ("very little") to 9 ("very great"), in comparison with "other clients you have seen in psychotherapy." A standardized difference score was computed for the mean of these five items.

Therapist actions. To measure interventions of the therapist, items from the Therapist Action Scale (Hoyt, Marmar, Horowitz, & Alvarez, 1981) and from the Psychotherapy Process Q-Sort (Jones, 1985; Jones & Pulos, 1987) were used.

The Therapist Action Scale (Hoyt, Marmar, Horowitz, & Alvarez, 1981) was constructed to assess therapist interventions in psychotherapy at the "middle level of abstraction," that is, between counting words or phrases and ratings of depth of intervention, in order to determine important events in dynamic psychotherapy. The original scale consisted of 27 items rated for emphasis as well as occurrence/non-occurrence from a scale of 0 ("did not occur") to 5 ("major emphasis"). These items were selected from earlier rating scales of therapist activity. In the

original validation study, judges (doctoral-level mental health professionals) listened to audiotapes of sessions from individuals undergoing stress reactions who were treated with brief dynamic psychotherapy. Provisional ratings were done for each one-third segment of the session and a composite was then obtained. Interrater reliability using Finn's r ranged from .44 to .96, with a mean r of .76. Similar reliabilities were obtained in a second study (Xenakis, Hoyt, Marmar, & Horowitz, 1983). In a third study with the scale, (Windholz, Weiss, & Horowitz, 1985), factor analysis of the self-report forms extracted seven factors: Transference and Termination, Reassurance, Affect Expression, Clarification, Relationships, Meaning of the Bereavement, and Errors. It was found that variation in the levels of these factors over sessions in brief therapy was consistent with theoretical models of short-term psychotherapy, thus implying construct validity of the measure.

The Psychotherapy Process Q-Sort (Jones, 1985) was developed to measure specific process factors and their relative importance in characterizing different forms of psychological intervention and psychotherapy outcome. It contains items describing patient attitude and behavior and experience, items pertaining to therapist actions and attitudes, and those describing interaction or the climate of the therapy. The Q-set was first constructed through examination of psychotherapy process measures and through

discussion with research-oriented clinicians. One hundred items were selected. They were used to construct pilot ratings on psychotherapies from a wide range of theoretical standpoints, including client-centered, Gestalt, rational-emotive, psychodynamic, and cognitive-behavioral. Important areas not covered by the Q-set were added and those items judged not descriptive were deleted. In a pilot study of audiotapes of therapy hours, interrater reliabilities of individual items ranged from .71 to .89. Reliability at the scale level ranged from .68 to .90, with mean reliability at .86. Studies using the Q-Sort have distinguished between different types of therapy (Jones & Pulos, 1987). Process correlates of psychotherapy have been found to be associated with such patient characteristics as gender and age (Jones, Krupnick, & Kerig, 1987). A recent study (Jones, Cumming & Horowitz, 1988) found that process factors associated with positive symptom outcome varied with pretreatment disturbance level. Characteristics of process generally termed "supportive" were significantly associated with positive outcome in patients with high pretreatment disturbance levels; those known as "expressive" were associated with positive outcome in patients with low pretreatment disturbance levels.

For this study, items were grouped into four subscales: Transference Interventions, Confrontation and/or Clarification of Defensive Attitudes, Supportive Interventions, and Expressive Interventions. The

Transference Interventions subscale contains three items from the original TAS and the 1985 revision. The second subscale, Confrontation and/or Clarification of Defensive Attitudes, contains four items from the TAS that refer to the identification and exploration of how the patient avoids important material or feelings in session. The third subscale, Supportive Interventions, contains five items from both the TAS and the Psychotherapy Q-Sort that are indicative of supportive or anxiety-suppressing interventions. The fourth subscale, Expressive Interventions, contains items from the TAS and the Q-Sort indicative of the therapist's efforts to get the patient to explore the meaning of experience or emotions or to express feelings. The hypothesized factor structure for the TAS was tested by confirmatory factor analysis (Hunter, undated). Results of the factor analysis will be presented in the Results section.

To obtain ratings suitable for analysis, two raters were trained in the use of the TAS. They received instruction on the use of the scale and read the coding manual. They practiced on sample 20-minute segments until interrater reliability as measured by the intraclass correlation coefficient (Shrout & Fliess, 1979) for each subscale reached 0.70.

Raters overlapped in their ratings of tapes approximately 25% of the time. Although retraining and recallibration were originally designed to be responsive to

drift in reliability, close monitoring was not possible due to difficulty in scheduling regular meetings. In spite of these difficulties, recallibration meetings (both face-to-face and by telephone conference call) were held six times during the rating period. At these meetings, raters reviewed and discussed ratings on selected segments. For sessions where both judges contribute ratings, the mean rating was used for analysis.

RESULTS

Measurement Model Analysis of CALPAS Subscales

The CALPAS is a new instrument whose subscales have not been firmly validated. Therefore, exploratory and confirmatory factor analyses were employed to test the integrity of the a priori five-factor model of the CALPAS.

An initial confirmatory factor analysis using the oblique multiple groups method (Hunter, undated) was performed using the original subscale structure. The results of this analysis revealed Patient Working Capacity, Patient Commitment, and Working Strategy Consensus were highly intercorrelated (about 0.8). Tables A2 and A3, containing the raw score correlation matrix and the initial oblique multiple groups factor analysis are shown in the Appendix. Since the analysis suggested the presence of a general factor, an exploratory principal axis factor analysis was performed on all CALPAS segments. Four factors with eigenvalues greater than one were found. After varimax rotation, these four factors accounted for 64.2% of total variance, with the first factor representing 45.8% of the total. Items loading onto the first scale included all items from the original Patient Working Capacity-Positive Aspects; these items loaded most strongly and clearly. Also loading onto this factor were most items from the original

Patient Commitment and Working Strategy Consensus. Six items which loaded strongly onto this factor also loaded strongly onto other factors (absolute difference between loadings ranging from 0.03 to 0.16). Two of these items were from the Patient Working Capacity-Negative Aspects subscale which had negative loadings on this scale. The latter, the remainder of which were from the Patient Commitment and Working Strategy Consensus subscales, were dropped from subsequent analyses. The second factor, accounting for 8.9% of the variance, consisted of all items from the original Therapist Understanding and Involvement scale and one item from the Working Strategy Consensus subscale (which deals with therapist technique). The third factor, accounting for 5.8% of the variance, included two types of items. Some of the items from the Patient Commitment and Working Strategy Consensus scales which were dropped due to high loadings on two or more factors loaded positively onto this scale. Additionally, four items from the Patient Working Capacity-Negative Aspects scale loaded onto this factor with high negative loadings. These negative loadings were unique and suggested the existence of a Patient Working Capacity-Negative Aspects (PWC-NEG) scale. The final scale, accounted for 3.7% of the variance and consisted of only one item loading clearly onto this scale. This item (and a second item which loaded strongly negatively onto the third factor) was from PWC-NEG.

The CALPAS, less the items which loaded onto more than one factor, and less the fourth factor, were analysed using the oblique multiple groups technique. A few more items were eliminated for violations of the parallelism assumption. The final analysis suggested a three-factor structure for the CALPAS: Patient Positive Alliance, Patient Working Capacity-Negative Aspects, and Therapist Understanding and Involvement. A list of discarded CALPAS items, as well as the final scale, is located in the Appendix in Table A4. Table 1 contains the item-factor and factor-factor intercorrelation matrix for the final CALPAS. This matrix contains the correlations among items, items and factors, and between factors corrected for attenuation due to unreliability.

Table 1
Item-Factor and Factor-Factor Intercorrelation Matrix
CALPAS (N=184)

		POS							NEG			TUI							
		6	1	2	17	3	15	4	8	9	11	29	30	26	25	28	24	POS	NEG	TUI
	6	82*	80	77	71	74	66	65	-15	-8	-48	43	53	53	49	24	37	91	-32	56
	1	80	78*	80	71	68	64	60	-15	-9	-41	32	41	50	38	18	31	88	-30	45
P	2	77	80	69*	60	77	57	54	-16	-18	-47	36	46	46	44	18	29	83	-37	47
O	17	71	71	60	68*	61	66	71	-27	-17	-44	35	41	46	39	18	32	83	-41	45
S	3	74	68	77	61	64*	57	54	-22	-12	-52	35	48	45	47	21	31	80	-40	49
	15	66	64	57	66	57	52*	49	-30	-18	-41	29	35	45	33	14	19	72	-42	38
	4	65	60	54	71	54	49	50	-9	-8	-33	33	36	37	40	13	28	71	-23	40
N	8	-15	-15	-16	-27	-22	-30	-9	73*	62	53	-5	-12	-24	-17	-10	-3	-24	87	-15
E	9	-8	-9	-18	-17	-12	-18	-8	62	49*	40	-5	-5	-16	-15	-7	-7	-16	70	-12
G	11	-48	-41	-47	-44	-52	-41	-33	53	40	37	-11	-26	-28	-21	-3	-13	-54	60	-22
	29	43	32	36	35	35	29	33	-5	-5	-11	80*	80	68	64	62	61	43	-9	89
T	30	53	41	46	41	48	35	36	-12	-5	-26	80	74*	62	71	57	56	53	-20	86
U	26	53	50	46	46	45	45	37	-24	-16	-28	68	62	61*	67	56	48	57	-32	78
I	25	49	38	44	39	47	33	40	-17	-15	-21	64	71	67	61*	49	49	51	-24	78
	28	24	18	18	18	21	14	13	-10	-7	-3	62	57	56	49	47*	47	22	-9	69
	24	37	31	29	32	31	19	28	-3	-7	-13	61	56	48	49	47	43	36	-11	65
	POS	91	88	83	83	80	72	71	-24	-16	-54	43	53	57	51	22	36	100	-43	56
	NEG	-32	-30	-37	-41	-40	-42	-23	87	70	60	-9	-20	-32	-24	-9	-11	-43	100	-23
	TUI	56	45	47	45	49	38	40	-15	-12	-22	89	86	78	78	69	65	56	-23	100
		6	1	2	17	3	15	4	8	9	11	29	30	26	25	28	24	POS	NEG	TUI

Notes:

1) Asterisked numbers in the diagonal are the communalities, which are the reliability of each item.
2) Correlations of each item with the factor true score are at the bottom right side.
3) The factor-factor intercorrelations are displayed at the bottom right of the table.

POS: Patient Positive Alliance
NEG: Patient Working Capacity-Negative Aspects
TUI: Therapist Understanding and Involvement

Summary Statistics for CALPAS

Figures 4a and 4b show the 95 per cent confidence interval for session and grand means for the CALPAS subscales as determined above and used in this study. Multiple range tests were also performed to test for differences in subscales between sessions. These analyses showed that for the CALPAS subscale Patient Positive Alliance, the mean of Segment 2 (Session 3) is significantly lower than any of the other segments. No significant differences were found among the Patient Working Capacity-Negative Aspects scale means.

Reliability of CALPAS

Since 39 of the 184 segments (20%) were rated by both judges, reliability was first assessed through use of the intraclass correlation coefficient (ICC) recommended by Fliess (1986). This formula estimates the reliability of a single session rating by one judge using a variant of a two-way random-effects ANOVA. These are listed in Table 2. In addition, ICC for the mean rating of the segments rated by both judges are also listed, also calculated using a two-way random effects ANOVA (Shrout and Fliess, 1979).

Despite adequate training time for raters, the CALPAS subscale ratings were disappointingly low, ranging at the individual segment level from 0.25 to 0.87. There are several possible explanations for this. As can be seen in Figure 4, variability was quite low for all variables. Low

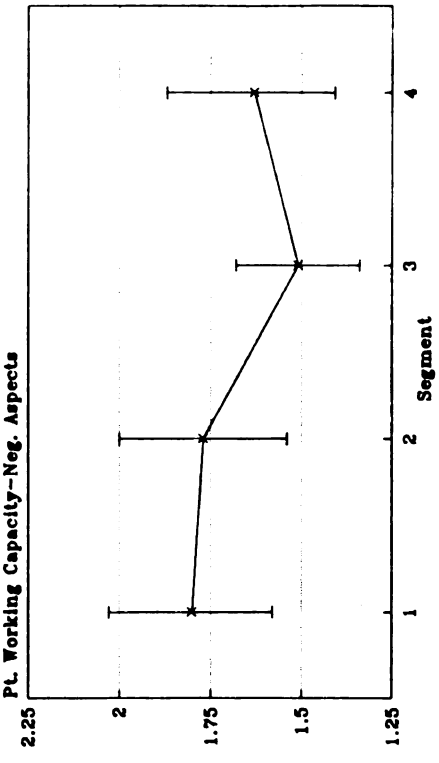

Figure 4b
PWC-NEG: 95% confidence intervals around mean

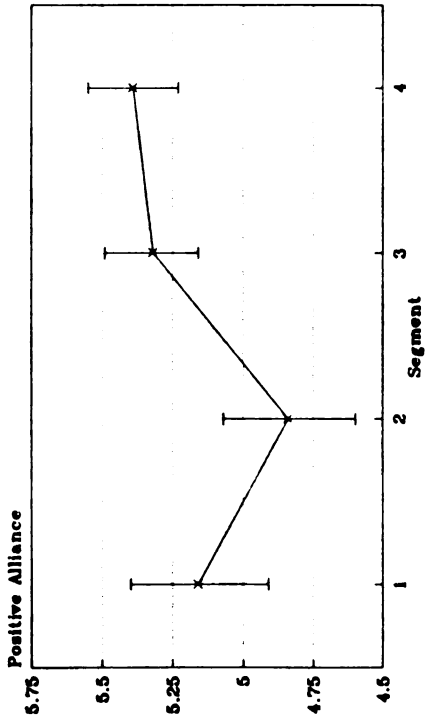

Figure 4a
Positive Alliance: 95% confidence intervals around mean

Table 2
CALPAS Reliability
Intraclass Correlation Coefficients

Scale	Single Rating	Mean Rating
All Segments (N=37)		
Patient Positive Alliance	.32	.58
Patient Working Capacity-Negative Aspects	.40	.57

variability has been shown to greatly attenuate the ICC (Lahey, Downey, & Saal, 1983). Recalibration training for judges was also limited, especially in the later stages of the project. The latter ratings were also done over a longer period of time which further increased the likelihood of rater drift. It is also of note, however, that these session reliabilities are similar for earlier versions of the CALPAS (the CALTARS) rated under similar conditions (Marmar, Horowitz, Weiss, & Marziali, 1986). In that study, reliability (of the mean of judges' ratings -- not of a single rater) at the session level ranged from 0.19 to 0.62.

The problems with the intraclass correlation as an index of relability in a sample with low between-subjects variability suggest selection of an alternate measure of reliability that does not depend upon total variability in a sample. The Finn's r (Finn, 1970; Tinsley & Weiss, 1975) satisfies this requirement. Finn's r is a measure of

reliability which is is based on the improvement in reliability over chance agreement made by judges. These figures are shown in Table 3; they are considerably higher, and suggest that low variability had indeed attenuated the intraclass correlation coefficient.

Table 3
CALPAS Reliability
Finn's r Calculations

Scale	Single Rating
All Segments (N=37)	
Patient Positive Alliance	.93
Patient Working Capacity-Negative Aspects	.86

Measurement Model Analysis of Therapist Action Scale (TAS) Subscales

As with the CALPAS, the integrity of the TAS measurement model was tested using a confirmatory oblique multiple groups factor analysis. The raw score intercorrelation matrix and the item-factor/factor-factor intercorrelation matrix are displayed in Tables A5 and A6 in the Appendix. The initial factor analysis showed Item 11 (on the Supportive Interventions subscale) to be negatively correlated with its own factor; items 5, 7, 8 and 16 were

removed due to violation of parallelism assumptions. A second factor analysis was performed which resulted in intact TAS scales. Table A7, located in the Appendix, shows discarded and retained items. Table 4 shows the final item-factor and factor-factor intercorrelation matrix for the TAS. This matrix has a structure identical to the CALPAS factor matrix.

Coefficient alpha for these scales were as follows: Transference Interventions (TRA) 0.63; Confrontation and/or Clarification of Defensive Attitudes (DEF) 0.85; Supportive Interventions (SUP) 0.77; and Expressive Interventions (EXP) 0.61. These coefficients are quite low in comparison to the CALPAS. This is due to the combined effects of small number of items per scale, particularly for TRA and EXP, and the low-to-moderate intercorrelation among scale items (as can be seen in the intercorrelation matrix).

Summary Statistics for TAS

Figures 5a-d show the means, standard deviations, and 95 per cent confidence intervals for the TAS subscales as used in this study. Small standard deviations, as were found with the CALPAS, were also found here. Although the range of scores for these subscales was potentially 1 (none present) to 4 (major emphasis), the mean of all subscales is under 2; Expressive Interventions was at about 2.0. Multiple comparisons tests performed on these scales showed significant differences for all subscales except the

Table 4
Item-Factor and Factor-Factor Intercorrelation Matrix
TAS (N=184)

		---TRA---			--DEF--		-----SUP-------			--EXP--					
		1	3	2	4	6	9	13	10	12	14	15	TRA	DEF	SUP	EXP
T	1	53*	47	34	28	31	3	-11	10	-18	13	11	73	34	-6	17
R	3	47	40*	28	14	19	-1	-10	-3	-6	10	-4	63	19	-7	4
A	2	34	28	23	3	4	4	-11	2	-7	2	-5	46	4	-4	-2
D	4	28	14	3	76*	75	-4	-18	-6	-8	21	24	25	87	-13	33
E	6	31	19	4	75	76	0	-15	-10	-2	23	27	30	87	-10	37
F																
	9	3	-1	4	-4	0	63*	57	55	43	-2	-18	3	-2	79	-15
S	13	-11	-10	-11	-18	-15	57	58*	44	50	-8	-17	-18	-19	76	-18
U	10	10	-3	2	-6	-10	55	44	37*	30	3	-16	5	-9	61	-9
P	12	-18	-6	-7	-8	-2	43	50	30	33	-16	-12	-17	-6	57	-21
E	14	13	10	2	21	23	-2	-8	3	-16	48*	44	14	25	-9	68
X	15	11	-4	-5	24	27	-18	-17	-16	-12	44	48	1	29	-23	68
P																
TRA		73	63	46	25	30	3	-18	5	-17	14	1	100	31	-10	11
DEF		34	19	4	87	87	-2	-19	-9	-6	25	29	31	100	-13	40
SUP		-6	-7	-4	-13	-10	79	76	61	57	-9	-23	-10	-13	100	-23
EXP		17	4	-2	33	37	-15	-18	-9	-21	68	68	11	40	-23	100

Notes:

1) Asterisked numbers in the diagonal are the communalities, which are the reliability of each item.
2) Correlations of each item with the factor true score are at the bottom right side.
3) The factor-factor intercorrelations are displayed at the bottom right of the table.

TRA: Transference Interventions
DEF: Confrontations/Clarifications of Defensive Attitudes
SUP: Supportive Interventions
EXP: Expressive Interventions

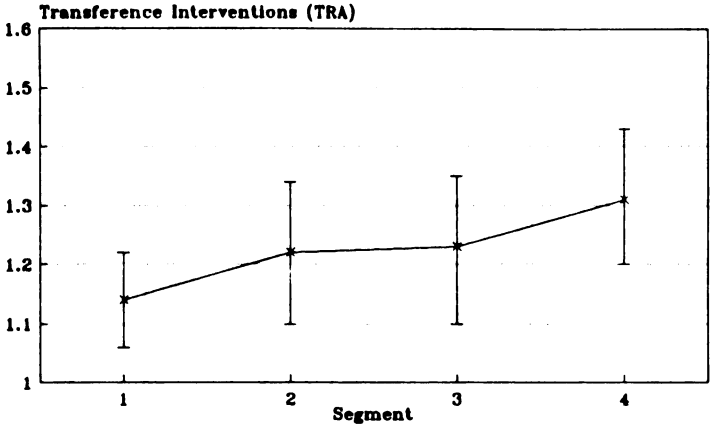

Figure 5a
TRA: 95% confidence intervals around mean

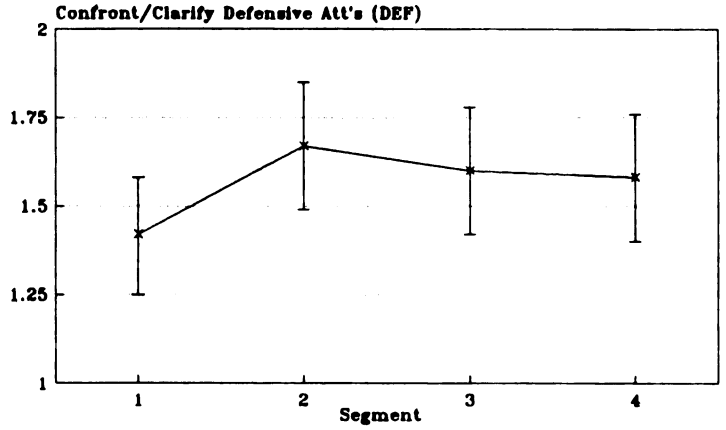

Figure 5b
DEF: 95% confidence intervals around mean

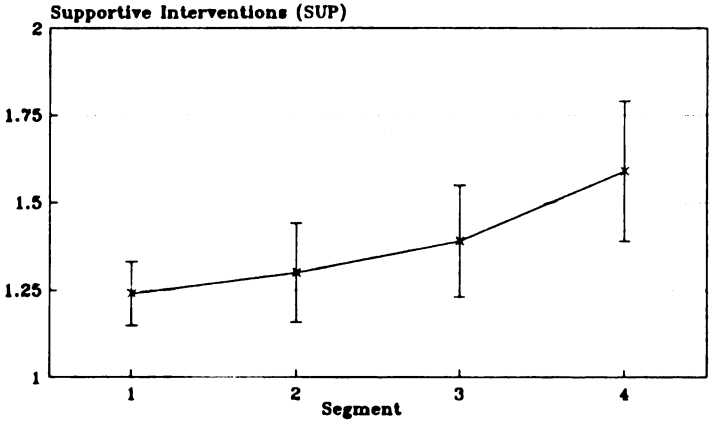

Figure 5c
SUP: 95% confidence intervals around mean

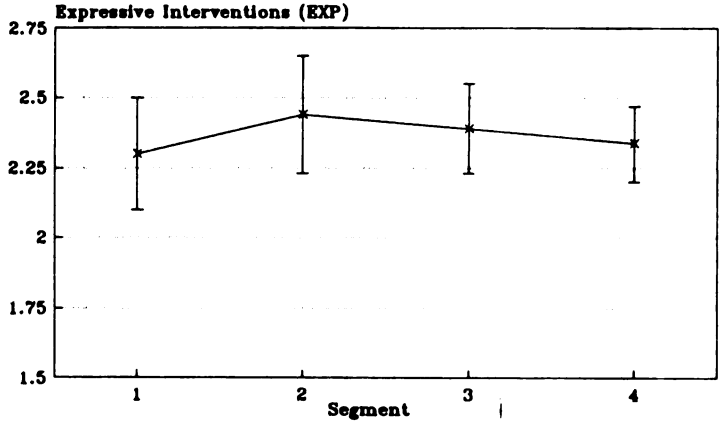

Figure 5d
EXP: 95% confidence intervals around mean

Expressive Interventions scale. As shown in Figures 5a-d, Segment 4 (Late Session) is significantly higher than Segment 1 (Session 1) on the Transference Interventions subscale; Segment 4 is significantly higher than Segment 1 on the Confrontation and/or Clarification of Defensive Attitudes subscale; and Segment 4 is significantly higher than Segments 1, 2, and 3 on the Supportive Interventions subscale.

Reliability of TAS

As with the CALPAS, a subsample of segments (45, or 25%) were rated on the TAS by both judges. Reliability of a single rating was estimated using the intraclass correlation coefficient recommended by Fliess (1986). and for the mean rating (Shrout & Fliess, 1979). These are listed in Table 5. As with the CALPAS, TAS many subscale ratings were quite low, but also more variable. The problem with low subscale variability that attenuated CALPAS reliability ratings was present here as well. Also, particularly for the first hour, therapists made few interventions, lowering internal consistency, and therefore also reliability (Lahey, Downey, & Saal, 1983).

As with the CALPAS, ratings were performed over an extended period of time. Reliabilities for single sessions varied widely as well, ranging from 0.00 for Supportive Interventions and 0.81 for Transference Interventions. The

Table 5
TAS Reliability
Intraclass Correlation Coefficients

Scale	Single Rating	Mean Rating
All Segments (N=45)		
Transference Interventions	.47	.65
Contront/Clarify Defensive Attitudes	.28	.46
Supportive Interventions	.47	.67
Expressive Interventions	.34	.69

surprising result for Supportive Interventions is misleading and is due to the extremely low mean and standard deviation of this scale in the first session where this reliability was found. Examination of the raw data revealed that raters agreed on 4 of 15 segments used to estimate reliability for this session; no ratings were more than 0.60 apart.

For reasons similar to the CALPAS, a Finn's r was calculated for each of the TAS subscales. These single-session ratings are shown in Table 6a. These reliabilities were a considerable improvement over the ICC estimates of reliability as well, although a bit lower, particularly for Expressive Interventions. They fall within the range of acceptable reliability suggested by Kraemer (1981).

Table 6
TAS Reliability
Finn's r Calculations

Scale	Single Rating
All Segments (N=45)	
Transference Interventions	.90
Contront/Clarify Defensive Attitudes	.72
Supportive Interventions	.84
Expressive Interventions	.64

Outcome Measures

SCL-90. It was discovered that a small amount of data (165 out of 8280 data points, approx. 2%) were missing from the study sample. To complete the data set, the mean of the subscale scores for each item was substituted for the missing values. Each subject had at least some original data, and many subjects had only a few data points missing. As the SCL-90 has been frequently used and has demonstrated reliability and validity, no formal tests of the measurement model were made here. The General Severity Index (GSI), used in this study, had a pretherapy mean of 1.33 (SD 0.61) and a mean of 0.84 (SD 0.47) at termination. A paired-samples t-test showed these means to be significantly different ($t=4.96$, 45 df, $p < .001$, $r=.27$). A standardized

gain score was calculated for the GSI and will be used in data analysis.

Post-Therapy Therapist Questionnaire. A factor analysis procedure was used to obtain psychometric characteristics of the questions selected to estimate dynamic outcome from the Post-Therapy Therapist Questionnaire. A principal components analysis with oblique rotation was performed. Five factors emerged, including a factor which contained most of the dynamic outcome factors. One original question ("Degree of basic personality change") loaded highly on several factors, and was therefore eliminated. A confirmatory oblique multiple groups factor analysis was then performed on the data, which confirmed the model. As the therapist estimated the degree of improvement with the patient's baseline, a standardized gain score was calculated as well. The mean score on the dynamic change items at the beginning of treatment was 4.61 (SD 1.12) and at termination was 5.57 (SD 1.37). These means were significantly different at the less than .001 level ($t=5.28$, 45 df, $r=.53$) by a paired-sample t-test. Table 7 shows the items used to calculate dynamic change.

Table 7
Post-Therapy Therapist Questionnaire
Final List of Dynamic Outcome Items

1) Ego strength (before and after treatment).
2) Capacity for insight (before and after treatment).
3) Adjustment (before and after treatment).
4) Motivation for psychotherapy (before and after treatment).
5) Prognosis (before and after treatment).

Path Model #1: Alliance and Interventions Early in Treatment

The first path model is a test of the following hypotheses:

(1) Patients' level of psychopathology adversely affects their ability to form an alliance;

(2) Patients who present for treatment with low positive alliance will benefit from supportive interventions -- that is, their (positive) alliance will improve with more support. However, those patients who come to therapy demonstrating a capacity to work and a commitment to therapy will find supportive interventions either unhelpful or detrimental to their positive alliance. Therefore, there is an interaction of alliance and supportive interventions.

(3) Patients presenting for therapy with negative and/or defensive attitudes toward therapy (negative alliance) will benefit from interventions aimed at clarification and confrontation of defensive attitudes. This will be associated with decreased defensive attitudes.

Because of the changes necessitated by the revision of the CALPAS scales, the path model was revised to fit the new data. These revisions can be seen in the revised path model shown in Figure 6. For reference, the measurement model is included in the figure.

To obtain a correlation matrix corrected for attenuation for the path analysis, a confirmatory oblique multiple groups factor analysis was performed on the scales used in the first path model: the General Severity Index (GSI) of the SCL-90; from the CALPAS, Patient Positive Alliance (POS) for sessions 1 and 3; Patient Working Capacity-Negative Aspects (NEG) for Sessions 1 and 3; Patient Commitment for Sessions 1 and 3; from the TAS, Transference (TRA) for Session 1; Supportive Interventions (SUP) for Session 1; Clarification and/or Confrontation of Defensive Attitudes (DEF) for Session 1; and an interaction term composed of POS and SUP. This analysis revealed item 3 of the Transference Interventions scale of the TAS (Linked reactions toward therapist to other important figures) had a negative loading on its own factor for this subset of the data; it was eliminated for this analysis. The factor-factor intercorrelation matrix corrected for attenuation for Path Model 1 is shown in Table 8.

Table 9 shows the matrix of correlations among variables estimated by the path equations and the resultant error matrix. Figure 6 shows the path model with path

Table 8
Correlation Matrix for Path Model #1

	GSI	PO1	NE1	TRA	DEF	SUP	POP	PO2	NE2
GSI	1.00	.20	.30	-.06	-.03	.35	.21	.32	-.02
PO1	.20	1.00	-.44	.10	.24	.04	.64	-.02	-.10
NE1	.30	-.44	1.00	-.08	.03	.35	-.03	.03	.03
TRA	-.06	.10	-.08	1.00	.31	.28	.24	.22	-.08
DEF	-.03	.24	.03	.31	1.00	.24	.51	.18	-.20
SUP	.35	.04	.35	.28	.24	1.00	-.02	.69	.18
POP	.21	.64	-.03	.24	.51	.69	1.00	-.06	-.18
PO2	.32	-.02	.03	.22	.18	.18	-.06	1.00	-.20
NE2	-.02	-.10	.03	-.08	-.20	-.02	-.18	-.20	1.00

GSI: General Severity Index
PO1: Patient Positive Alliance, Session 1
NE1: Patient Working Capacity, Negative Aspects, Session 1
TRA: Transference Interventions
DEF: Clarification and/or Confrontation of Defensive Attitudes
SUP: Supportive Interventions
POP: Interaction of Positive Alliance and Supportive Interventions
PO2: Patient Positive Alliance, Session 3
NE2: Patient Working Capacity, Negative Aspects, Session 3

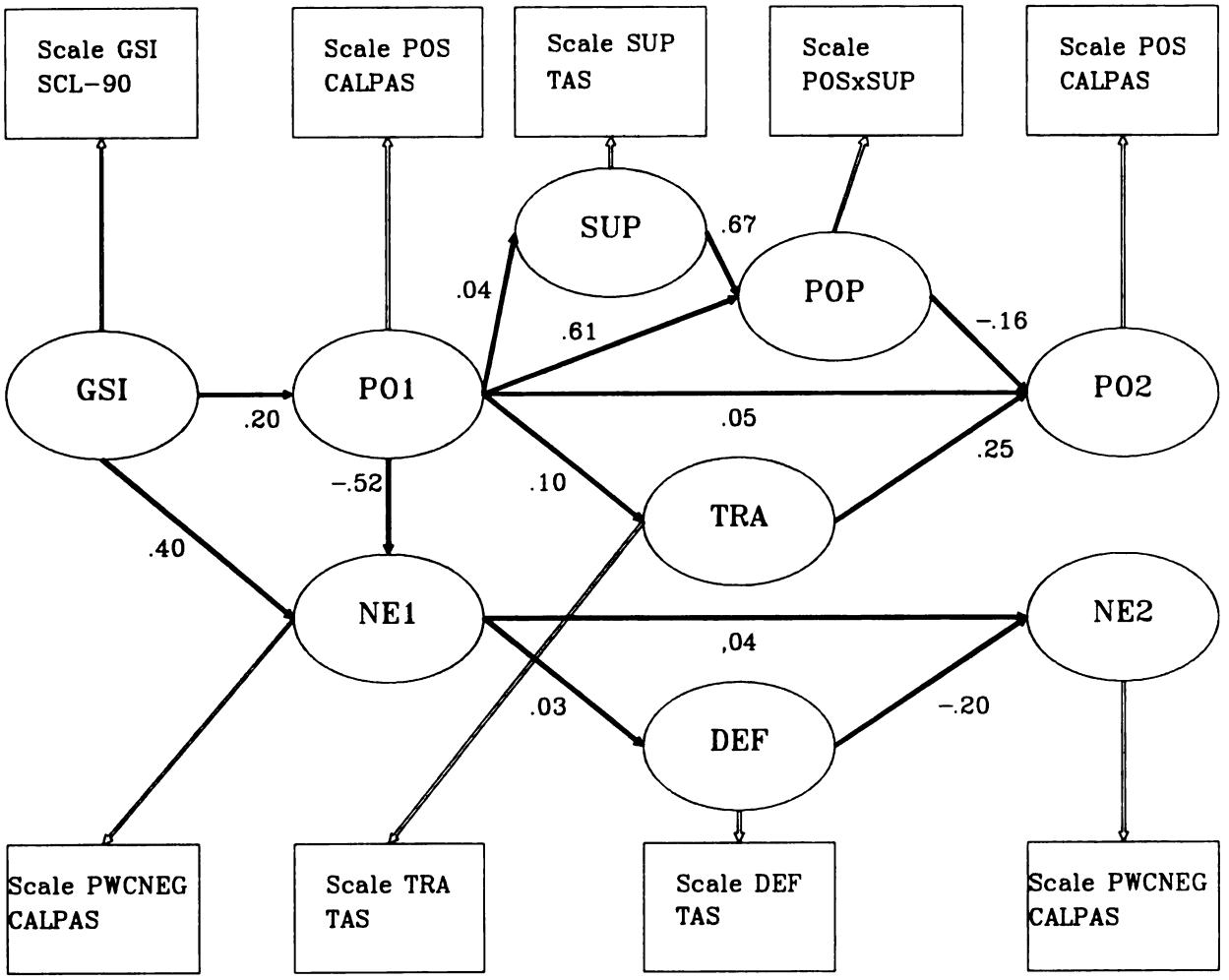

Figure 6

Path Model #1: Alliance Changes Early in Therapy

Table A8 lists items composing the observed variables

Table 9
Matrices of Reproduced Correlations and Errors in Prediction Path Model #1

Reproduced correlations:

	GSI	PO1	NE1	TRA	DEF	SUP	POP	PO2	NE2
GSI	1.00	.20	.30	.02	.01	.01	.13	.00	.01
PO1	.20	1.00	-.44	.10	-.01	.04	.64	-.02	-.01
NE1	.30	-.44	1.00	-.04	.03	-.02	-.28	.01	.03
TRA	.02	.10	-.04	1.00	.00	.00	.06	.25	.00
DEF	.01	-.01	.03	.00	1.00	.00	-.01	.00	-.20
SUP	.01	.04	-.02	.00	.00	1.00	.69	-.10	.00
POP	.13	.64	-.28	.06	-.01	.69	1.00	-.10	-.01
PO2	.00	-.02	.01	.25	.00	-.10	-.10	1.00	.00
NE2	.01	-.01	.03	.00	-.20	.00	-.01	.00	1.00

Errors: (Actual - reproduced)

	GSI	PO1	NE1	TRA	DEF	SUP	POP	PO2	NE2
GSI	.00	.00	.00	-.08	-.04	.34	.08	.32	-.03
PO1	.00	.00	.00	.00	.25	.00	.00	.00	-.09
NE1	.00	.00	.00	-.04	.00	.37	.25	.02	.00
TRA	-.08	.00	-.04	.00	.31	.28	.18	-.03	-.08
DEF	-.04	.25	.00	.31	.00	.24	.52	.18	.00
SUP	.34	.00	.37	.28	.24	.00	.00	.28	.00
POP	.08	.00	.25	.18	.52	.00	.00	.04	-.17
PO2	.32	.00	.02	-.03	.18	.28	.04	.00	-.20
NE2	-.03	-.09	.00	-.08	.00	-.02	-.17	-.20	.00

Sum of squared errors in the lower triangle = 1.23
Chi-Square for model: 19.93, $p < .20$.

coefficients and the chi-square for the model. (Note that Supportive Interventions is included in this path analysis for statistical purposes, and is not part of the theoretical model.) The chi-square statistic, which tests the hypothesis that the original matrix and the matrix generated by the path equations are the same, was used to test the fit of the model. The chi-square for this model was 19.93, 23 df, $p > .20$. Due to this chi-square, the null hypothesis that the two matrices are the same can not be rejected, confirming the model is a good fit for the data.

The significance of the individual paths was tested using the computer program REGRESS (Gerbing & Hunter, 1988) which calculates the significance of path coefficients by testing the beta weights generated by the path equations that have been corrected for attenuation caused by error of measurement. A significance level of 0.10 was employed for the analysis of beta weights to minimize the possibility of a Type II error. Due to the experimental nature of this work, and low power due to sample size and low reliability on some of the scales the probability of a Type II error is elevated, necessitating this adjustment. The results of these tests are displayed in Table 10.

The results suggested by the significance tests listed in Table 10 are the following:

1) Pretreatment symptomatology is predictive of alliance, but only of Positive Alliance, and in the opposite direction (that is, high pretreatment symptomatology is

Table 10
Significance Testing of Path Coefficients for Path Model #1 (N=46)

Dependent Variable: Patient Positive Alliance, Session 3

Path: GSI + PO1 + POP = PO2

Multiple R: .41 Shrunken R: .34
R Squared: .17

Variable	Beta	Standard Error of Beta	t	Significance
GSI	.37	.15	2.41	p < .01
PO1	.12	.21	0.52	ns
POP	-.33	.20	-1.64	p = .06

Path: GSI + PO1 + SUP + POP = PO2

Multiple R: .48 Shrunken R: .40
R Squared: .23

Variable	Beta	Standard Error of Beta	t	Significance
GSI	.14	.25	0.54	ns
PO1	.56	.60	0.93	ns
SUP	.80	.74	1.07	ns
POP	-.99	.88	-1.12	ns

Path: GSI + PO1 = PO2

Multiple R: .34 Shrunken R: .26
R Squared: .11

Variable	Beta	Standard Error of Beta	t	Significance
GSI	.33	.15	2.25	p < .01
PO1	-.09	.16	-0.53	ns

Table 10 (cont.)
Significance Testing of Path Coefficients for Path Model #1 (N=46)

Dependent Variable: Patient Positive Alliance, Session 3

Path: GSI + PO1 + TRA = PO2

Multiple R: .42 Shrunken R: .34
R Squared: .18

Variable	Beta	Standard Error of Beta	t	Significance
GSI	.36	.15	2.32	p < .01
PO1	.12	.17	0.70	ns
TRA	.25	.19	1.31	p = .10

Path: PO1 == PO2

Pearson r (corrected for attenuation) = .02, ns

GSI: General Severity Index
PO1: Patient Positive Alliance, Session 1
TRA: Transference Interventions
SUP: Supportive Interventions
POP: Interaction of Positive Alliance and Supportive Interventions
PO2: Patient Positive Alliance, Session 3

Table 10 (cont.)
Significance Testing of Path Coefficients for Path Model #1 (N=46)

Dependent Variable: Patient Working Capacity, Negative Aspects, Session 3 (NE2)

Path: GSI + PO1 + NE1 = NE2

Multiple R: .10, ns

All beta weights not significant at the 0.10 level, one-tailed test.

Path: GSI + NE1 = NE2

Multiple R: .04, ns

All beta weights not significant at the 0.10 level, one-tailed test.

Path: GSI + PO1 + DEF = NE2

Multiple R: .20 ns

All beta weights not significant at the 0.10 level, one-tailed test.

Path: NE1 == NE2

Pearson r (corrected for attenuation) = .03, ns

GSI: General Severity Index
PO1: Patient Positive Alliance, Session 1
NE1: Patient Working Capacity, Negative Aspects, Session 1
DEF: Clarification and/or Confrontation of Defensive Attitudes
PO2: Patient Positive Alliance, Session 3
NE2: Patient Working Capacity, Negative Aspects, Session 3

associated with greater initial positive alliance). Thus Hypothesis 1, that symptoms adversely affect positive therapeutic alliance, is rejected. While the zero-order correlation was significant beteween GSI and PWC-NEG, no relationship was demonstrated in any of the path equations for PWC-NEG.

2) The interaction between positive alliance and supportive interventions in the first session is not a significant predictor of alliance in the third session; Hypothesis 2 is also rejected.

3) First session alliance is not predictive of third session alliance.

4) Alliance does not significantly predict therapist interventions. All paths suggesting such a relationship were not significant.

5) Therapist interventions have some predictive power of alliance. Transference interventions were positively associated with increased third session positive alliance. However, the hypothesis that therapist's confronting and/or clarifying defensive attitudes would be associated with lower negative alliance in the third session (Hypothesis 3) was disconfirmed.

Path Model #2: Alliance, Interventions, and Outcome

This model is a test of the following hypotheses:

3) The major effect of supportive interventions on outcome is through their interaction with positive alliance.

One of these effects is to help the patient hear and understand interventions dealing with the transference.

5) Interventions relating to transference (here broadly defined as interventions including the therapist-patient relationship as well as the traditional therapist-parent-other link) are associated with increased positive alliance and increased outcome. Outcome measures related to dynamic change will be most affected.

6) Interventions relating to transference will be associated with positive outcome in conjunction with the use of other therapist interventions. a) Patients with low positive alliance will benefit from supportive interventions which will be related to the incidence of transference interventions. b) Patients with high levels of negative alliance will benefit from interventions addressing defensive attitudes which will be related to the incidence of transference interventions. c) Transference interventions are related to positive outcome.

7) Expressive interventions (aimed at increased exploration of thoughts and feelings) will positively effect therapeutic outcome.

The analysis of these hypotheses set out in the Hypotheses section was modified somewhat. Due to the nonsignificant correlation of therapist-rated dynamic outcome and patient-rated symptom outcome (r=.09, ns)

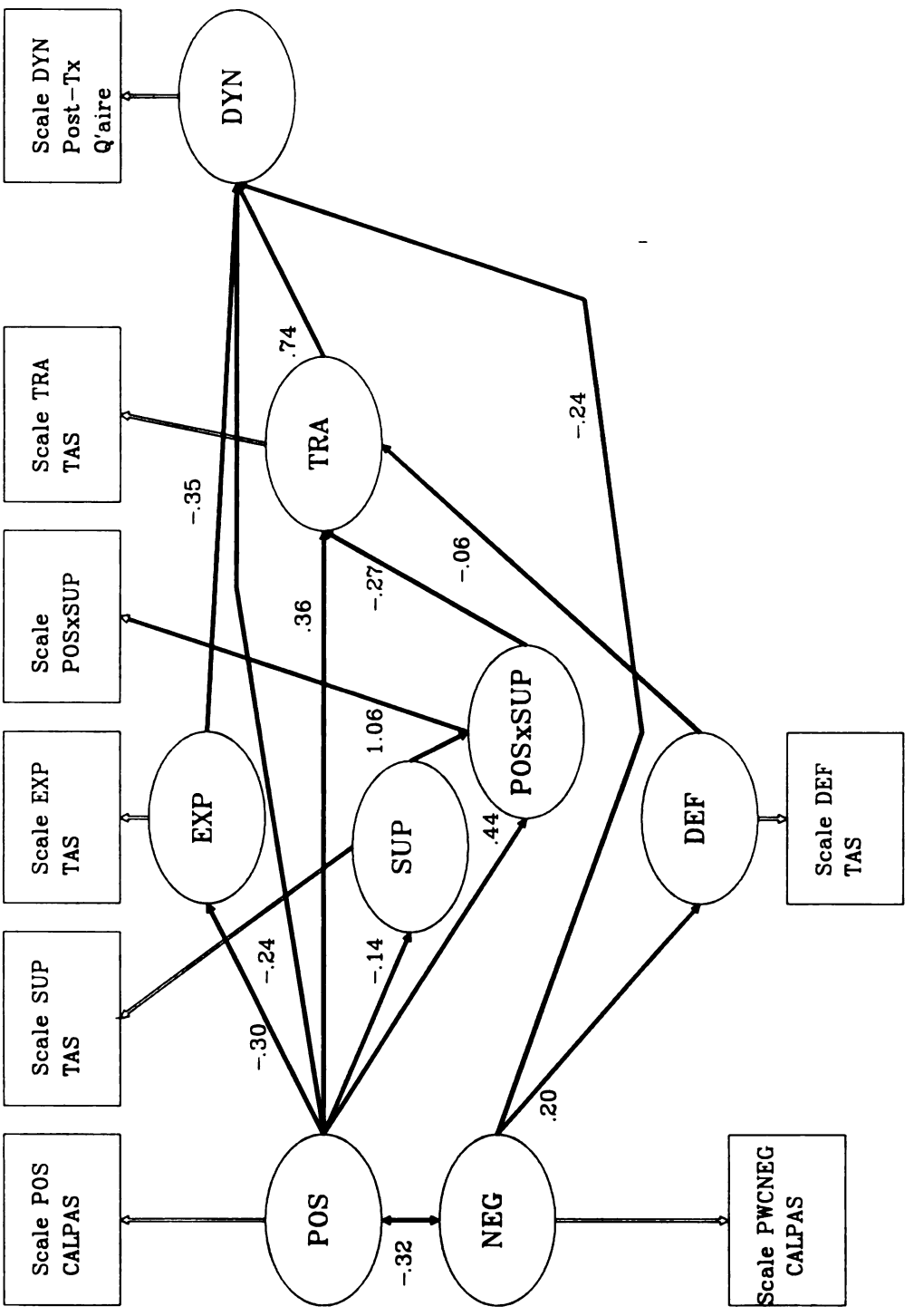

Figure 7
Path Model #2A Alliance, Interventions, and Dynamic Outcome
Table A8 lists items composing the observed variables

analyses were performed separately for both forms of outcome. Secondly, modifications similar to those for the first path model were made, and can be seen in Figure 7. The test of alliance, interventions and dynamic outcome was considered to be an adequate test of the fifth hypothesis concerning the unique contribution of transference interventions to dynamic outcome.

To obtain a correlation matrix corrected for attenuation for this analysis, two confirmatory oblique multiple groups factor analyses were performed, with dynamic outcome in one analysis, symptom outcome in the other. The following scales were included: from the CALPAS, Patient Positive Alliance (POS) and Patient Working Capacity-Negative Aspects (NEG) for Segments 2-4 (Sessions 3, Middle and Late); from the TAS, Transference Interventions (TRA), Confrontation/Clarification of Defensive Attitudes (DEF), Supportive Interventions (SUP), and Expressive Interventions (EXP) for Segments 2-4 (Sessions 3, Middle and Late); an interacton term composed of SUP and POS; a standardized gain score of items related to dynamic outcome from the Post-therapy Therapist Questionnaire (DYN), and a standardized gain score for the General Severity Index of the SCL-90 (GSI). This analysis, as with the analysis for Path Model 1, showed item 3 from the TRA subscale to negatively load on its own factor; it was elimiminated, and the procedure repeated. Table 11 shows the factor-factor correlation matrix for the path model predicting dynamic

Table 11
Correlation Matrix for Path Model #2A, Dynamic Outcome

	POS	NEG	POP	DEF	SUP	EXP	TRA	DYN
POS	1.00	-.32	.29	-.04	-.14	-.30	.29	.16
NEG	-.32	1.00	.15	.20	.31	-.05	-.07	-.20
POP	.29	.15	1.00	-.30	1.00	-.68	-.14	.10
DEF	-.04	.20	-.30	1.00	-.33	.27	.00	-.08
SUP	-.14	.31	1.00	-.33	1.00	-.67	-.19	.03
EXP	-.30	-.05	-.68	.27	-.67	1.00	.14	-.16
TRA	.29	-.07	-.14	.00	-.19	.14	1.00	.64
DYN	.16	-.20	.10	-.08	.03	-.16	.64	1.00

POS: Patient Positive Alliance
NEG: Patient Working Capacity, Negative Aspects
POP: Interaction of Positive Alliance and Supportive Interventions
DEF: Clarification and/or Confrontation of Defensive Attitudes
EXP: Expressive Interventions
TRA: Transference Interventions
SUP: Supportive Interventions
DYN: Dynamic Outcome

outcome generated by this analysis. Table 14 shows a similar matrix for the path model predicting symptom outcome.

Table 12 shows the matrix of correlations among variables estimated by the path equations, the resultant error matrix, the sum of squared errors in the matrix, and the chi-square for the model. The chi-square for this model was 21.50, 15 df, $p > .10$. This chi-square suggests that the model is is a good fit to the data. Figure 7 shows the path model with path coefficients. (Note again that Supportive Interventions is included in this path analysis for statistical purposes, and is not part of the theoretical model.)

Significance testing of the path coefficients was performed using the REGRESS program. The results can be seen in Table 13. Significance testing could not be performed on the path POS - SUP - POP - DYN due to the very high intercorrelation of the SUP and POP scales; it is not included in the table.

Based on the results displayed in this table, the following conclusions can be drawn concerning the relationship between alliance, therapist interventions, and dynamic outcome:

1) Transference interpretations are clearly predictive of positive dynamic outcome, confirming Hypothesis 5.

2) Hypothesis 6a, which posits that supportive interventions interacting with positive alliance will

Table 12
Matrices of Reproduced Correlations and Errors in Prediction
Path Model #2A, Dynamic Outcome

Reproduced correlations:

	POS	NEG	POP	DEF	SUP	EXP	TRA	DYN
POS	1.00	-.32	.29	-.06	-.14	-.30	.29	.16
NEG	-.32	1.00	-.09	.20	.04	.10	-.10	-.28
POP	.29	-.09	1.00	-.02	1.00	-.09	-.16	-.13
DEF	-.06	.20	-.02	1.00	.01	.02	-.08	-.10
SUP	-.14	.04	1.00	.01	1.00	.04	-.30	-.21
EXP	-.30	.10	-.09	.02	.04	1.00	-.09	-.36
TRA	.29	-.10	-.16	-.08	-.32	-.09	1.00	.73
DYN	.16	-.28	-.13	-.10	-.23	-.36	.73	1.00

Errors: (Actual - reproduced)

	POS	NEG	POP	DEF	SUP	EXP	TRA	DYN
POS	.00	.00	.00	.02	.00	.00	.00	.00
NEG	.00	.00	.24	.00	.27	-.15	.03	.08
POP	.00	.24	.00	-.28	.00	-.59	.02	.23
DEF	.02	.00	-.28	.00	-.34	.25	.08	.02
SUP	.00	.27	.00	-.34	.00	-.71	.11	.26
EXP	.00	-.15	-.59	.25	-.71	.00	.23	.20
TRA	.00	.03	.02	.08	.13	.23	.00	-.09
DYN	.00	.08	.23	.02	.26	.20	-.09	.00

Sum of squared errors in the lower triangle = 1.52
Chi-Square = 21.50, 15 df, p > .10

Table 13
Significance Testing of Path Coefficients for Path Model #2A

Dependent Variable: Dynamic Outcome

Path: POS + EXP = DYN

Multiple R: .20, ns

All beta weights not significant at the 0.10 level, one-tailed test.

Path: POS + TRA = DYN

Multiple R: .64 Shrunken R: .62
R Squared: .41

Variable	Beta	Standard Error of Beta	t	Significance
POS	-.03	.18	0.15	ns
TRA	.65	.26	2.50	p < .01

Path: POS + POP + TRA = DYN

Multiple R: .67 Shrunken R: .65
R Squared: .45

Variable	Beta	Standard Error of Beta	t	Significance
POS	-.11	.20	0.54	ns
POP	.23	.19	1.22	p = .11
TRA	.70	.17	4.05	p < .001

Table 13 (cont.)
Significance Testing of Path Coefficients for Path Model #2A

Dependent Variable: Dynamic Outcome

Path: POS == DYN

Pearson r = .16, t = 1.07, p =.15

Path: NEG + DEF + TRA = DYN

Multiple R: .67 Shrunken R: .65
R Squared: .45

Variable	Beta	Standard Error of Beta	t	Significance
NEG	-.15	.19	-0.80	ns
DEF	-.05	.18	-0.27	ns
TRA	.63	.14	4.47	p < .001

Path: NEG == DYN

Pearson r = -.20, t = -1.25, p =.10

POS: Patient Positive Alliance
NEG: Patient Working Capacity, Negative Aspects
POP: Interaction of Positive Alliance and Supportive Interventions
DEF: Clarification and/or Confrontation of Defensive Attitudes
EXP: Expressive Interventions
TRA: Transference Interventions
SUP: Supportive Interventions
DYN: Dynamic Outcome

positively link with transference-based interpretations, could not be tested and therefore could not be confirmed.

3) Interventions addressing defensive attidudes are not related to negative alliance, nor are they associated with increased dynamic outcome; Hypothesis 6a is rejected.

4) Expressive interventions do not significantly predict dynamic outcome; Hypothesis 7 is rejected.

5) Negative, but not positive alliance predicts dynamic outcome.

As stated before, the factor-factor intercorrelation matrix for Path Model #2A is displayed in Table 14. Table 15 shows the matrix of correlations among variables estimated by the path equations, the resultant error matrix, the sum of squared errors in the matrix, and the chi-square for the model. (Supportive Interventions is included in this path analysis for statistical purposes; it is not part of the theoretical model.) The chi-square for this model was 19.61, 15 df, $p > .10$. This chi-square suggests that the model is a good fit to the data. Figure 8 shows the path model with path coefficients.

Significance testing of the path coefficients was performed using the REGRESS program. The results can be seen in Table 16. Again, significance testing could not be performed on the path POS - SUP - POP - GSI due to the very high intercorrelation of the SUP and POP scales; it is not included in the table.

Table 14
Correlation Matrix for Path Model #2B, Symptom Outcome

	POS	NEG	POP	DEF	SUP	EXP	TRA	GSI
POS	1.00	-.32	.29	-.04	-.14	-.30	.29	.16
NEG	-.32	1.00	.15	.20	.31	-.05	-.07	-.11
POP	.29	.15	1.00	-.30	1.00	-.68	-.14	.12
DEF	-.04	.20	-.30	1.00	-.33	.27	.00	-.15
SUP	-.14	.31	1.00	-.33	1.00	-.67	-.19	.02
EXP	-.30	-.05	-.68	.27	-.67	1.00	.14	.07
TRA	.29	-.07	-.14	.00	-.19	.14	1.00	-.19
GSI	.16	-.11	.12	-.15	.02	.07	-.19	1.00

POS: Patient Positive Alliance
NEG: Patient Working Capacity, Negative Aspects
POP: Interaction of Positive Alliance and Supportive Interventions
DEF: Clarification and/or Confrontation of Defensive Attitudes
EXP: Expressive Interventions
TRA: Transference Interventions
GSI: Symptom Outcome

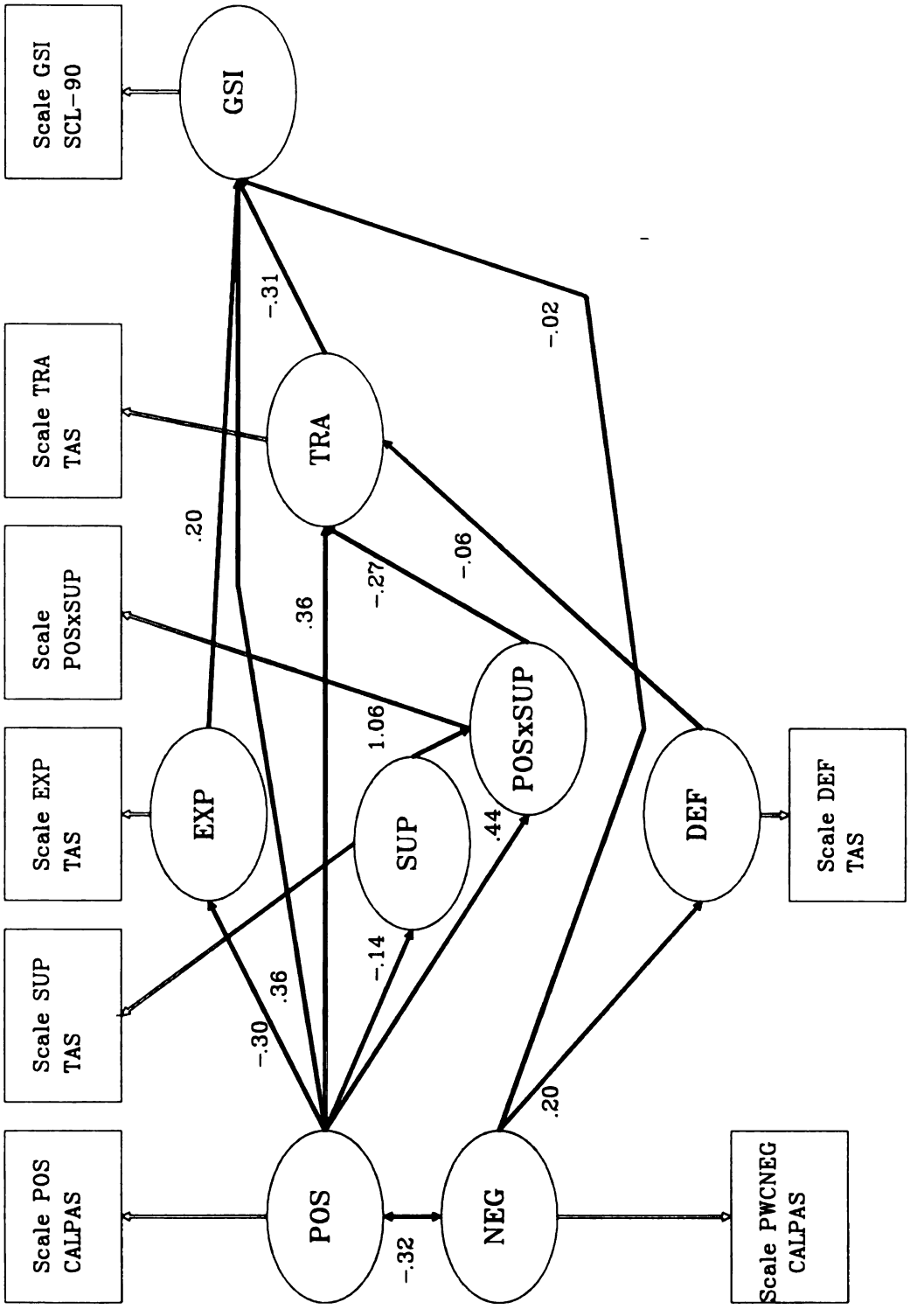

Figure 8
Path Model #2B: Allliance, Interventions, Symptom Outcome
Table A8 lists items composing the observed variables

Table 15
Matrices of Reproduced Correlations and Errors in Prediction
Path Model #2B, Symptom Outcome

Reproduced correlations:

	POS	NEG	POP	DEF	SUP	EXP	TRA	GSI
POS	1.00	-.32	.29	-.06	-.14	-.30	.29	.16
NEG	-.32	1.00	-.09	.20	.04	.10	-.10	-.07
POP	.29	-.09	1.00	-.02	1.00	-.09	-.16	.12
DEF	-.06	.20	-.02	1.00	.01	.02	-.08	-.22
SUP	-.14	.04	1.00	.01	1.00	.04	-.32	.06
EXP	-.30	.10	-.09	.02	.04	1.00	-.09	.14
TRA	.29	-.10	-.16	-.08	-.32	-.09	1.00	-.23
GSI	.16	-.07	.12	-.22	.06	.14	-.23	1.00

Errors: (Actual - reproduced)

	POS	NEG	POP	DEF	SUP	EXP	TRA	GSI
POS	.00	.00	.00	.02	.00	.00	.00	.00
NEG	.00	.00	.24	.00	.27	-.15	.03	-.04
POP	.00	.24	.00	-.28	.00	-.59	.02	.00
DEF	.02	.00	-.28	.00	-.34	.25	.08	-.16
SUP	.00	.27	.00	-.34	.00	-.71	.11	-.04
EXP	.00	-.15	-.59	.25	-.71	.00	.23	-.07
TRA	.00	.03	.02	.08	.23	.23	.00	.04
GSI	.00	-.04	.00	-.16	-.04	-.07	.04	.00

Sum of squared errors in the lower triangle = 1.38
Overall Chi-Square = 19.61, 15df, ns

Table 16
Significance Testing of Path Coefficients for Path Model #2B

Dependent Variable: Symptom Outcome

Path: POS + EXP = GSI

Multiple R: .20, ns

NB: EXP Beta: 0.20, SE: 0.16, T-value = 1.21, p=.11

Path: POS + TRA = GSI

Multiple R: .29 Shrunken R: .21
R Squared: .08

Variable	Beta	Standard Error of Beta	t	Significance
POS	.23	.17	1.42	p = .08
TRA	-.26	.20	-1.30	p = .10

Path: POS + POP + TRA = GSI

Multiple R: .29 Shrunken R: .15
R Squared: .08

Variable	Beta	Standard Error of Beta	t	Significance
POS	.23	.18	1.26	p = .10
POP	.02	.17	0.11	ns
TRA	-.25	.20	-1.23	p = .11

Path: POS == GSI

Pearson r = .16, t=1.00, ns

Table 16 (cont.)
Significance Testing of Path Coefficients for Path Model #2B

Dependent Variable: Symptom Outcome

Path: NEG + DEF + TRA = GSI

Multiple R: .26 Shrunken R: .03
R Squared: .07

Variable	Beta	Standard Error of Beta	t	Significance
NEG	-.10	.18	-0.55	ns
DEF	-.13	.17	-0.70	ns
TRA	.20	.18	1.06	ns

Path: NEG == GSI

Pearson r = -.11, t=-0.65, ns

POS: Patient Positive Alliance
NEG: Patient Working Capacity, Negative Aspects
POP: Interaction of Positive Alliance and Supportive Interventions
DEF: Clarification and/or Confrontation of Defensive Attitudes
EXP: Expressive Interventions
TRA: Transference Interventions
SUP: Supportive Interventions
GSI: Symptom Outcome

Based on the results displayed in this table, the following conclusions can be drawn concerning the relationship between alliance, therapist interventions, and symptom outcome:

1) Transference interpretations are negatively predictive of positive symptom outcome. This result is evidence against confirming Hypothesis 5, which hypothesizes that transference interventions are related to positive outcome, and opposite in direction to the relationship between transference interventions and dynamic outcome.

2) The path from the positive alliance/support interaction to transference was untestable, leading to the rejection of Hypothesis 6a, which posits that supportive interventions interacting with positive alliance will positively link with transference interpretations in predicting outcome.

3) Interventions addressing defensive attidudes are not related to negative alliance, nor are they associated with increased symptom outcome; Hypothesis 6b is rejected.

4) Expressive interventions do not significantly predict symptom outcome; Hypothesis 7 is rejected.

5) Positive alliance predicts symptom outcome.

Post-Hoc Analyses: The Role of Supportive Interventions

The models presented in the a priori hypotheses did not consider the role of supportive interventions alone in the prediction of alliance and outcome. Although the

interaction of positive alliance and supportive interventions had some predictive power, examination of the zero-order correlation matrices suggested the use of supportive interventions was related to negative aspects of working alliance. Supplemental path models were constructed to test the effect of supportive interventions on alliance and outcome.

Supportive interventions and outcome. Table 17 shows the correlation matrix generated by confirmatory multiple groups factor analysis. It is identical to that of Path Model 2A except for the Positive Alliance X Supportive (POS) variable was replaced by the Supportive Interventions (SUP) subscale.

Table 18 shows the matrix of correlations among variables estimated by the path equations, the resultant error matrix, the sum of squared errors in the matrix, andthe chi-square for the model. (Although the top portion of the model is identical to Path Model 2A, it is included here for completeness. The chi-square for this model was 10.83, 12 df, $p < .500$, a good fit to the data as well. Figure 9 shows the path model with coefficients.

Table 17
Correlation Matrix for Post Hoc Path Model predicting Dynamic Outcome from Supportive Interventions

	POS	NEG	DEF	SUP	EXP	TRA	DYN
POS	1.00	-.32	-.04	-.14	-.30	.29	.16
NEG	-.32	1.00	.20	.31	-.05	-.07	-.20
DEF	-.04	.20	1.00	-.33	.27	.00	-.08
SUP	-.14	.31	-.33	1.00	-.67	-.19	.03
EXP	-.30	-.05	.27	-.67	1.00	.14	-.16
TRA	.29	-.07	.00	-.19	.14	1.00	.64
DYN	.16	-.20	-.08	.03	-.16	.64	1.00

POS: Patient Positive Alliance
NEG: Patient Working Capacity, Negative Aspects
DEF: Clarification and/or Confrontation of Defensive Attitudes
SUP: Supportive Interventions
EXP: Expressive Interventions
TRA: Transference Interventions
DYN: Dynamic Outcome

Table 18
Matrices of Reproduced Correlations and Errors in Prediction Post Hoc Model Predicting Dynamic Outcome From Supportive Interventions

Reproduced correlations:

	POS	NEG	DEF	SUP	EXP	TRA	DYN
POS	1.00	-.32	-.06	-.10	-.30	.29	.19
NEG	-.32	1.00	.20	.31	.10	-.08	-.06
DEF	-.06	.20	1.00	.06	.02	-.02	-.09
SUP	-.10	.31	.06	1.00	.03	.04	.02
EXP	-.30	.10	.02	.03	1.00	.19	.12
TRA	.29	-.08	-.02	.04	.19	1.00	.64
DYN	.19	-.06	-.09	.02	.12	.64	1.00

Errors: (Actual - reproduced)

	POS	NEG	DEF	SUP	EXP	TRA	DYN
POS	.00	.00	.02	-.04	.00	.00	-.03
NEG	.00	.00	.00	.00	-.15	.01	-.14
DEF	.02	.00	.00	-.39	.25	.02	.01
SUP	-.04	.00	-.39	.00	-.70	-.23	.01
EXP	.00	-.15	.25	-.70	.00	-.05	-.28
TRA	.00	.01	.02	-.23	-.05	.00	.00
DYN	-.03	-.14	.01	.01	-.28	.00	.00

Sum of squared errors in the lower triangle = .89
Overall Chi-Square = 10.83, 12 df

POS: Patient Positive Alliance
NEG: Patient Working Capacity, Negative Aspects
DEF: Clarification and/or Confrontation of Defensive Attitudes
SUP: Supportive Interventions
EXP: Expressive Interventions
TRA: Transference Interventions

Equations that were different from Path Model 2A were tested for significance. These are listed in Table 19. As can be seen, with the exception of the Transference-Dynamic outcome link, no paths were significantly greater than zero. We can conclude that therapist use of Supportive Interventions (or Confrontation/Clarification of Defensive Attitudes) do not significantly affect the relationship between negative alliance and dynamic outcome.

An identical analysis was performed for examining the possible relationship between Supportive Interventions and symptom outcome. Table 20 shows the correlation matrix for this analysis (identical to the matrix for Path Model 2B except for the Positive Alliance X Supportive (POS) variable replacing the Supportive Interventions subscale). Table 21 shows the matrix of correlations among variables estimated by the path equations, the resultant error matrix, the sum of squared errors in the matrix, and the chi-square for the model. The chi-square for this model was 9.91, 11 df, $p < .50$, a good fit for the data. Figure 10 shows the path model with coefficients. As with the previous analysis, equations that were different from Path Model 2B were tested for significance. These are listed in Table 22. Neither multiple correlations nor paths were significantly greater than zero. We can conclude that therapist use of Supportive Interventions (or Confrontation/Clarification of Defensive Attitudes) does not significantly affect the relationship between negative alliance and symptomatic outcome.

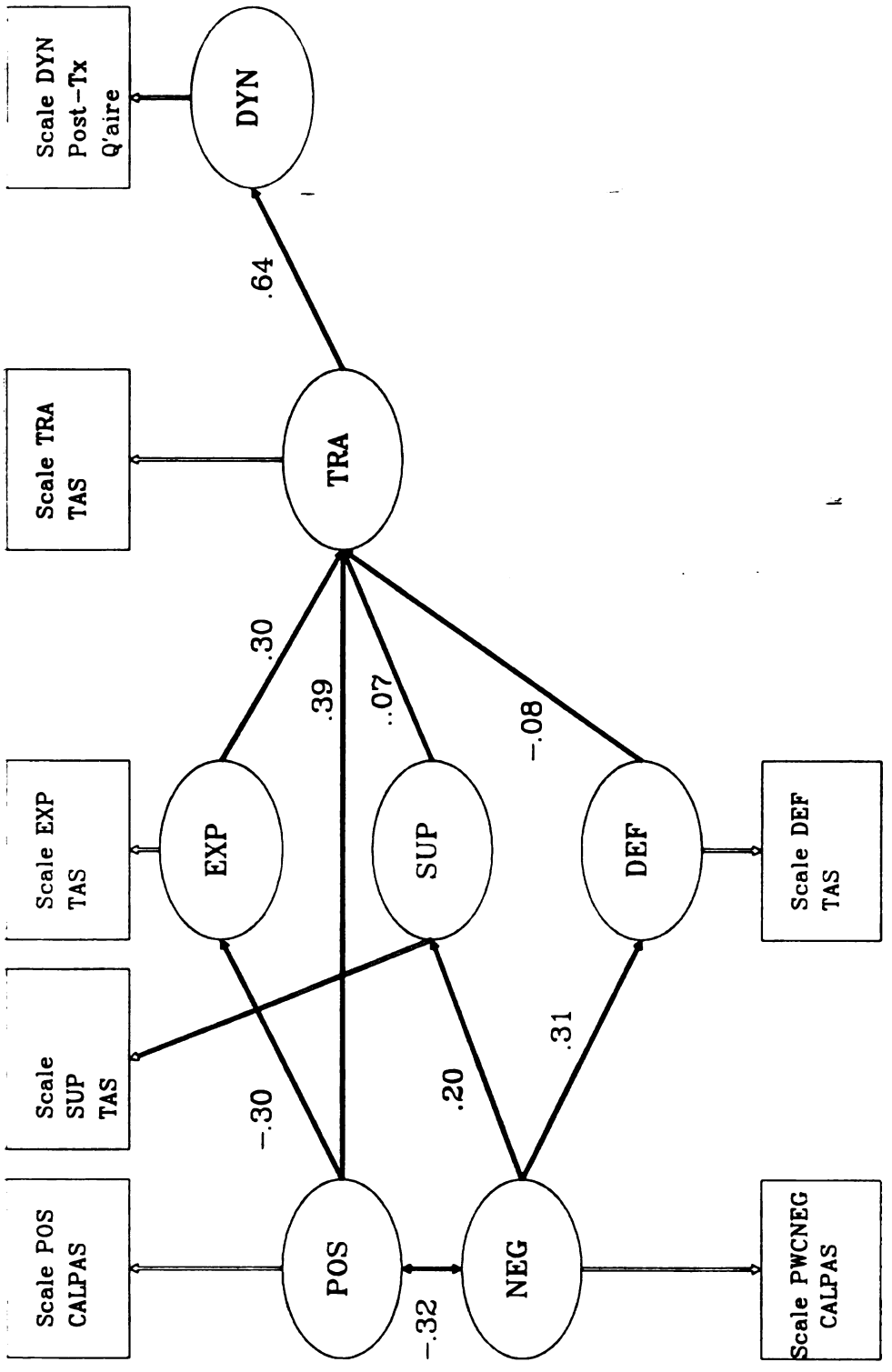

Figure 9

Post-hoc Path Model: Support and Dynamic Outcome

Table A8 lists items composing the observed variables

Table 19
Significance Testing of Path Coefficients for Post Hoc Model Predicting Dynamic Outcome From Supportive Interventions

Dependent Variable: Dynamic Outcome

Path: NEG + SUP + TRA = DYN

Multiple R: .69 Shrunken R: .66
R Squared: .48

Variable	Beta	Standard Error of Beta	t	Significance
NEG	-.22	.21	-1.08	ns
SUP	.23	.23	1.00	ns
TRA	.67	.16	4.22	p < .001

Path: NEG + DEF = DYN

Multiple R: .20, ns

All beta weights not significant at the 0.10 level, one-tailed test.

POS: Patient Positive Alliance
NEG: Patient Working Capacity, Negative Aspects
DEF: Clarification and/or Confrontation of Defensive Attitudes
SUP: Supportive Interventions
EXP: Expressive Interventions
TRA: Transference Interventions
DYN: Dynamic Outcome

Table 20
Correlation Matrix for Post Hoc Path Model predicting Symptom Outcome from Supportive Interventions

	POS	NEG	DEF	SUP	EXP	TRA	GSI
POS	1.00	-.32	-.04	-.14	-.30	.29	.16
NEG	-.32	1.00	.20	.31	-.05	-.07	-.11
DEF	-.04	.20	1.00	-.33	.27	.00	-.15
SUP	-.14	.31	-.33	1.00	-.67	-.19	.02
EXP	-.30	-.05	.27	-.67	1.00	.14	.07
TRA	.29	-.07	.00	-.19	.14	1.00	-.19
GSI	.16	-.11	-.15	.02	.07	-.19	1.00

POS: Patient Positive Alliance
NEG: Patient Working Capacity, Negative Aspects
DEF: Clarification/Confrontation of Defensive Attitudes
SUP: Supportive Interventions
EXP: Expressive Interventions
TRA: Transference Interventions
GSI: Symptom Outcome

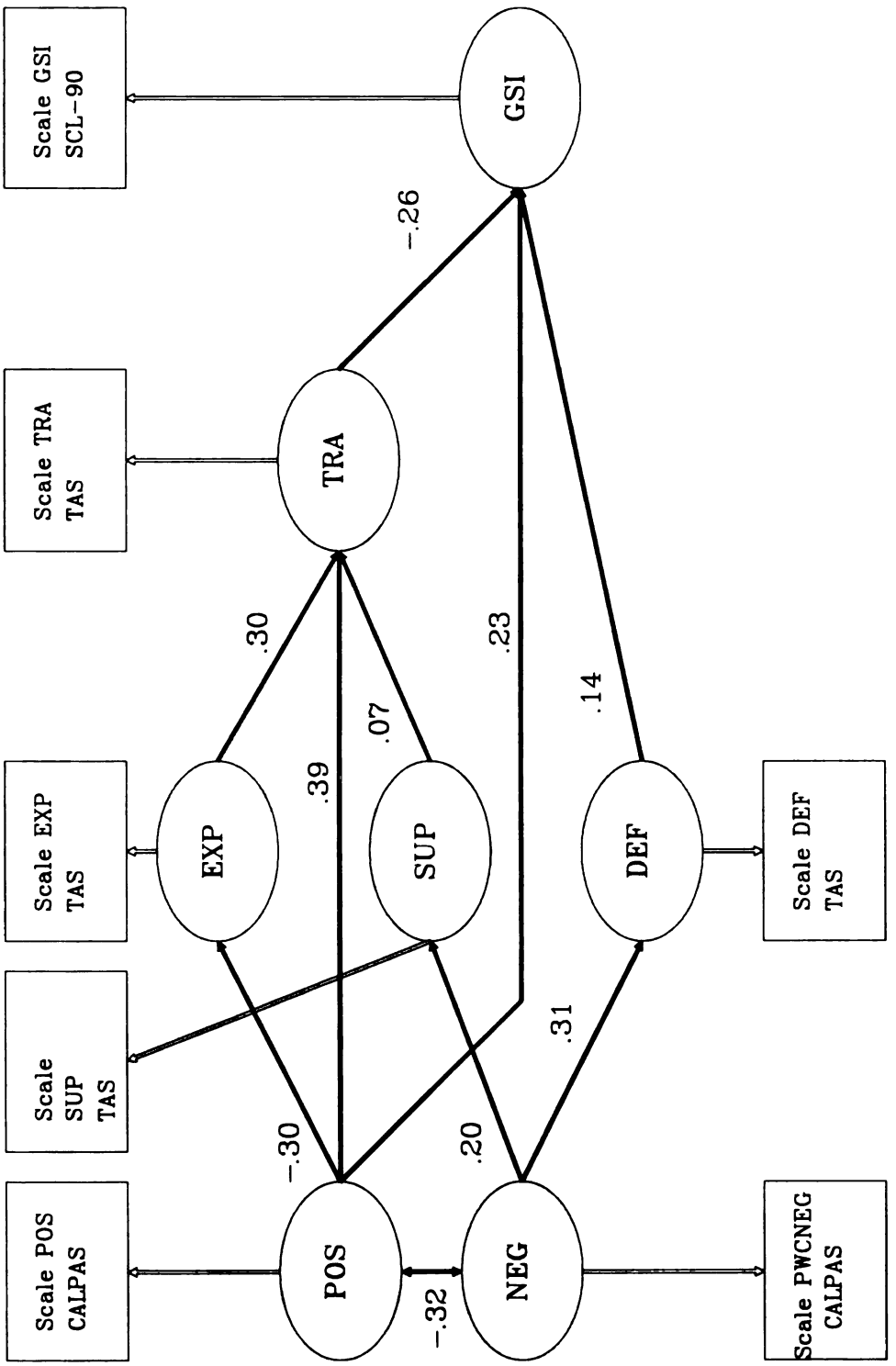

Figure 10

Post-Hoc Path Model: Support and Symptom Outcome

Table A8 lists items composing the observed variables

Table 21
Matrices of Reproduced Correlations and Errors in Prediction Post Hoc Model Predicting Symptom Outcome From Supportive Interventions

Reproduced correlations:

	POS	NEG	DEF	SUP	EXP	TRA	GSI
POS	1.00	-.32	-.06	-.10	-.30	.29	.16
NEG	-.32	1.00	.20	.31	.10	-.08	-.08
DEF	-.06	.20	1.00	.06	.02	-.02	-.15
SUP	-.10	.31	.06	1.00	.03	.04	-.04
EXP	-.30	.10	.02	.03	1.00	.19	-.12
TRA	.29	-.08	-.02	.04	.19	1.00	-.19
GSI	.16	-.08	-.15	-.04	-.12	-.19	1.00

Errors: (Actual - reproduced)

	POS	NEG	DEF	SUP	EXP	TRA	GSI
POS	.00	.00	.02	-.04	.00	.00	.00
NEG	.00	.00	.00	.00	-.15	.01	-.03
DEF	.02	.00	.00	-.39	.25	.02	.00
SUP	-.04	.00	-.39	.00	-.70	-.23	.06
EXP	.00	-.15	.25	-.70	.00	-.05	.19
TRA	.90	.01	.02	-.23	-.05	.00	.00
GSI	.00	-.03	.00	.06	.19	.00	.00

Sum of squared errors in the lower triangle = .82
Chi-Square = 9.91, 11df

POS: Patient Positive Alliance
NEG: Patient Working Capacity, Negative Aspects
DEF: Clarification and/or Confrontation of Defensive Attitudes
SUP: Supportive Interventions
EXP: Expressive Interventions
TRA: Transference Interventions
GSI: Symptom Outcome

Table 22
Significance Testing of Path Coefficients for Post Hoc Path Model Predicting Symptom Outcome from Supportive Interventions

Dependent Variable: Symptom Outcome

Path: NEG + SUP + TRA = GSI

Multiple R: .14, ns

All beta weights not significant at the 0.10 level, one-tailed test.

Path: NEG + DEF = GSI

Multiple R: .17, ns

All beta weights not significant at the 0.10 level, one-tailed test.

POS: Patient Positive Alliance
NEG: Patient Working Capacity, Negative Aspects
DEF: Clarification and/or Confrontation of Defensive Attitudes
SUP: Supportive Interventions
EXP: Expressive Interventions
TRA: Transference Interventions
GSI: Symptom Outcome

DISCUSSION

General Review of Purpose and Findings

The purpose of this study was to demonstrate the role of the therapist's use of specfic interventions in understanding the course of the patient contribution to the therapeutic alliance and the relation to outcome in dynamic psychotherapy. Path analytic strategies were used in order to test causal relationships among these variables and thus reach a deeper understanding of their predictive power.

Results revealed that some but not all of the hypothesized relationships among pretreatment variables, early and later alliance, therapist interventions and outcome were present. Of particular interest was that greater focus on transference predicted later positive alliance and dynamic and symptomatic outcome. Relationships of alliance to outcome were not consistent, but consideration of therapist interventions, particularly transference interventions, increased predictive power. Alliance generally did not predict selection of interpretive strategies, contrary to hypothesis, although interesting zero-order correlations were found. No effect of the the interaction of positive alliance and supportive strategies predicted was detected as well.

Transference Interventions, Alliance, and Outcome

Alliance, transference and dynamic outcome. Therapist emphasis on transference strongly predicted positive dynamic outcome. This finding replicates those of Malan (1976) and Marziali (1984b) who also found a link between transference interpretations (particularly the transference-parent link) and dynamic outcome. This finding is also in support of classical psychoanalytic theory that interpretation of the transference is the central mechanism of dynamic change (e.g., Freud, 1913; Fenichel, 1941; Zetzel, 1956; Greenson, 1967).

The finding that emphasis on transference significantly predicted positive alliance is similar to results noted by Gabbard et al. (1988). Those researchers, using a single case design, found that accurate interventions around the transference increased patient collaboration with a borderline patient. In contrast, Marmar, Weiss, and Gaston (1989) found Patient Working Capacity on the California Therapeutic Alliance Rating System (CALTARS) to be negatively related to Therapist Action Scale items addressing transference-related phenomena. In the present study, first session alliance was not predictive of first session transference interventions, or second session alliance; later in treatment, while positive alliance did not add signficantly to the prediction of dynamic outcome the zero-order correlation of alliance and transference was significant ($r=.29$, $t=1.71$, $p=.05$, one-tailed test). This

finding is comparable to that of Luborsky et al. (1987) in their study of the preconditions and consequences of transference interpretations in three analytic cases. They found that for the patient who seldom benefited from transference interpretations, involvement and positive transference was low in the period preceeding the intervention; the two patients who did benefit showed higher levels of involvement in the therapy, including positive transference, prior to interventions. The first patient also showed a poor therapeutic alliance. In the present study, the significant relation of positive alliance to transference leads to the speculation that therapists who emphasized this mode of intervention in the middle and late phases may have done so selectively with patients who demonstrated an ability to work in this way (that is, had a positive alliance); those who did so enhanced dynamic outcome. This is also consistent with the lack of association found between negative alliance and transference interventions (-0.08, -0.08, -0.07). At the beginning of the treatment, neither pretherapy symptomatology nor alliance variables were significantly associated with transference interventions, suggesting the influence of other unmeasured factors on the selection of intervention.

The transference-dynamic outcome relationship is stronger than that found in other studies (Malan, 1976) and merits examimation. In the present study, dynamic outcome was rated by the therapist who estimated both pre- and

posttherapy levels of these factors at termination, while patients rated their symptoms before and after therapy. One could assume that therapist ratings of pretherapy dynamic factors may have been influenced somewhat by the experience of working with patients in treatment. The correlation of pre-post ratings of dynamic variables is 0.53; for symptoms, the correlation is 0.27. Therefore, it appears that patient factors reflective of greater psychopathology were impacted less by the pre-post measures, possibly inflating the relationship between transference and dynamic outcome. This is also suggested by the lack of association between TRA and other variables at the beginning of treatment.

Alliance, transference, and symptom outcome. Contrary to prediction, the emphasis on transference, in the path from positive alliance to symptom outcome, predicted poorer symptom outcome. This finding is in striking contrast to the strong positive transference-dynamic outcome link. What accounts for these contrasting findings? Both clinical and empirical literature suggests that exploratory interventions, of which transference interventions are a subset, can have different effects on different patients. The Luborsky et al. (1979) study is an example of this. Jones et al. (1987) found that patients with high symptoms and other indices of poor functioning benefited most from supportive interventions.

It may also be that this small negative effect of

transference interventions on symptom outcome has always been present but previously obscured by the methodology used. The zero-order correlation between tranference interventions and symptom outcome itself (-0.19) was not significant but only in combination with positive alliance did emphasis on transference significantly predict symptom outcome.

Another possible explanation involves the associated finding that interventions involving the clarification and confrontation of defensive attitudes did not contribute to the prediction of alliance or outcome. As noted by theorists on psychoanalytic technique, (e.g., Greenson, 1967) interpretations involving the transference are not made in isolation but in conjunction with other interventions, most notably exploration of resistance. Perhaps therapists did not prepare patients who were most symptomatic for interpretations of the transference, and therefore the interventions had a slight negative effect.

Conclusions. It was shown in this study that utilizing transference interpretations has a small beneficial effect on positive alliance. Positive alliance is usually expected to predict symptomatic improvement; yet, in this population, transference had a negative effect on symptomatic improvement. Taking the conclusion about the influence of transference on different outcome dimensions as it stands suggests that therapist emphasis on working with

transference results in both costs and benefits. In their technical prescriptions, psychoanalysts have traditionally de-emphasized focusing on symptom relief in neurotic patients (e.g. Fenichel, 1941) in favor of the analysis of intrapsychic conflict. They maintained that eventually symptoms would diminish over the course of therapy with the resolution of the conflicts that generated them. This conclusion was based on case study data; actual symptom outcome was not measured systematically. It must also be considered that these authors were also writing about long-term, several-times-weekly treatments; the length of therapies in this study were in the range of brief therapy (median 29 sessions) and usually conducted on a once-weekly basis. It is possible that in the therapies in which the therapist placed more emphasis on transference examination, dynamic change resulted but treatment did not go long enough to resolve symptoms in this manner.

It could also be that therapist experience and/or skill is a factor. Therapists in this study, being a graduate student sample, were less experienced in conducting dynamic therapy which examines transference phenomena. The acquisition of the skills necessary to conduct dynamic psychotherapy well is a long and gradual process; much of the long-term learning is in the area of the timing and preparation for interpretive work. Several empirical studies of dynamic psychotherapy have demonstrated the importance of therapist skill and experience, particularly

with more disturbed patients (Kernberg et al., 1972; Luborsky et al., 1986; Koenigsberg et al., 1990). Many of these skills are required to conduct interpretive work in the context of patients with ego weakness, such as using clarification and/or confrontation of contradictory material, using supportive interventions, etc. (e.g., Zetzel, 1956; Kernberg, 1985). The data presently available in this study do not permit us to examine the level of disturbance of study patients, the skill of individual therapists, or the quality of therapist interventions. These data would be necessary to study the question of whether or not transference interpretations adversely affect symptomatic outcome in a only small number of patients, or are a product of poor technique, or are an inevitable side effect of intrapsychic exploration.

Pretreatment Symptomatology and Alliance

The hypothesis that symptoms adversely affect positive alliance was not confirmed; in fact, an opposite relationship was demonstrated in the paths connecting pretreatment symptomatology to negative alliance. No relationship was shown for the paths predicting negative alliance; of interest, however, is the significant zero-order correlation between GSI and first session negative alliance (0.30). The former finding is unique to this study, and may be an anomaly. The only possible explanation is that patients in this sample with high symptomatology may

have been motivated by their level of discomfort rather than hampered by it. Another factor that is unusual to this study, and may bear on this finding, was the significant drop in positive alliance in the third session. This has been associated with poor outcome (Hartley & Strupp, 1983) but that is not true for this sample. The cause for this drop is unclear; it may reflect actual changes in patient alliance which would make this study sample quite different among outpatient samples; it may also reflect rating problems.

Alliance and Outcome

Alliance only partially predicted outcome in this study. Negative alliance (PWC-NEG) predicted poorer dynamic outcome, and positive alliance predicted better symptomatic outcome in the path linking positive alliance, transference, and symptom outcome.

How do these results compare with other studies of alliance and outcome? A recently-published meta-analysis of 24 alliance-outcome studies (Horvath & Symonds, 1991) reports an average effect size (ES) of 0.23 (range 0.00 to 0.50) (interpretable like a correlation coefficient) for observer-rated alliance and therapy outcome. When only measures similar to the CALPAS are considered (this eliminates Luborsky's Helping Alliance Questionnaire which some see as somewhat different from other alliance measures (Tichenor & Hill, 1989), the effect size drops to 0.13.

Alliance-outcome relationships in this study were in the range of correlations reflected in the meta-analysis' ES's. It can be concluded, on the basis of the present study findings and a review of previous work, that the alliance-outcome relationship in dynamic therapy, while significant, is a weak one, and may be difficult to detect consistently.

Psychoanalytic clinicians (e.g., Freud, 1913; Greenson, 1967) have maintained that a stable therapeutic alliance is essential for good outcome. As Freud stated, the alliance was necessary for the patient to participate in analysis and accept the interpretations of the analyst. However, the only empirical study done in this area found that quality of alliance was not related to the impact of interpretations accurately addressing the patient's core conflictual relationship theme, a construct hypothesized to be related to transference (Crits-Christoph, Cooper, & Luborsky, 1989). They speculated that in their sample therapeutic alliance was relatively high and may have obscured a relationship between alliance and impact of interpretation. The treatments examined here were similar to that of Luborsky, a subset of the universe of dynamic psychotherapy. These were cases that continued at least ten sessions, where patients on the average made significant gains. Members of this patient sample functioned well enough to be seen for psychotherapy in an outpatient clinic operating without hospital or psychiatric backup. Therefore, the alliance-outcome relationship may also have been attenuated by sample

selection factors biasing toward more successful outcomes. Designs that utilized comparison of high-outcome/low-outcome groups or have examined dropouts have generally shown a higher association between alliance and outcome, particularly poor alliance and poor outcome (Luborsky, 1976; Marziali et al., 1981; Hartley & Strupp, 1983). It could therefore be speculated that there is such a thing as "good enough" alliance, where additional positive alliance adds little predictive power.

Other Therapist Interventions, Alliance, and Outcome

Confrontation and/or clarification of defensive attitudes. In contrast to the findings of Foreman and Marmar (1985), interventions addressing the patient's defensive attitudes were predictive of neither decreased negative alliance nor outcome. It is also of interest in this light that initial negative alliance was not predictive of the use of interventions addressing these attitudes. The only zero-order correlation between first session alliance and these interventions was with positive alliance ($r=.24$, $t=1.50$, $p=.07$, one-tailed test).

This lack of significant association may be related to the structure of the scale measuring confrontation and/or clarification of defensive attitudes (DEF). Two of the original four items, both of which concerned addressing defensive attitudes in relation to the therapist, were scored as occuring less far frequently than the other two

items addressing defensive attitudes in other relationships. The former two items were dropped from the scale due to their different pattern of correlation with the other items in the DEF scale, as well as problems with parallelism. However, Foreman and Marmar noted that the interventions that addressed and explored defensive attitudes toward the therapist were the most effective in reducing negative alliance and bettering outcome. The lack of significant findings may be connected to the elimination of these items.

A sample selection factor must also be considered. Foreman and Marmar took a sample of patients who had initially poor alliances and looked for therapist factors which were associated with increased alliance and good outcome, and those which were not. It was a retrospective study, looking at extreme groups. These extreme groups differed markedly in the amount of negative alliance. In the present study, levels of negative alliance were quite low, showed little variance within sessions and no significant difference across them. This also may have accounted for an attenuation of correlations.

Supportive interventions. Significant zero-order correlations were found between supportive interventions and initial negative alliance ($r=.35$, $t=1.84$, $p=.03$, one-tailed test) and negative alliance later in therapy ($r=0.31$, $t=1.72$, $p=.04$, one-tailed test), but post-hoc analyses revealed no role for supportive interventions in predicting outcome. Although no causality can be formally posited it

appears that therapists use supportive interventions when negative alliance is elevated, but this strategy does not improve alliance or outcome. Contrary to prediction, the interaction of positive alliance and support predicted neither alliance nor outcome. Problems with the data interfered with the testing of this hypothesis, however. Due to the very high correlation among the variables, particularly Supportive Interventions and Positive Alliance, standard errors were very high in the first model. For the second model, paths could not be tested because of multicollinearity preventing inversion of the correlation matrix.

Study Limitations

To undertake a process-outcome study such as the one described here takes much planning and coordinated effort. A rationale must be developed for the selection of tapes and questionnaires. Tapes and questionnaires must be collected and archived, a process which usually takes several years. To rate these materials takes extended training and precise measurement of subjective factors. Many factors can affect the reliability and validity of the data and the results produced. Several considerations must be taken into account when considering the implications of the results of this study. Some of these have been mentioned earlier, but are reviewed in more detail in the following section.

Sample considerations. The sample of patients and therapists, in many ways, resemble patients and therapists at most outpatient clinics. Their initial symptomatology is similar to that reported by Derogatis' (1977) psychiatric outpatient sample, and although not formally documented, personal experience with this group of patients suggests that presenting problems are well within the range of outpatient samples. However, as noted earlier, this is a sample, like many others, of relatively successful cases. Dropouts were not studied, and of the included cases, there was no documentation of whether or not treatment may have ended prematurely. Very few patients who were only mildly disturbed were included in this sample. Therefore, variability may have been insufficient to detect subtle effects seen in other studies. As it was, most significant effects were quite modest, just reaching the p=.10 significance level established for the study.

Even though the clinicians in this study had all experienced considerable training in mental health interventions as clinicians-in-training, they were less experienced in conducting dynamic treatment. No attempt was made to evaluate the overall quality of interventions and this is certainly a factor which may have influenced conclusions drawn from this study.

Measures of pretreatment patient characteristics.

For this study, there was only one measure of

pretreatment psychopathology available made at the time of the evaluation, the GSI of the SCL-90. While this is a common method of measuring pretreatment pathology, it is an incomplete one. There is no information available on patient's diagnosis, quality of interpersonal relationships, motivation for therapy, or defensive style. Previous studies have shown these pretreatment variables, often unrelated to pretreatment symptomatology, to be related to both process and outcome (e.g., Moras & Strupp, 1982; Morgan et al., 1982; Piper et al., 1985). It is possible that some these variables may have influenced therapists in the selection of early interventions, a hypothesis impossible to confirm given the lack of measures. It would be optimal to have measures of pretreatment functioning from the viewpoint of patient, therapist and observer.

Measures of process variables. (1) CALPAS.

Although the CALPAS showed acceptable levels of reliability on one measure, the low intraclass correlations suggested that problems with reliability (even if related to low variance) may have lowered the quality of these data. The use of a single rater for some portion of the segments added to this difficulty. This lowering in quality is difficult to measure as corrections for attenuation only correct for unreliability in the resulting scales, not for raters. Many items were discarded from the original CALPAS due to violation of parallelism. It could have been that

low reliability exaggerated these small differences between factors, reducing the power of the CALPAS to discriminate among dimensions of the alliance.

Another factor that may have lessened the efficiency of the CALPAS as an instrument measuring different aspects of therapeutic alliance was the presence of a large general factor composed of positive patient and interaction components. This finding is difficult to place in context, because with the exception of Marmar et al. (1989), no other studies reported the amount of variance accounted for by their principal component analyses; even this group reported only the amount of variance accounted for using component-based scales. Still, their analyses showed better distribution of variance among subscales. Earlier attempts at measuring therapeutic alliance (e.g., Marziali et al., 1981) showed only one or two factors with moderate to high correlations between them. More recent studies employing confirmatory factor analysis (maximum likelihood) on two participant-rated measures of alliance (CALPAS-P and the Working Alliance Inventory) showed the presence of a second-order general factor which explained most of the variance in the theoretically-defined alliance subscales (Gaston, 1992; Tracey & Kokotovic, 1988). Thus, it appears that the "fallback" position of raters (including participant raters of alliance) is to rely on a general alliance factor, based in part on their own conception of alliance, to guide their ratings. The Marmar et al. (1989) study suggests it may be

possible to differentiate alliance components. However, this result was obtained in the laboratory that developed the scale. It could be that other researchers have encountered the same difficulty experienced by CALPAS raters in the present study. A recent review of the alliance concept (Marmar, 1990) takes the position that the alliance concept itself is ill-defined and present scales are in the early stages of development.

The most serious problem with using the CALPAS in its present form (perhaps reflecting the above difficulty) was the lack of a detailed manual and/or expert-coded audiotapes. Material on the CALPAS only provided general guidelines with neither specific examples nor practice exercises. Informal consultations with one of the scale's developers (Louise Gaston) was helpful for providing some discrimination, but with the lack of systematic guidance and frequent recallibration, rater drift was (and would be in any study) inevitable. Both the impreciseness in initial training and subsequent drift could well be responsible for both the very high intercorrelation between theoretical subscales and low interrater reliability.

(2) TAS. The TAS did not suffer as did the CALPAS from the presence of a large general factor, but low variability and consequent low interrater reliability were shared difficulties. This was compounded by lower alphas caused by low numbers of items in a scale, low frequency of some interventions, and only moderate correlations among

them. For example, the problem with the DEF scale, where two items measuring the therapist's addressing defensive attitudes toward the therapist were eliminated, likely significantly affected the study results.

Measures of outcome. The kinds of outcome data that had been gathered in this database limited the questions one could address in this study. The likely difficulty with the dynamic outcome measure was outlined earlier. It would have also been ideal to compare patient and therapist ratings of satisfaction and outcome to the outcome measures examined here. (These variables are available in the present database, and could be made available for future comparison.) Additionally, as with the pretherapy variables, it would be optimal to compare an observer's perspective on various aspects of outcome with the perspectives of patient and therapist. This may have been particularly useful in this study as measures of patient symptom outcome and therapist dynamic outcome were uncorrelated. Usually, there is some shared variance in outcome perspectives, although actual correlations vary (Luborsky et al., 1988).

Use of path analytic strategies. As stated previously, the use of path analysis enhances the theory-confirming ability of non-experimental research, and in this context has been useful. However, as a form of multiple regression, path analysis is quite sensitive to unreliability and scale

internal consistency. Both reliability and internal consistency have been problems with this study and the results may have been obscured because of this. Additionally, the number of subjects used in this study is relatively low for path analysis; low numbers of subjects is a common problem in psychotherapy research, particularly with studies employing observer-rated process measures. However, the correction for attenuation due to unreliability likely increased the power of this study to detect weak associations and stands out as a distinct advantage.

Recommendations for Further Research

The results of this study raise several questions that merit further investigation and suggest future direction for research addressing the relationships among alliance, interventions, and outcome. Further refinement of measurement strategies and experimental design are also suggested by study results.

One of the major weaknesses of this study was the lack of evaluation of the quality of therapy and individual therapist interventions. Several research groups have evaluated adherence to specific therapeutic technique (Woody et al., 1985), and evaluation of therapists (Karon & vandenBos, 1981; Kernberg et al., 1972; Woody et al., 1985) and found significant relationships to outcome. Individual therapist interventions have been evaluated for their adherence to theoretically-derived conceptualizations of

patients' core conflicts, such as the core conflictual relationship theme (CCRT) (Crits-Christoph et al., 1990) and the plan diagnosis method (Silberschatz, Fretter, & Curtis, 1986). A new set of measures have been developed for evaluating patient progress/stagnation and therapist "goodness of process" (Messer, Tishby, & Spillman, 1990) which may be useful here.

Given the lack of relationship of alliance and non-transference therapist interventions, further study of pretherapy variables may prove profitable. As mentioned earlier, these factors have been shown to affect both therapy process and outcome.

The lack of association between non-transference therapist interventions and outcome also suggests another research strategy. Russell and Trull (1986) reviewed studies of therapist interventions from the counseling psychology literature and concluded that a sequential analysis design, where therapist and patient activity is compared utterance-by-utterance, may optimize the possiblity of finding connections between therapist intervention and patient process. This strategy of studying multiple single cases could be easily adapted to study therapy tapes or transcripts using the therapist and patient progress measures mentioned earlier.

To improve the accuracy of measurement of the therapeutic alliance, the CALPAS needs further devlopment as an observer-rated measure. A detailed manual needs to be

written, and/or expert-coded tapes need to be made available. Further factor analytic study should be performed with a large heterogeneous patient sample to firmly establish factorial validity.

To optimize the rating process, selection of raters should be done carefully. Moras and Hill (1992) suggest that raters of what they term "high inference" measures (the CALPAS was classified as such) should be matched in terms of experience, therapeutic orientation, and style. Raters who cannot master pre-rated material should be replaced. As the results of this study show, two judges should rate all material and meet frequently to recallibrate.

Final Summary

Having said all of the above, what have we learned from this study?

(1) Therapist emphasis on transference predicts positive dynamic outcome.

(2) While utilizing transference interpretations is usually expected to have a beneficial effect on symptom outcome, transference interventions had a negative impact on symptom outcome.

(3) Extent of symptoms did not adversely effect positive alliance.

(4) Negative alliance predicted poorer dynamic outcome.

(5) Interpreting patients' defensive attitudes did not predict decreased negative alliance or outcome.

(6) Study results demonstrate the potential efficacy of path analytic models to study relationships among process and outcome variables in dynamic psychotherapy.

APPENDIX

Table A1
Items for Observed Variables in Path Analyses

Scale PWCPOS: Patient Working Capacity-Positive Aspects (CALPAS)
1) Patient self-discloses thoughts and feelings.
2) Patient self-observes behaviors.
3) Patient explores own contribution to problems.
4) Patient experiences strong emotions.
5) Patient works actively with therapist's comments.
6) Patient deepens exploration of salient themes.

Scale PWCNEG: Patient Working Capacity-Negative Aspects
1) Patient conveys an expectation of easy cure without work on his/her part.
2) Patient defies therapist's efforts to promote self-understanding.
3) Patient acts in hostile, attacking and critical manner towards therapist.
4) Patient seems mistrustful and suspicious of therapist.
5) Patient engages in power struggle, attempting to control session.
6) Patient defies therapist's efforts to promote self-understanding.

Scale PTC: Patient Commitment
1) Patient is confident that efforts will lead to change.
2) Patient has confidence in therapy and therapist.
3) Patient is committed to go through process to completion.
4) Patient views therapy as important.
5) Patient participates in therapy despite painful moments.
6) Patient is willing to make sacrifices such as time or money.

Transference Interventions (TAS)
1) Discussed patient's reaction to therapist.
2) Linked reactions toward therapist to parental figures.
3) Linked reactions toward therapist to other important figures.

Clarification of Defensive Attitudes
1) Discussed process of patient avoiding material or feelings.
2) Discussed content and meaning of material and feelings patient was avoiding.
3) Discussed process of patient avoiding material and/or feelings in relation to the therapist.
4) Discussed content and meaning of material and/or feelings in relation to the therapist.

Supportive Interventions
1) Therapist gives explicit reassurance.
2) Expressed liking or positive regard for the patient.
3) Therapist gives explicit advice or guidance.
4) Acts to strengthen defenses (vs. stimulate insight).
5) Therapist suggests meanings of others' behavior.
6) Conveyed confidence of favorable therapy outcome for the patient.

Expressive Interventions
1) Encouraged or permitted expression of feelings.
2) Encouraged patient to examine meanings of his/her thoughts, behavior, or feelings.
4) Patient's feelings and perceptions are linked to situations and feelings from the past.

Scale PWC-PxSUP

Interaction of PWC-POS and SUP

Table A1 (cont.)
Items for Observed Variables in Path Analyses

Scale PTCxSUP

Interaction of PTC and SUP

Scale GSI: Symptoms

GSI from SCL-90

Outcome

Scale DYN: Dynamic Outcome: Post-Therapy Therapist Questionnaire
1) Ego strength (before and after treatment).
2) Capacity for insight (before and after treatment).
3) Adjustment (before and after treatment).
4) Motivation for psychotherapy (before and after treatment).
5) Prognosis (before and after treatment).

Scale PGSI, GSI: Symptomatic Outcome: SCL-90

Standardized gain score from the GSI pre-and post-therapy

Scale OUT: Average outcome

Mean of DYN and GSI

Table A2
Raw Score Intercorrelation Matrix
CALPAS (N=184)

	PWP									PWN									PTC									WSC									TUI					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	100	80	68	60	74	80	-53	-15	-9	-18	-41	-10	58	61	64	49	71	55	60	65	55	57	63	31	38	50	26	18	32	41
2	80	100	77	54	71	77	-50	-16	-18	-20	-47	-13	60	57	57	50	60	60	56	63	57	56	57	29	44	46	26	18	36	46
3	68	77	100	54	69	74	-52	-22	-12	-25	-52	-17	58	54	57	53	61	62	54	61	59	53	62	31	47	45	31	21	35	48
4	60	54	54	100	54	65	-38	-9	-8	-18	-33	-13	36	41	49	38	71	40	38	50	44	38	46	28	40	37	25	13	33	36
5	74	71	69	54	100	77	-52	-30	-26	-29	-56	-8	63	63	62	61	65	62	65	70	61	62	68	31	44	48	26	19	39	50
6	80	77	74	65	77	100	-47	-15	-8	-22	-48	-14	61	57	66	53	71	61	60	69	61	62	66	37	49	53	33	24	43	53
7	-53	-50	-52	-38	-52	-47	100	20	21	31	37	13	-46	-47	-44	-44	-47	-51	-38	-49	-43	-43	-49	-20	-26	-31	-20	4	-11	-25
8	-15	-16	-22	-9	-30	-15	20	100	62	44	53	-9	-46	-40	-30	-54	-27	-41	-50	-26	-37	-42	-37	-3	-17	-24	-15	-10	-5	-12
9	-9	-18	-12	-8	-26	-8	21	62	100	34	40	-8	-41	-29	-18	-43	-17	-37	-39	-21	-19	-37	-21	-7	-15	-16	-10	-7	-5	-5
0	-18	-20	-25	-18	-29	-22	31	44	34	100	45	47	-33	-30	-26	-32	-29	-35	-33	-30	-36	-35	-34	-4	-22	-19	-26	-6	-3	-17
11	-41	-47	-52	-33	-56	-48	37	53	40	45	100	8	-54	-48	-41	-52	-44	-55	-57	-44	-53	-59	-52	-13	-21	-28	-16	-3	-11	-26
12	-10	-13	-17	-13	-8	-14	13	-9	-8	47	8	100	2	-11	-17	-1	-13	-10	-1	-23	-7	-5	-12	-12	-25	-11	-28	-2	-19	-21
13	58	60	58	36	63	61	-46	-46	-41	-33	-54	2	100	70	65	74	52	74	76	62	65	66	66	26	43	50	33	17	34	40
14	61	57	54	41	63	57	-47	-40	-29	-30	-48	-11	70	100	75	63	63	71	63	62	60	55	63	23	33	40	35	11	24	34
15	64	57	57	49	62	66	-44	-30	-18	-26	-41	-17	65	75	100	65	66	68	63	67	58	54	60	19	33	45	34	14	29	35
16	49	50	53	38	61	53	-44	-54	-43	-32	-52	-1	74	63	65	100	53	67	72	62	63	66	64	23	47	49	43	23	37	44
17	71	60	61	71	65	71	-47	-27	-17	-29	-44	-13	52	63	66	53	100	62	58	66	57	59	65	32	39	46	34	18	35	41
18	55	60	62	40	62	61	-51	-41	-37	-35	-55	-10	74	71	68	67	62	100	70	62	60	62	63	18	41	44	33	13	24	38
19	60	56	54	38	65	60	-38	-50	-39	-33	-57	-1	76	63	63	72	58	70	100	66	63	77	69	28	48	61	42	37	46	45
20	65	63	61	50	70	69	-49	-26	-21	-30	-44	-23	62	62	67	62	66	62	66	100	66	72	70	47	63	65	51	30	57	65
21	55	57	59	44	61	61	-43	-37	-19	-36	-53	-7	65	60	58	63	57	60	63	66	100	70	81	24	47	54	37	21	34	45
22	57	56	53	38	62	62	-43	-42	-37	-35	-59	-5	66	55	54	66	59	62	77	72	70	100	74	35	51	55	36	30	45	52
23	63	57	62	46	68	66	-49	-37	-21	-34	-52	-12	66	63	60	64	65	63	69	70	81	74	100	36	54	63	39	29	46	55
24	31	29	31	28	31	37	-20	-3	-7	-4	-13	-12	26	23	19	23	32	18	28	47	24	35	36	100	49	48	31	47	61	56
25	38	44	47	40	44	49	-26	-17	-15	-22	-21	-25	43	33	33	47	39	41	48	63	47	51	54	49	100	67	63	49	64	71
26	50	46	45	37	48	53	-31	-24	-16	-19	-28	-11	50	40	45	49	46	44	61	65	54	55	63	48	67	100	55	56	68	62
27	26	26	31	25	26	33	-20	-15	-10	-26	-16	-28	33	35	34	43	34	33	42	51	37	36	39	31	63	55	100	41	51	49
28	18	18	21	13	19	24	4	-10	-7	-6	-3	-2	17	11	14	23	18	13	37	30	21	30	29	47	49	56	41	100	62	57
29	32	36	35	33	39	43	-11	-5	-5	-3	-11	-19	34	24	29	37	35	24	46	57	34	45	46	61	64	68	51	62	100	80
30	41	46	48	36	50	53	-25	-12	-5	-17	-26	-21	40	34	35	44	41	38	45	65	45	52	55	56	71	62	49	57	80	100

PWP: Patient Working Capacity-Positive Aspects
PWN: Patient Working Capacity-Negative Aspects
PTC: Patient Commitment
WSC: Working Strategy
TUI: Therapist Understanding and Involvement

Table A3
Original CALPAS (N=184)
Item-Factor Intercorrelation Matrix

	PWP						PWN						PTC						WSC						TUI			
	6	1	2	5	3	4	10	11	8	9	7	12	18	14	15	13	16	17	23	22	20	21	19	24	29	30	25	26	28	27
6	84*	80	77	77	74	65	-22	-48	-15	-8	-47	-14	61	57	66	61	53	71	66	62	69	61	60	37	43	53	49	53	24	33
1	80	78*	80	74	68	60	-18	-41	-15	-9	-53	-10	55	61	64	58	49	71	63	57	65	55	60	31	32	41	38	50	18	26
2	77	80	76*	71	77	54	-20	-47	-16	-18	-50	-13	60	57	57	60	50	60	57	56	63	57	56	29	36	46	44	46	18	26
5	77	74	71	69*	69	54	-29	-56	-30	-26	-52	-8	62	63	62	63	61	65	68	62	70	61	65	31	39	50	44	48	19	26
3	74	68	77	69	68*	54	-25	-52	-22	-12	-52	-17	62	54	57	58	53	61	62	53	61	59	54	31	35	48	47	45	21	31
4	65	60	54	54	54	44	-18	-33	-9	-8	-38	-13	40	41	49	36	38	71	46	38	50	44	38	28	33	36	40	37	13	25
10	-22	-18	-20	-29	-25	-18	64*	45	44	34	31	47	-35	-30	-26	-33	-32	-29	-34	-35	-30	-36	-33	-4	-3	-17	-22	-19	-6	-26
11	-48	-41	-47	-56	-52	-33	45	50*	53	40	37	8	-55	-48	-41	-54	-52	-44	-52	-59	-44	-53	-57	-13	-11	-26	-21	-28	-3	-16
8	-15	-15	-16	-30	-22	-9	44	53	41*	62	20	-9	-41	-40	-30	-46	-54	-27	-37	-42	-26	-37	-50	-3	-5	-12	-17	-24	-10	-15
9	-8	-9	-18	-26	-12	-8	34	40	62	29*	21	-8	-37	-29	-18	-41	-43	-17	-21	-37	-21	-19	-39	-7	-5	-5	-15	-16	-7	-10
7	-47	-53	-50	-52	-52	-38	31	37	20	21	18*	13	-51	-47	-44	-46	-44	-47	-49	-43	-49	-43	-38	-20	-11	-25	-26	-31	4	-20
12	-14	-10	-13	-8	-17	-13	47	8	-9	-8	13	3	-10	-11	-17	2	-1	-13	-12	-5	-23	-7	-1	-12	-19	-21	-25	-11	-2	-28
18	61	55	60	62	62	40	-35	-55	-41	-37	-51	-10	73*	71	68	74	67	62	63	62	62	60	70	18	24	38	41	44	13	33
14	57	61	57	63	54	41	-30	-48	-40	-29	-47	-11	71	72*	75	70	63	63	63	55	62	60	63	23	24	34	33	40	11	35
15	66	64	57	62	57	49	-26	-41	-30	-18	-44	-17	68	75	71*	65	65	66	60	54	67	58	63	19	29	35	33	45	14	34
13	61	58	60	63	58	36	-33	-54	-46	-41	-46	2	74	70	65	68*	74	52	66	66	62	65	76	26	34	40	43	50	17	33
16	53	49	50	61	53	38	-32	-52	-54	-43	-44	-1	67	63	65	74	62*	53	64	66	62	63	72	23	37	44	47	49	23	43
17	71	71	60	65	61	71	-29	-44	-27	-17	-47	-13	62	63	66	52	53	51	65	59	66	57	58	32	35	41	39	46	18	34
23	66	63	57	68	62	46	-34	-52	-37	-21	-49	-12	63	63	60	66	64	65	78*	74	70	81	69	36	46	55	54	63	29	39
22	62	57	56	62	53	38	-35	-59	-42	-37	-43	-5	62	55	54	66	66	59	74	76*	72	70	77	35	45	52	51	55	30	36
20	69	65	63	70	61	50	-30	-44	-26	-21	-49	-23	62	62	67	62	62	66	70	72	73*	66	66	47	57	65	63	65	30	51
21	61	55	57	61	59	44	-36	-53	-37	-19	-43	-7	60	60	58	65	63	57	81	70	66	64*	63	24	34	45	47	54	21	37
19	60	60	56	65	54	38	-33	-57	-50	-39	-38	-1	70	63	63	76	72	58	69	77	66	63	63*	28	46	45	48	61	37	42
24	37	31	29	31	31	28	-4	-13	-3	-7	-20	-12	18	23	19	26	23	32	36	35	47	24	28	17	61	56	49	48	47	31
29	43	32	36	39	35	33	-3	-11	-5	-5	-11	-19	24	24	29	34	37	35	46	45	57	34	46	61	74*	80	64	68	62	51
30	53	41	46	50	48	36	-17	-26	-12	-5	-25	-21	38	34	35	40	44	41	55	52	65	45	45	56	80	70*	71	62	57	49
25	49	38	44	44	47	40	-22	-21	-17	-15	-26	-25	41	33	33	43	47	39	54	51	63	47	48	49	64	71	68*	67	49	63
26	53	50	46	48	45	37	-19	-28	-24	-16	-31	-11	44	40	45	50	49	46	63	55	65	54	61	48	68	62	67	65*	56	55
28	24	18	18	19	21	13	-6	-3	-10	-7	4	-2	13	11	14	17	23	18	29	30	30	21	37	47	62	57	49	56	45*	41
27	33	26	26	26	31	25	-26	-16	-15	-10	-20	-28	33	35	34	33	43	34	39	36	51	37	42	31	51	49	63	55	41	42
PWP	92	88	87	83	82	66	-26	-56	-21	-16	-59	-15	68	67	71	67	61	80	73	66	76	68	67	37	44	55	53	56	23	33
PWN	-47	-45	-50	-61	-55	-36	81	71	64	54	43	16	-70	-63	-54	-66	-69	-54	-63	-67	-59	-59	-67	-18	-16	-32	-38	-40	-8	-35
PTC	76	74	71	77	71	56	-38	-60	-49	-38	-57	-10	85	85	84	83	79	71	78	75	78	75	82	29	37	48	48	56	20	44
WSC	77	72	69	77	69	53	-37	-60	-43	-31	-52	-13	73	71	69	78	76	73	88	87	85	80	79	41	63	69	68	75	42	51
TUI	55	44	46	49	49	40	-20	-22	-18	-13	-24	-23	41	38	41	47	52	46	62	58	71	51	60	63	86	84	82	80	67	65

Table A3 (cont.)
Original CALPAS (N=184)
Factor-Factor Intercorrelation Matrix

	PWP	PWN	PTC	WSC	TUI
PWP	100	-59	85	84	57
PWN	-59	100	-77	-72	-36
PTC	85	-77	100	90	54
WSC	84	-72	90	100	79
TUI	57	-36	54	79	100

PWP: Patient Working Capacity-Positive Aspects
PWN: Patient Working Capacity-Negative Aspects
PTC: Patient Commitment
WSC: Working Strategy
TUI: Therapist Understanding and Involvement

Table A4
CALPAS Items Discarded and Retained from Factor Analyses

Items Eliminated Due to High Loadings on More than one Factor

1) Patient conveys an expectation of easy cure without work on his/her part. (PWC-NEG)
2) Patient defies therapist's efforts to promote self-understanding. (PWC-NEG)
3) Patient is confident that efforts will lead to change. (PTC)
4) Patient has confidence in therapy and therapist. (PTC)
5) Patient is committed to go through process to completion. (PTC)
6) Therapy proceeds in accord with patient's ideas of helpful change processes. (WSC)
7) Patient and therapist work together in a joint struggle. (WSC)
8) Patient and therapist share same sense about how to proceed. (WSC)

Items Loading on First Factor (Patient Positive Alliance)

1) Patient self-discloses thoughts and feelings. (PWC-POS)
2) Patient self-observes behaviors. (PWC-POS)
3) Patient explores own contribution to problems. (PWC-POS)
4) Patient experiences strong emotions. (PWC-POS)
5) Patient works actively with therapist's comments. (PWC-POS) **
6) Patient deepens exploration of salient themes. (PWC-POS)
7) Patient views therapy as important. (PTC)
8) Patient participates in therapy despite painful moments. (PTC)

Items Loading on Second Factor (Therapist Understanding and Involvement)

1) Therapist rigidly applies technique. (WSC)
2) Therapist is understanding of patient's suffering and subjective world. (TUI)
3) Therapist demonstrates non-judgmental acceptance and positive regard. (TUI)
4) Therapist demonstrates commitment to help and confidence in treatment. (TUI)**
5) Therapist does not misuse treatment to serve own needs. (TUI)
6) Therapist demonstrates tact and timing of interventions. (TUI)
7) Therapist facilitates work on salient themes. (TUI)

Items Loading on Third Factor (Patient Negative Alliance)

1) Patient acts in hostile, attacking and critical manner towards therapist. (PWC-NEG)
2) Patient seems mistrustful and suspicious of therapist. (PWC-NEG)
3) Patient engages in power struggle, attempting to control session. (PWC-NEG)
4) Patient defies therapist's efforts to promote self-understanding. (PWC-NEG)**

Abbreviations:

PWC-POS: Patient Working Capacity, Positive Aspects
PWC-NEG: Patient Working Capacity, Negative Aspects
PTC: Patient Commitment
WSC: Working Strategy Consensus
TUI: Therapist Understanding and Involvement

Table A5
Raw Score Intercorrelation Matrix
TAS (N=184)

		---TRA---			------DEF-----				---------SUP----------						----EXP----		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
T	1	100	34	47	28	50	31	51	13	3	10	-13	-18	-11	13	11	2
R	2	34	100	28	3	2	4	2	-2	4	2	-9	-7	-11	2	-5	19
A	3	47	28	100	14	22	19	19	1	-1	-3	-3	-6	-10	10	-4	3
D	4	28	3	14	100	36	75	45	12	-4	-6	7	-8	-18	21	24	12
E	5	50	2	22	36	100	33	76	16	-10	-3	-4	-16	-10	-1	7	-1
F	6	31	4	19	75	33	100	31	7	0	-10	8	-2	-15	23	27	23
	7	51	2	19	45	76	31	100	16	-6	-2	-9	-9	-9	3	9	-3
	8	13	-2	1	12	16	7	16	100	35	45	-7	14	24	-10	-19	-12
S	9	3	4	-1	-4	-10	0	-6	35	100	55	4	43	57	-2	-18	-6
U	10	10	2	-3	-6	-3	-10	-2	45	55	100	-2	30	44	3	-16	-8
P	11	-13	-9	-3	7	-4	8	-9	-7	4	-2	100	11	5	15	18	26
	12	-18	-7	-6	-8	-16	-2	-9	14	43	30	11	100	50	-16	-12	-6
	13	-11	-11	-10	-18	-10	-15	-9	24	57	44	5	50	100	-8	-17	-11
E	14	13	2	10	21	-1	23	3	-10	-2	3	15	-16	-8	100	44	13
X	15	11	-5	-4	24	7	27	9	-19	-18	-16	18	-12	-17	44	100	30
P	16	2	19	3	12	-1	23	-3	-12	-6	-8	26	-6	-11	13	30	100

TRA: Transference-Related Interventions
DEF: Confrontations/Clarifications of Defensive Attitudes
SUP: Supportive Interventions
EXP: Expressive Interventions

Table A6
Inter-Item and Item Factor Correlations with Communalities
TAS (N=184)

		1	3	2	4	7	5	6	9	13	10	12	8	11	15	14	16	601	602	603	604
T	1	53*	47	34	28	51	50	31	3	-11	10	-18	13	-13	11	13	2	73	57	-5	15
R	3	47	40*	28	14	19	22	19	-1	-10	-3	-6	1	-3	-4	10	3	63	26	-7	5
A	2	34	28	23	3	2	2	4	4	-11	2	-7	-2	-9	-5	2	19	46	4	-7	10
D	4	28	14	3	58*	45	36	75	-4	-18	-6	-8	12	7	24	21	12	25	76	-5	34
E	7	51	19	2	45	54*	76	31	-6	-9	-2	-9	16	-9	9	3	-3	40	73	-6	5
F	5	50	22	2	36	76	46*	33	-10	-10	-3	-16	16	-4	7	-1	-1	41	68	-9	3
	6	31	19	4	75	31	33	41	0	-15	-10	-2	7	8	27	23	23	30	64	-3	44
	9	3	-1	4	-4	-6	-10	0	65*	57	55	43	35	4	-18	-2	-6	3	-7	81	-16
S	13	-11	-10	-11	-18	-9	-10	-15	57	52*	44	50	24	5	-17	-8	-11	-18	-19	72	-22
U	10	10	-3	2	-6	-2	-3	-10	55	44	46*	30	45	-2	-16	3	-8	5	-7	68	-12
P	12	-18	-6	-7	-8	-9	-16	-2	43	50	30	32*	14	11	-12	-16	-6	-17	-12	56	-21
P	8	13	1	-2	12	16	16	7	35	24	45	14	16*	-7	-19	-10	-12	6	18	40	-25
	11	-13	-3	-9	7	-9	-4	8	4	5	-2	11	-7	0	18	15	26	-14	1	3	36
D	15	11	-4	-5	24	9	7	27	-18	-17	-16	-12	-19	18	65*	44	30	1	24	-20	83
E	14	13	10	2	21	3	-1	23	-2	-8	3	-16	-10	15	44	27*	13	14	16	-6	50
F	16	2	3	19	12	-3	-1	23	-6	-11	-8	-6	-12	26	30	13	12	13	11	-5	32
TRA		73	63	46	25	40	41	30	3	-18	5	-17	6	-14	1	14	13	100	48	-11	17
DEF		57	26	4	76	73	68	64	-7	-19	-7	-12	18	1	24	16	11	48	100	-8	31
SUP		-5	-7	-7	-5	-6	-9	-3	81	72	68	56	40	3	-20	-6	-5	-11	-8	100	-19
EXP		15	5	10	34	5	3	44	-16	-22	-12	-21	-25	36	83	50	32	17	31	-19	100

TRA: Transference-Related Interventions
DEF: Confrontations/Clarifications of Defensive Attitudes
SUP: Supportive Interventions
EXP: Expressive Interventions

Table A7
TAS Items Discarded and Retained from Factor Analyses

Item Discarded due to Negative Loading on Own Factor

1) Therapist suggests meanings of others' behavior. (SUP)

Items Discarded due to Violation of Parallelism

1) Discussed process of patient avoiding material and/or feelings in relation to the therapist. (DEF)
2) Discussed content and meaning of material and/or feelings in relation to the therapist. (DEF)
3) Conveyed confidence of favorable therapy outcome for the patient. (SUP)
4) Patient's feelings and perceptions are linked to situations and feelings from the past. (EXP)

Factors Retained:

First Factor (Transference Interventions)

1) Discussed patient's reaction to therapist.
2) Linked reactions toward therapist to parental figures.
3) Linked reactions toward therapist to other important figures.

Second Factor (Clarification of Defensive Attitudes)

1) Discussed process of patient avoiding material or feelings.
2) Discussed content and meaning of material and feelings patient was avoiding.

Third Factor (Supportive Interventions)

1) Therapist gives explicit reassurance.
2) Expressed liking or positive regard for the patient.
3) Therapist gives explicit advice or guidance.
4) Acts to strengthen defenses (vs. stimulate insight).

Fourth Factor (Expressive Interventions)

1) Encouraged or permitted expression of feelings.
2) Encouraged patient to examine meanings of his/her thoughts, behavior, or feelings.

DEF: Confrontations/Clarifications of Defensive Attitudes
SUP: Supportive Interventions
EXP: Expressive Interventions

Table A8
Items for Observed Variables in Revised Path Analyses

Scale POS: Patient Positive Alliance (CALPAS)

1) Patient self-discloses thoughts and feelings.
2) Patient self-observes behaviors.
3) Patient explores own contribution to problems.
4) Patient experiences strong emotions.
5) Patient works actively with therapist's comments.
6) Patient deepens exploration of salient themes.
7) Patient views therapy as important.
8) Patient participates in therapy despite painful moments.

Scale PWC-NEG: Patient Working Capacity-Negative Aspects (CALPAS)

1) Patient acts in hostile, attacking and critical manner towards therapist.
2) Patient seems mistrustful and suspicious of therapist.
3) Patient engages in power struggle, attempting to control session.
4) Patient defies therapist's efforts to promote self-understanding.

Scale TRA: Transference Interventions (TAS)

1) Discussed patient's reaction to therapist.
2) Linked reactions toward therapist to parental figures.
3) Linked reactions toward therapist to other important figures.

Scale DEF: Clarification of Defensive Attitudes (TAS)

1) Discussed process of patient avoiding material or feelings.
2) Discussed content and meaning of material and feelings patient was avoiding.

Scale SUP: Supportive Interventions (TAS)

1) Therapist gives explicit reassurance.
2) Expressed liking or positive regard for the patient.
3) Therapist gives explicit advice or guidance.
4) Acts to strengthen defenses (vs. stimulate insight).

Table A8 (cont.)
Items for Observed Variables in Path Analyses

Scale EXP: Expressive Interventions (TAS)

1) Encouraged or permitted expression of feelings.
2) Encouraged patient to examine meanings of his/her thoughts, behavior, or feelings.

Scale POSxSUP

Interaction of POS and SUP

Scale GSI: Symptoms

GSI from SCL-90

Outcome

Scale DYN: Dynamic Outcome: Post-Therapy Therapist Questionnaire
1) Ego strength (before and after treatment).
2) Capacity for insight (before and after treatment).
3) Adjustment (before and after treatment).
4) Motivation for psychotherapy (before and after treatment).
5) Prognosis (before and after treatment).

Scale GSI: Symptomatic Outcome: SCL-90

Standardized gain score from the GSI pre-and post-therapy

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