THE PERCEPTION OF FOUR RELATIONSHIP FACTORS
AS RELATED TO OUTCOME SCORES IN SOCIAL
CASEWORK TREATMENT

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ABSTRACT

The purpose of this field study was to determine the association between clients' perceptions of the level of four relationship factors and scores on 10 outcome criteria measures. The outcome criteria were the adjusted difference in seven before-after marital and psychological behavior measures, a change index, clients' assessment of improvement in family relationships and four outcome groups related to aspects of continuance and termination. The four relationship factors measured between pretest and post-test were clients' subjective experience of the level of accurate empathy, congruence or genuineness, regard, and unconditional positive regard communicated by their social workers. A fifth relationship variable was the sum score of the four individual factors. This highly intercorrelated system of five variables was also compared to twenty-two other independent variables for their relative ability to account for as great or greater a proportion of the variation in scores on the ten outcome criteria. These twenty-two other variables were classified into the domains of aspects of the client, aspects of the worker, aspects of the treatment system, and post-test case status. A further attempt was made to find combinations from all twenty-seven
independent variables together that consistently predicted the greatest proportion of variation in outcome scores. Prior research in other than primary social work settings and theoretical literature supported the expectation that a positive association would be found between the relationship factors and outcome in this sample of clients receiving social casework treatment.

The total sample was composed of eighty-three clients reporting family related problems who were seen by twenty-three social workers with MSW degrees in three family service agencies. Clients were not randomly assigned but rather entered the study on a first come first served basis within the data collection time limit. Measurement instruments, all uniformly self administered, were the Locke-Wallace Marital Adjustment Test, the Semantic Differential, a measure designed by the FSAA, several questionnaires, and the Barrett-Lennard Relationship Inventory. The statistical methodology was the use of multiple regression techniques including step-wise analyses.

It was found that clients' subjective experience of the level of relationship factors predicted the scores on all of the ten outcome measures. Levels of significance ranged from .05 to .001. Relationship factors predicted as great or greater a proportion of outcome variance as any other single variable 9 out of 10 times, and in 8 out of the 10 outcome
measures as any other set of independent variables that were grouped together. However, various combinations of all twenty-seven variables together were always able to predict a greater proportion of outcome variance than the five relationship factors by themselves. These factors did not account for even half of the total variation in outcome scores despite the fact that they were the most consistent significant outcome predictors. Therefore, the experienced level of the relationship factors might be necessary but not sufficient conditions to account for all change.

It was concluded that further research is needed to see if this positive association applies to a wide cross section of social casework samples employing different interventive procedures and different outcome criteria. If the association is universal in social casework practice, it is relevant to discriminate specific worker behaviors, as well as interaction processes, that in general facilitate clients' experience of higher levels of the relationship factors. Also the relationship factors need to be accounted for as intervening variables in future studies of the relative effectiveness of different models of social casework intervention.
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Chapter I

INTRODUCTION AND PROBLEM

During the past decade, an important area of concern in social work practice, research, education and training has been the effectiveness of intervention. This area must always be of concern to the profession as it involves our professional commitment to increase the benefits of our services to clients and our commitment to the scientific method of inquiry.

Effectiveness of intervention has far-reaching implications in terms of the development and modification of curriculum in schools of social work, and has been one of the concerns that has led to reassessments of education for intervention into the macro and micro system levels as well as the deployment of manpower. While the overwhelming majority of published studies of the effectiveness of social casework as well as psychotherapy have shown that the

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difference in the average outcome scores between experimentals and controls is null, the need continues to exist for research to determine what processes and conditions within the various models of social casework are associated with client improvement or deterioration.\(^3\)

The general question, is casework (or any form of counseling or therapy) effective, is too broad and general. A more important question is: under what conditions is it more or less effective?\(^4\) The purpose of this study was to find processes that are associated with client improvement and processes that are associated with client deterioration in a sample of adults being treated by social caseworkers. The goal was two-fold. First there was an attempt to discriminate possible variables which need to be accounted for in measuring the relative effectiveness of different models of social casework intervention. Second, it was aimed at learning more about the possible effect of certain processes that could be maximized to increase the benefits of service to clients.

In a review of research in the family service field


from 1966 to 1971, Briar found that studies of social casework intervention dominated. The attention focused on continuance, planned short-term service, and techniques. According to Briar, the most significant studies in this area were the major ones that measured the significance of difference in outcome scores between experimentals and controls. Two of these most often referred to were Girls at Vocational High and the Chemung County Study. Although not conducted in family agencies, the service provided was social casework, the primary service offered in most family agencies. In both studies, the major findings led to the conclusion that persons receiving the help of the professional caseworkers in the sample did not show significant average gains over comparable persons who did not receive these services. 5

Fisher surveyed the research literature and located eleven casework effectiveness studies, which included the above two. Subjects were children, adolescents, and adults receiving a variety of casework services. Measures ranged from subjective to objective criteria dealing with personal and social functioning. Performance, judgment, and descriptive data were collected and utilized in various ways from psychological inventories and questionnaires to worker and client ratings and observed behavior. More than one source

5Briar, *op.cit.*, pp. 114-117.
of data was used to draw conclusions in almost all of these studies. Designs were considered minimally acceptable where-in experimental and control groups were assigned through matching, randomization, or a combination of the two.

These eleven studies represented all of the controlled investigations of the average effectiveness of casework that could be found by Fisher. Nine of these eleven showed that the average professional caseworker was unable to bring about positive, significant, measurable changes in clients beyond the changes that would have occurred without the service and the help of the worker. Fisher claims that the results from the remaining two studies were obfuscated by deficiencies in the design or statistical analysis.⁶

Truax and Carkhuff reviewed over twenty studies where patients who represented a broad range of problem categories received various types and modalities of psychotherapy or counseling from a range of different therapists including psychiatrists, social workers, psychologists, and other professional counselors. Outcome scores on experimentals were compared with the scores obtained from the same outcome measures employed with controls. In all of these reports it was again found that there was no significant difference in

⁶Fischer, op.cit., pp. 5-19.
mean outcome scores between experimental and controls.\textsuperscript{7}

Therefore, the weight of the evidence, which involves a large number of therapists and clients, suggests that the average effects of therapeutic intervention (with the average counselor or therapist) is approximately equivalent to the random effects of normal living without treatment or what has been traditionally called spontaneous improvement. But, besides the fact that mean change scores between experimental and controls were approximately equal, the above investigations did not fully explore differences in variability in change scores between groups of treated and untreated subjects. The difference in the means between groups of scores is simply an expression of the difference in averages. The significance of this difference is obtained, in part, through utilization of the standard deviation scores, which, in turn, can be utilized to obtain the variance of the scores.

Is there, then, a difference between the amount of variability of outcome scores for experimental as opposed to controls, or, like the means, is this too approximately equal? If there is a significant difference in variability between the experimental and control subjects and the range of variability in outcome is much greater for those in treatment, it would clearly indicate that counseling was having a

pronounced effect in both the positive and negative directions that surpassed movement in both directions by those not in treatment. It would then be evident that counseling was having a greater effect than no treatment but the effect would be helpful for some and harmful for others.

Bergin surveyed seven studies of psychotherapy effectiveness which were conducted between 1954 and 1960. He focused his attention on the difference in the amount of variability, in criteria change scores, between experimental and controls. In all seven studies there was no significant difference in the average amount of change between experimental and controls but the outcome scores for those receiving treatment showed considerably greater variance than the scores obtained by controls. In one of the studies, the variance was computed from the published standard deviations of outcome scores. Of 12 items, 11 showed greater variance in the treated group. Six of these 11 showed differences in variability between experimental and controls that were significant at the .05 and .01 level.

Due to this double edged effect of treatment, Bergin suggests a general paradigm which depicts what he refers to as the deterioration effect (see Fig. 1). When all scores

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Figure 1
The Deterioration Effect

Bergin's schematic representation of pre- and post-test distributions of outcome criteria scores in psychotherapy outcome studies.
Reference cited in footnote 8.
Pre Control

Therapeutic change

Post

Therapy

Spontaneous change

M2

No Change

M1

Deterioration

M2

Pre

Post
are pooled, the average predictions or discriminations are often no different from chance estimates. However, some individuals appear to exceed chance predictions while others deteriorate.

Although the mean change in both groups was similar, the change scores for treatment cases attained a much wider dispersion than those of the control groups. Typically, the control subjects changed a little with the variance clustering about the mean. However, the scores for experimental subjects typically were dispersed from marked deterioration to marked improvement.

From the findings in this survey Bergin concluded that there were processes in treatment that caused patients to improve and processes that caused patients to deteriorate. In summary, he suggested that the therapeutic process and outcome probably varies as a function of certain therapist characteristics, such as warmth, empathy, adequacy of adjustment, and experience.

While this evidence indicates that there can be a difference in the variability in outcome scores between experimentals and controls, it does not explain the reason for the similarity in the means. As a possible answer to this question, Bergin also discovered that many control subjects who receive no formal therapy do seek out and obtain help from various non-professional sources. He reasoned that
individuals tend to seek out others in the community who provide the kind of relationship or therapeutic conditions that are also provided by the therapists whose patients tend to show more gain. The positive change scores obtained by those not in treatment may represent the existence of what Bergin calls unrecognized but powerful therapeutic agents existing naturally in everyday life. It may be that in counseling some patients are assigned to a helper who generates low therapeutic conditions and the patient shows an effect of deterioration. Others are assigned to helpers who enable the patient to experience high levels of certain relationship phenomena and consequently the patient shows greater improvement.

Focusing on a normative population and using an instrument that measured perceived empathy, regard, and genuineness, Shapiro, Kruss and Truax hypothesized that individuals in general disclose themselves differentially to other persons in a manner related to the degree of perceived empathy, regard and genuineness that is felt to be provided by the other person. The data gathered from a sample of male and female college students led to the conclusion that individuals who were perceived as offering highest levels of

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these conditions were given the most disclosure, both positive and negative. Individuals in the sample tended to be most open with those whom they perceived as most understanding, warm and genuine.10

Prior to Bergin's survey on the difference between the variance in outcome scores for experimentals and controls, others discovered that differences in outcome scores within treated groups seemed to be related to differences in the relationship between the therapist and patient. In a ten year study of 325 potentially delinquent boys receiving supportive counseling and 325 untreated boys in a control group, Teuber and Powers found no overall average difference favoring the treated group. But Powers and Teuber also discovered that certain specific counselors tended to form poor relationships with the boys and these same counselors had generally poor outcomes. The other counselors seldom had either poor relationships or poor outcomes. In the introduction to this same investigation, Allport pointed out that the most effective counselor, a social worker, had a minimum amount of professional training as a therapist, but was a warm, understanding and mature person.11


11Hans-Lukas Teuber and Erwin Powers, "Evaluating
In the pioneering work of Whitehorn and Betz at Johns Hopkins Hospital, some significant differences were found between two groups of psychiatrists representing those successful and those unsuccessful with their schizophrenic patients. Both groups of therapists included bright and dull conversationalists and patients varied greatly in personality characteristics. However, the two groups of psychiatrists were different in their attitudinal approach to the helping relationship. The successful therapists defined as "B" types on the Strong Vocational Test were warm and attempted to understand the patient in an immediate and idiosyncratic way. The less successful therapists defined as "A" types on the same test related to their patients in a more impersonal way, focusing on psychopathology and a more external kind of understanding. The successful "B" therapist had an improvement rate of 75 percent while the other group of unsuccessful therapists who had similar training had an improvement rate of only 27 percent. The results of this investigation stimulated further studies into the association between aspects of the therapist-patient relationship and scores on outcome measures for different groups of patients receiving Therapy in a Delinquency Prevention Program," Proceedings of the Association for Research in Nervous and Mental Disease, Vol. 31 (1953), pp. 138-147.

12 Truax, op.cit., pp. 82-95.
a heterogeneous variety of counseling and psychotherapy.

Truax and Carkhoff reviewed over twenty studies which consistently showed a positive relationship between patients' scores on outcome measures with scores on scales measuring the degree of accurate empathy, congruence (or genuineness), and regard (or warmth) and unconditional positive regard which was provided by the therapist. In a doctoral dissertation, which explored the association between these relationship factors and congruence in cognitive style between the worker and client, Greene presents a useful conceptual definition of therapeutic conditions, which I have also defined as the four relationship factors. These therapeutic conditions were first defined by Carl Rogers and the client centered school of treatment where they are consciously employed as the primary treatment tool. This will be discussed later in the literature chapter.

Factor 1, accurate emphatic understanding:

Empathy is a multi-dimensional concept containing affective and cognitive components. It involved the worker's entering into the feeling experience of the client as if it were his own, so gaining an emotional understanding rich in experiential meaning. To

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13 Ibid., pp. 82-95.

utilize this awareness, it is then necessary to regain a certain distance and subject experiential findings to objective and logical scrutiny. The process is one of oscillating between involved and detached positions. This is then used to communicate to the client the message, 'I am with you although different from you,' since it enables the worker to respond in a manner that fits the client's mood. When empathic understanding is low, the worker may be more related to his own feelings or needs than to those of the client, or he may be in touch with dynamics in a manner that is removed from the client's current feelings and concerns.

Factor 2, worker's congruence or genuineness:

Such genuineness implies that the worker expresses himself with a sense of authenticity and honesty while maintaining a professional commitment to his task. It implies that the worker is in touch with and integrated in his own experience since, should a gap exist, the worker could not be fully capable of relating openly. Theoretically, since in part the client seeks help with his own lack of congruence, the worker's model of integrated functioning is a prerequisite to helping the client in this area. To be genuine also implies a lack of defensiveness and an openness to direct personal encounters when such encounters are therapeutically indicated. It does not mean that the worker must overtly express all that he feels. It means that he does not hide nor does he deny what he feels by adopting a professional facade that conveys a lack of sincerity. In this sense his responses are integrated with his actual feelings and are not merely professional responses that fail to reflect his actual reactions.

Factor 3, level of regard:

Rogers subsequently divided this condition into two components, differentiating regard from unconditional positive regard. Level of regard refers to the general tendency of the therapist's various affective reactions to the client. It subsumes how much the therapist
likes, cares for, values, and feels warmth for the client. Regard may be considered a composite of all the feeling reactions of worker to client, both negative and positive at any one point in time.

Factor 4, unconditional positive regard:

Unconditional positive regard is primarily concerned with how little or how much variability there is in the worker's affective response to the client. It involves consistency in valuing the client as a person, separate from any evaluation of his behavior. This does not mean that the worker sanctions destructive behavior. Rather, he appreciates the meaning that such behaviors have for the client instead of approving or disapproving of them. In social work, this is reflected in our emphasis on accepting the client as he is and in respecting his right to self-determination.

A further distinction between the perceived level of regard and the perceived level of unconditional positive regard can be seen by a direct inspection of the items themselves on a relationship inventory. The inventory referred to is discussed later in the methodology chapter and appears in appendix 17. The items reflecting the perceived level of regard are straightforward statements representing the degree to which the worker is perceived as respecting, liking, appreciating, caring for, valuing, etc. the client. The items representing unconditional regard are essentially the same terms of caring for the client etc., with the addition of various conditions. For example, some of these conditions are whether the client himself is feeling happy or unhappy,
critical, angry, or is expressing "good" or "bad" feelings at the moment. These latter items permit the client to report how much he perceives the worker's attitude to be changed by the various changing temporal conditions within the system of interaction and how much the worker maintains a constant attitude toward the client regardless of temporal changes.

In all of the aforementioned studies that were reviewed by Truax and Carkhuff, patients who were provided with the experience of high levels of at least two of these factors showed significantly greater positive change on a variety of outcome criteria than patients who were provided with the experience of low levels of these same factors of the therapist-patient relationship. Some of the studies compared scores on one of these dimensions or factors to outcome while some compared scores on two or three factors to outcome criterion. It was additionally found that there was a high inner correlation between the four factors and, following the fifth session, therapists' levels of empathy did not vary significantly with a specific patient over the course of the treatment.

Patient subjects included adolescents and adults. While the majority of the investigations were conducted with hospitalized mental patients, a few of the studies included patient subjects seen in an outpatient setting. Therapists
were primarily psychiatrists and psychologists, but in one of the studies conducted at a Veteran Administration facility, a few of the therapists were social workers. In all of the reported studies patients received either individual or group therapy and treatment was either planned long-term or planned short-term.

Data for determining the level of empathy, congruity, and regard were gathered during the course of treatment by the use of taped sessions. The tape recorded sessions between the therapist and patients were rated by judges trained in the use of scales designed to measure these factors of the therapeutic relationship. Outcome criteria differed according to the study. In general, outcome criteria included the patient's engagement in therapy, self revelation and self exploration, changes in the patient's observed behavior, and changes on various personality measures, including scales on the M.M.P.I., Rorschach, Q sort, the Welsh Anxiety Scale and the Taylor Manifest Anxiety Scale. Other outcome criteria included the length of hospitalization, change in diagnostic assessment, and the supervisor's rating of success. Statistical tests, which were employed to measure the relationship between observed levels of the therapeutic conditions and scores on outcome measures, included analysis of covariance and correlational techniques.

The findings from these studies were all reported by
Truax and Carkhuff to be significant. Where levels of significance were quoted, they were $p < .05$ for the lowest with $p < .001$ for the highest level of significance.\(^{15}\)

By employing a self-administered instrument developed by Barrett-Lennard that measures the patient's perceived levels of therapeutic conditions also defined as empathy, congruity, regard and unconditional positive regard, other investigators (Truax, Wargo, Carkhuff, Turnell and Glenn, 1966), (Truax, Wargo, Tunnel and Glenn, 1966), and (Truax, Leslie, Smith, Glenn and Fisher, 1966) were able to reproduce similar significant findings with samples of outpatients. Using correlational techniques, significance ranged from $p < .05$ to $p < .01$. It was, however, found that the self-administered relationship inventory was unreliable when used with hospitalized mental patients or severely disoriented schizophrenics.\(^{16}\)

The findings from all of these studies together indicate that there is a positive relationship between the levels of observed or perceived therapeutic conditions and scores on outcome measures. Furthermore, significant correlations are obtained regardless of the therapist's orientation, discipline, the modality of treatment and whether the treatment is planned

\(^{15}\)Truax, \textit{op.cit.}, pp. 82-95.

\(^{16}\)Ibid., pp. 137-141.
long-term or planned short-term.

The ratings of the therapist's observed accurate empathy, congruence, regard and unconditional positive regard by trained judges do not, however, always correspond with the therapist's rating of these factors or the patient's ratings on the Relationship Inventory. Actually, Meltzoff and Kornreich found that correlations between the scores on the three different types of measurement techniques is quite low, ranging from $r = 0.06$ to $r = 0.26$ (Truax et al., 1966). This leads Truax to conclude that judges' ratings and the questionnaire scores measure somewhat different but related aspects of the therapist's traits with a specific patient. The nature of these traits, that are measured by the different techniques, is yet to be determined in future research.

Meltzoff and Kornreich go on to report that the increasing number of investigators conducting exploratory studies in this area believe that the perception of the four relationship factors originate with the therapist and become part of the patient's experience in treatment. While noting the growing sophistication of research techniques that can be employed in measuring the correlation of these relationship factors to outcome, the authors stress the fact that aspects of the therapist himself and other intervening variables have been sadly neglected. For example, in the majority of the studies the therapist's experience and
training were not sufficiently accounted for, perhaps because most of the therapist-subjects were students or beginners. 17

The evidence from all of these reported exploratory studies combined indicated that there is a positive relationship between objectively observed as well as patient perceived levels of therapeutic conditions (defined as the four relationship factors) and scores on the outcome criteria. Because social caseworkers often help their clients by using also face-to-face interview techniques, it is relevant to ask if there is a positive relationship between these clients' perception of the levels of therapeutic conditions and their scores on outcome measures.

The practice of social caseworkers helping individuals and families through the use of face-to-face interviews is based in accumulated knowledge within the field of social work which, in turn, is a related but separate field from other professions that provide direct individualized services. Thus it is appropriate to subject this question to empirical testing with a sample of clients being helped by social workers in family service agencies.

In a national survey of clients' and counselors' views on family services (1973), the Family Service Association of

America discovered that certain client, worker and treatment characteristics were positively associated with their change criteria. In this pioneering study, it was also found that the clients' global subjective assessment of the quality of the casework relationship was the most powerful predictor of change. However, change was not computed from objective pre- and post-test measures and the data on the worker-client relationship was gathered at the same time as the ex-post facto subjective assessment of change was measured. The degree to which the client perceived improvement could have influenced the attitude toward the worker which was assessed at the same time. It is nevertheless evident that a number of different variables, including aspects of the client, aspects of the worker and aspects of the treatment as well as the client's perception of the quality of the relationship, probably interact as a system in accounting for some of the variance in change scores.

The method of this study was to design a before-after empirical investigation of the correlations between perceived therapeutic conditions and outcome criteria with objective pre- and post-test measures and data on the perception of the four relationship factors gathered during the course of

treatment prior to post-testing. Data were included on aspects of the client, the worker and the treatment process to continue an exploration of the interrelationships between all of these variables and outcome criteria. The plan was to test the interrelationship of these variables within a system of adult clients seeking help for family related problems at three family service agencies and who were treated by social caseworkers with MSW degrees.

Seven domains of variables were selected and defined as (1) the clients' perception of the degree of empathy, congruence, regard, and unconditional positive regard provided by the worker; (2) pre- and post-test marital and psychological behavior; (3) aspects of the client; (4) aspects of the worker; (5) aspects of the treatment process; (6) post-test case status; and (7) the clients' subjective perception of change in family functioning consequent to treatment. The first and seventh domains of variables could have been classified with (2) pre and post-test marital and psychological behavior. However, because the perception of therapeutic conditions was the primary independent variable and was not a before-after measure, it was classified separately. Clients' subjective perception of changes in family functioning consequent to treatment was also classified within a separate domain because it represented data gathered at post-test only.
Marital and psychological behavior included the level of clients' marital adjustment, the degree of clients' ego satisfaction, and attitudes and feelings about other people. With a sample of clients' reporting family related problems, it seemed appropriate to include a measure of the client's level of marital adjustment as well as the client's subjective assessment of improvement in family functioning. Ego satisfaction or self attitudes, as well as attitudes toward other people are commonly accepted areas of focus in the counseling provided by social caseworkers. Attitudes have been defined as a disposition to behave favorably or unfavorably toward a given object, an organization of valenced cognitions combined with a predilection for motive arousal, an affective evaluative response toward an object and an implicit anticipatory mediating response. For the purposes of this study, Rosenberg's definition of attitudes as affective evaluative responses toward objects was used. Attitudes are defined as measurable cognitions and there is a precedent for the measure of attitude change as the dependent

variable in behavior modification research\textsuperscript{22} as well as in psychotherapy research.\textsuperscript{23} In social casework both Hollis\textsuperscript{24} and Hamilton\textsuperscript{25} have specified client attitudes as a point of focus for change effort.

Aspects of the client included the client's sex, age, spouse's age, length of marriage, married before or not, spouse married before or not, the number of children at home, family weekly income, employment, education, number of rooms in the home and whether or not the client was in treatment before. Client's sex, age, education, marital status, environment, and readiness for treatment have been investigated in previous research to determine directly their relationship to outcome. Findings from these studies were mixed and inconclusive.\textsuperscript{26}


\textsuperscript{26}Meltzoff, \textit{op.cit.}, pp. 230-264.
Items related to aspects of the worker included the worker's sex, the number of years that the worker was in professional practice, and the degree to which the worker attended post-graduate professional education at universities, institutes and agency seminars. Aspects of the treatment system included the number of treatment sessions, modality of treatment (individual or family sessions), who else in the family received treatment, type of service (planned long-term and planned short-term service) and the focus of the treatment. Prior research which measured the relationship between therapist's education and training to outcome showed conflicting findings. Similar inconsistent findings were seen in comparing the number of sessions to outcome.  

However, studies that compared differences between outcome scores for patients and clients receiving planned long-term treatment and those receiving planned short-term treatment consistently showed slight to significant improvement in favor of the planned short-term groups.

Post-test case status included workers' assessment of the degree to which treatment goals were realized. This was assumed to be of importance as it would enable comparisons to be made between workers' judgments and measured change as

27 Ibid., pp. 265-377.

well as workers' judgments and the clients' assessment of improvement. A group of items that determined the clients' behavior at post-test concerning continuation in treatment or the manner in which clients terminated was also included. This too was assumed to be of importance as an outcome measure for those interested in predicting, from a knowledge of all the aforementioned variables, which clients are likely to continue, conclude, or prematurely drop out of treatment. The last domain, clients' subjective perception of change consequent to treatment, was assumed to be important. It was believed that clients' personal opinions about their treatment, similar to any other consumer product are perceptions that need to be seriously considered.

**Outcome Criteria**

Outcome was defined as (1) the adjusted difference between pre- and post-test marital and psychological behavior on eight change indices; (2) the clients' subjective assessment of improvement in family functioning as consequent to the treatment they had; and (3) four outcome groups. These four outcome groups were: (a) clients who completed treatment with the concurrence of the worker, (b) clients who were continuing on in treatment, (c) clients who, after their fifth session, dropped out against the advice of their worker,
and (d) clients who dropped out before their fifth session.

**Study Questions**

The goal of this study was to answer the following three questions:

**Question One:** What are the relationships between clients' perception of the four relationship factors and outcome criteria in a sample of adult clients seen by social workers in three family service agencies?

**Question Two:** Does the perception of the four relationship factors account for as great or greater a proportion of the variance in outcome as any other variable measured?

**Question Three:** What combination of all variables measured accounts for the greatest proportion of variance in outcome?
Chapter II

SURVEY OF THE LITERATURE

A brief survey was made of writings in social casework, counseling and psychotherapy for theoretical views on the role played by the therapeutic relationship as a contributor to the success of intervention. References to the importance of the four relationship factors as well as references to the importance of the quality of the relationship in general seemed to fall into two primary categories. The first group of writers sees the relationship in general or some specific combination of the four factors as contributing the necessary conditions to produce change. The concept of the relationship is usually integrated into an interventive model that employs a range of other techniques as well as the use of relationship. The four factors or the relationship in general are seen to have a direct or indirect effect within the total interventive process. The second group includes those who see the therapeutic relationship and specifically the four relationship factors as providing the sufficient conditions to produce change. Here the model of intervention is the use of the relationship and specifically the four factors.
A third group of writers, which will be only briefly noted, represents the behavior modification model of intervention. Social learning procedures that utilize interventional techniques based in learning theory, generally de-emphasize the role of the four factors but do not categorically exclude them as agents which may influence change. For example, the concept of "affective feedback reinforcement" approaches a possible use of some combination of the four relationship factors within a behavior modification schedule.¹

In describing the various forms of counseling and psychotherapy, Skinner refers to the concept of the non-punishing audience which represents the unconditionally accepting therapist who provides the atmosphere for clients to feel free to say whatever is on their minds.² Bandura, in a review of the principles of social learning theory and behavior modification, criticizes the talking therapies as being non-systemic and based on hypothetical definitions of psychodynamics and unverified personality theory. Nevertheless, Bandura recognizes that in counseling, anxiety can be reduced through the accepting attitude of the therapist. He writes that counselors


... may reduce anxiety through their permissive and supportive reactions toward clients' disturbing self-revelations; and they inevitably model various attitudes, values, and interpersonal modes of behavior which clients are inclined to emulate. 3

The first group of writers seems to be representative of the majority of professionals providing direct individualized services. In a rather thorough review of the literature, Truax and Carkhuff concluded that in almost every major theory of psychotherapy and counseling, including the psychoanalytic, and many of the derivative and eclectic ones, the four relationship factors were viewed as necessary conditions to produce positive change. There was an emphasis on the importance of the therapist's ability to be mature, integrated, genuine, authentic, or congruent in the relationship with the client. The importance of the therapist's ability to provide a non-threatening, trusting, safe or secure atmosphere, by acceptance, non possessive warmth, unconditional positive regard or love was stressed, as well as the therapist's ability to be "with" the client, to be accurately emphatic and understanding. 4

Others have more systematically researched the literature. For example, Fiedler investigated areas of central

3 Bandura, op. cit., p. 60.

agreement regarding the essential elements of an ideal therapeutic relationship. His subjects included therapists who were considered skilled and experienced representatives of divergent schools of psychotherapy. The elements where agreement was found were warmth, acceptance and understanding.  

Some writers theorize how the communication of specific relationship factors has a specific therapeutic effect. Bordin suggests the selected use of genuineness or an open expression of induced feelings as a means of correcting a distorted view of the counselor. At times the client may cause the counselor to feel irritated, angry, or may cause other feelings to be experienced by the therapist. At selected critical moments it may contribute to the therapy if the counselor, after admitting to having these feelings, verbally communicates them to the client. This may correct distorted views of the counselor as omnipotent and unreal.  

Spotnitz refers to a kind of empathy and genuineness which can be very selectively used to remove resistances that are blocking the patient from freely saying what is on


his mind. He writes that emotional reactions in the therapist are often the result of "induced feelings" (as distinct from countertransference reactions) which are caused by the patient's non-verbal or pre-verbal expressions of unconscious resistance. When the therapist is able to recognize and clearly verbalize these induced feelings to the patient, it creates, theoretically, a mirroring of the resistance and brings it into the patient's consciousness. Spotnitz believes that by experiencing the patient's feelings in this way and then returning them, the patient, through hearing and feeling them from the therapist, is eventually helped to discharge them in language. 7

According to Munroe, all of the psychoanalytic schools of thought, including the theories of Adler, Horney, Fromm and Sullivan, emphasize the positive therapeutic value of insight which involved the ability to feel differently about significant aspects of one's situation and self. But at the same time, insight and awareness can only be achieved under facilitating circumstances within the relationship with the therapist. 8 For example, Greenson defines a conceptual system of a working alliance interacting with the real-


relationship and with transference. The positive real-relationship, according to Greenson, includes the therapist's genuine communication of concern, regard, and emphatic appreciation of the patient's discomfort or plight. The working alliance is only possible when there is a positive real-relationship. The working alliance involves the therapeutic contract and the mutual cooperative collaboration between therapist and patient in the clarifications and interpretative work. This work, in turn, is based in the theoretical model adhered to by the therapist. ⁹

The working alliance may be hindered by a real-relationship in which the therapist is non-emphatic, aloof, or unconcerned. The working alliance can also be hindered by transference resistances which may be positive, negative, ambivalent, or narcissistic. ¹⁰ In this case, the transference resistance would require working through. ¹¹ Transference is a theoretical concept for what is believed to be internal representations of earlier relationships projected onto the person of the therapist who is then experienced as if he were that other person. ¹²


¹⁰ Ibid., pp. 195-203.

¹¹ Ibid., pp. 268-287.

¹² Ibid., pp. 224-256.
Therefore, within the psychoanalytic frame of reference, the patient's perception of the four relationship factors could be an accurate reflection of the real relationship, a reflection of transference, or a combination of the two. If the perception were a reflection of transferred feelings and attitudes, it would then be, theoretically, an expression of the patient's earlier relationships. Munroe believes that patients in the psychoanalytic model of therapy respond to the analyst partly as a real person and partly as a figure representing the past. Psychoanalytic treatment is a unique situation in which the patient is deliberately encouraged to relax customary evaluative, self-controlling functions and to recreate past and present situations as if they were happening within the moment and as if the analyst were the personification or person in the original situation that was now being recalled.¹³

In the field of social casework, the worker-client relationship has been consistently emphasized as a necessary condition for successful treatment and it is integrated into the model of intervention. Hamilton wrote that the relationship of worker and client is important in helping people to help themselves "...not alms but a friend...is one of the oldest in casework...". It is only when rapport is created

¹³Munroe, op.cit., pp. 28-29.
for a professional purpose that there may be said to be a client.\(^{14}\) Stamm wrote that the relationship between worker and client is basic to all aspects of social casework. Whatever the theoretical orientation in casework practice, there is a commitment to become engaged with the client in a responsive, caring, authentic and empathic manner.\(^{15}\) According to Hollis, it is necessary for the client to perceive the worker as an accepting, concerned person if the client is to remain in counseling.\(^{16}\) Mullen found that the worker brings to the process his own particular style that determines what blend of procedures he uses. The worker is more of a person exerting influence rather than simply an expert applying techniques.\(^{17}\)

In a review of seven major social casework theories and models of treatment, Simon wrote that the relationship is "...the keystone of the casework process...."\(^{18}\) In this


same collection of theoretical writings (1970), the therapeutic relationship as part of the interventive process was most clearly explicated by Rapoport representing the crisis model, Smalley representing the functional model, Perlman with the problem solving approach, and Hollis representing the psychosocial model of treatment.

Rapoport believes that the concept "relationship" is too general and unclear and it is important to discover what specific identifiable operational aspects of the worker-client diad contributes most to desirable outcomes. In conjunction with this, Rapoport identifies the importance of discovering what specific aspects of the relationship can be maximized in brief crisis oriented treatment.19

Smalley defines social casework as "a method for engaging a client through a relationship process, essentially one to one, in the use of a social service toward his own and the general social welfare."20 The entire process, Smalley writes, is shaped by the relationship through which the client


discovers his own will, feelings and self. The central intent in the functional approach is to force the individual to use an experience in relationship with the worker in order to claim his own difference and leave the relationship for further self-discovery and actualization as a related but separate self.21

Otto Rank, whose theories are prominent in the functional school of social casework and in the development of time limited treatment, was a close associate with Sigmund Freud and Jesse Taft.22 Rank believed that when the therapist communicates a warmly supportive, accepting attitude, the patient is provided with a new reality figure which helps him to feel free to deal with the basic conflicts around hostility and fear, death and separation. Ideally the therapist is unconditional in his basic acceptance of the patient and at the same time realistically partializes through constant discussion of the past and present. Theoretically, this helps the patient toward a more creative, constructively integrated partialization rather than a blind, totalistic reaction to separation fear which is characteristic of the neurotic.23

21Ibid., pp. 92-121.
Perlman believes that there is a drive for "social connectedness" which results in the relationship being 
"...the bond that vitalizes, warms and sustains the work between helper and helped."²⁴ She invests the relationship with the most power to influence change. To accomplish positive change, the relationship needs to contain caring, respect, love, social exchange and affirmation. Perlman calls this human forms of nourishment; combining caring, concern and acceptance.²⁵

Hollis writes of establishing a relationship to enable the client to use the worker's help. This involves two primary ingredients which are the client's trust in the worker's competence and the client's trust in the worker's good will. These two client requirements are, in turn, dependent upon the worker's true interest in helping the client, objectivity, warmth, acceptance and respect.²⁶

The above group of writers seems generally representative of most social caseworkers and others who provide direct


²⁵Ibid., p. 150.

individualized services to clients and patients. Here the relationship in general or the four factors specifically were viewed as containing the necessary conditions to produce positive change. These writers explicate the use of relationship within a range of other techniques, based in a personality theory on some consistent system of sorting information, giving it meaning and intervening in terms of that meaning.

In outlining five sources of gain in psychotherapy and counselling, Nicholas Hobbs (1961) lists the first and primary source as the experience within the relationship itself. Hobbs theorizes that because the client has a sustained experience of intimacy with another human being without getting hurt, he discovers the possibility to be open and honest with himself and his feelings. Through past learning, the client has come to distort and to be fearful of openness. The new learning experience with the counselor can then be generalized onto other current object relationships outside of therapy, enriching those experiences for the client which, in turn, help to correct distortions about himself and others.

The relationship is not only seen as the primary source of gain. It also provides the necessary conditions

for four more important processes to occur. The second
source of gain, Hobbs writes, involves the modification of
the client's linguistic symbols which are causing anxiety
and guilt. The third source is the working through of dis-
torted transferential perceptions and the fourth source of
gain is the opportunity itself to experiment with new ways
of feeling and relating.

In discussing the fifth, but not last, source of gain
in counseling, Hobbs moves into another universe of dis-
course: the area of cognitive psychology and learning theory.
He makes a fascinating point! Mankind, Hobbs writes, is al-
ways engaged in building and repairing, extending and modi-
fying cognitive structures that help make meaning and sense
of the world and day to day experiences. At the same time,
people find new cognitive models that will provide a system
of meaning to make accurate predictions of one's own behavior
and the behavior of others as well.

While civilization has built cosmologies to explain
the universe and to predict the course of human and natural
events, people need simpler, more mundane models or systems
to order their own daily experience; systems that are inter-
ally consistent and appropriate to the person's current
reality situation and basic internal attitudes. Hobbs be-
lieves that psychoanalysis and other systems of personality
theory within a therapeutic relationship provided internally
consistent mundane principles or perceptual, cognitive models which could be used in daily experience. The individual, Hobbs goes on to say, seeks psychotherapy, counseling or some other form of cognitive control or structure when his own cosmology or personal way of ordering the world breaks down to an alarming degree, creating increasing anxiety. 28

While almost all theories of social casework and psychotherapy agree that the therapeutic relationship in general or some combination of empathy, congruity (or genuineness), regard and unconditional positive regard are necessary conditions to bring about positive change, the client centered model is the only one that maintains that these factors together are not only necessary but sufficient to bring about desired change.

The second group of writers, namely those who see the therapeutic relationship and specifically the four factors as providing the sufficient conditions to produce change, is represented only by Carl Rogers and the group of Client Centered therapists and counselors. Also distinguishing these from the first group of writers is the deemphasis that nondirective therapy places on personality diagnosis and psychodynamic formulations. The Rogerian therapist is

28 ibid., pp. 19-21.
supposed to enter into an intensely personal and subjective relationship with the client. But, as Rogers writes, not as a scientist to an object of study and not as a physician diagnosing and curing an illness.29

Rogers seems to suggest the use of the four relationship factors as the total treatment model itself. But actually, they are interventional techniques that emerge from Rogers' model of the changing personality within a phenomenological field. Hall and Lindzey explain Rogers' theory. Rogers reasons that modification of the hypothetical nuclear self-structure will have a systemic effect on most other aspects of the patient's other behavior. In order to accomplish this purpose, the therapist must be able to experience the client as [Rogers' quote]:

...a person of unconditional self-worth of value no matter what his condition, his behavior or his feelings. It means that the therapist is able to let himself go in understanding this client; that no inner barriers keep him from sensing what it feels like to be the client at each moment of the relationship; and that he can convey something of his emphatic understanding to the client. It means that the therapist has been comfortable in entering this relationship fully, without knowing cognitively where it will lead, satisfied with providing a climate which will free the client to

According to Rogers, therapy under these conditions facilitates an exploration of increasingly strange and unknown, dangerous feelings. The exploration is possible because the client realizes that he is accepted unconditionally. Through this process, the client becomes acquainted with thoughts, feelings and experiences that in the past were denied to awareness as too damaging to the self-structure. Through the process of treatment, the patient

...finds himself experiencing these feelings fully, completely, in the relationship, so that for the moment he is his fear, or his anger, or his tenderness, or his strength. And as he lives these widely varied feelings, in all their degrees of intensity, he discovers that he has experienced himself, that he is all these feelings. He finds his behavior changing in constructive fashion in accordance with this newly experienced self. He approaches the realization that he no longer needs to fear what experience may hold, but can welcome it freely as a part of his changing and developing self. 31

This non-directive Client Centered model of intervention grows out of Rogers' concept of the organism, the self-structure and how the self-structure can be modified. According to this personality theory, the organism is the total self-actualizing individual, interacting as an organized unit within the phenomenological field. It consists

30 Ibid., p. 476 (Rogers in Hall and Lindzey).
31 Ibid.
of a pattern of conscious values and perceptions or cognitions of the "I" or "me."

The self-structure is the hypothetical nuclear system within Rogers' theory of personality. It develops out of the individual's interactions with the environment and it strives for consistency. The individual behaves in ways that are consistent with the self, but the self may introject other peoples' values and perceive them in a distorted fashion. Experiences that are not consistent with the perceived self-structure are felt as threats and the self may change as a result of maturation and learning.\(^{32}\)

The concept of the self-structure as systemically holding the nuclear position within the personality is most interesting. Hypothetically, changes within the self-structure should also be reflected then in changes on other indices of psychological adjustment.

With a sample of 175 college students, Turner and Vanderlippe tested the relationship between self-ideal congruence and scores on other independent adjustment measures. A diverse set of behavioral indicators was used to obtain social and psychological adjustment scores. Using the Q sort technique, subjects were asked to sort 100 statements into categories of "yourself as you see yourself today," and "your

\(^{32}\)Ibid., p. 478.
ideal self—the kind of person you would most like to be." Subjects whose perception of their actual self was similar to their perception of their ideal self were compared on the several adjustment measures with subjects whose perceived actual self was markedly different from their perceived ideal self. Significant differences between several of the adjustment measures indicated that the greater the self-ideal congruence, the more likely is the person to score higher on other independent adjustment measures. 33

In summary, this brief survey of the literature indicates that there is general agreement among theoreticians and practitioners from the majority of helping professions, that the relationship in general or some combination of the four relationship factors are necessary ingredients for the successful provision of counseling services. In counseling, psychotherapy and social casework, the only controversy in terms of the four factors appears to be between the Client Centered group and the others. The Client Centered, Rogerian, non-directive model of intervention maintains that all of the four factors are not only necessary but they are sufficient as well to bring about desired changes through modification.

of the nuclear self-structure.

In both the reduction of anxiety and in learning new human interaction patterns, the roles of the four factors are theoretically of direct importance. The perception of the four factors is also theoretically important in providing the necessary conditions within which workers utilize different models of intervention.

The primary intent of this study does not include the reasons that clients perceive high, low or medium amounts of the four relationship factors provided by their worker. Because it is not unusual for social workers as well as other professionals in the helping professions to assume that transference determines the client's evaluation of the worker, it may be helpful to note the conclusion of Meltzoff and Kornreich in their review of psychotherapy research regarding the empirical evidence for transference.

As can be seen, there has been surprisingly little research on this central therapeutic phenomenon. Besides there are contradictions among the research that does exist. These may stem from diversity of definitions, measuring methods, and variations in the transference relations in different types of therapy. The automatic assumption that the therapist stands symbolically for parent is lacking in demonstrated generality. If the concept is expanded to refer to the quality of the relationship, and the stimulus equivalents broadened to include other significant life figures rather than being strictly limited to parents, more consistent support
is available. 34

In a study of the four relationship factors as a dependent variable, Greene discovered a soft but significant relationship (F = 5.2900, p < .025) between the congruity of cognitive style on the part of the worker and client and the client's perception of the four factors. 35 This supports an hypothesis of current rather than past remembered phenomena as determining conditions in the perception of the four factors. In conclusion, it seems presumptive to interpret broadly these perceptions as transference in view of the lack of empirical evidence to support such an assumption.

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Chapter III

METHODOLOGY

In order to answer the three research questions, there were eighty-three clients and twenty-three social workers from three family service agencies in Nassau and Westchester counties participating in this study. Data were collected from client subjects through the use of self-administered questionnaires and tests which were given at the onset of treatment (pretest), during the course of the treatment (5th session), and at a time designated as posttest. Data were also collected from workers through the use of self-administered questionnaires.

Because it was not possible or desirable to intervene in the case assignment and treatment process, a before-after field study design was selected. This permitted the taking of multiple measurements over time of a large number of variables in a natural setting and in their natural process of interaction with a minimum of interference in the process that was being investigated. It was believed that a field study design would provide a broad section of data which would add depth and further significance to the findings and could generate hypotheses for further research.
The Social Workers and Their Agencies

In selecting settings for this study, an attempt was made to find three agencies that helped clients with family relationship problems by the use of interviews conducted by social workers with an MSW degree. It was also necessary for the agency to have an intake and treatment policy which assured that clients normally continued with the same worker without interruption from the first interview at the time of the client's first visit to the agency. These requirements were assumed to be general enough to include a reasonably large number of clients in the study while maintaining the basic requirement that the method of treatment for all of the client subjects was the use of face to face individual and/or family interviews and that all client subjects would have the same MSW social workers from the first in-person interview to the conclusion of the data collection process.

Family Service agencies in the greater New York area were contacted by telephone until three were found that met these requirements and the agency director expressed an interest in the agency participating in a research project which was designed to help us better understand why some clients do better in treatment than others. There were in-person interviews with administrators from each of the three agencies at which time approval was obtained for the study
to be conducted with agency clients and their workers. It was agreed that workers who saw clients for family relationship problems would be asked to meet with this researcher and would be asked to participate in the research project.

During the interviews with the agency administration personnel, the research plan and first question were discussed in depth, but it was agreed that these details would not be shared with the workers until the conclusion of the data collection process. Additionally, the nature of the services, intake procedure, case assignment process and treatment policies were discussed in depth to be certain that the research requirements would be met. All of the workers who would be asked to participate would have MSW degrees and all of the study clients would receive for their treatment face to face individual sessions and/or family sessions (defined as one or more other family members participating in the session). All of the clients would continue with the same worker who conducted the first interview at the time of the client's first visit to the agency and all sessions and data collection would be conducted on agency premises.

Agency I

The first agency agreeing to participate was the Family Service Association of Nassau County, which draws its
clients from all of Nassau County (except the five towns area). In addition to family counseling and mental health services, the agency provides a wide range of special programs including family advocacy, drug counseling, central services for the needy as well as professional training.

All of the client subjects from this agency were seen in the family counseling and mental health unit and received planned short-term service. At the time of the first session, a contract was negotiated between the worker and client to limit counseling to 12 sessions. However, in terms of the number of sessions, the contract could occasionally be a few sessions longer in certain situations.

Prior to this study, workers in the family counseling and mental health unit attended regularly scheduled bi-weekly seminars sponsored by the agency which was focused on counseling clients in a planned short-term treatment structure. One month prior to the beginning of data collection, the same workers began a similar seminar for family treatment.

Agency II

The second agency that participated in the study was the Peninsula Counseling Center, serving clients from the five towns and other communities in the south shore area of Nassau County. Over and above its main function of providing
individual, family and group counseling, the agency offers a wide range of specialized services. Among them are, educational, geriatric, community consultation, hospital and prison outreach programs and professional training.

For the purpose of this study, the only clients asked to participate were those who applied to two offices serving the five towns and East Rockaway areas. Through discussion with the agency director, it was determined that these two offices would most likely provide more client and worker subjects who met all study criteria and who would be receiving, for treatment, regular individual and/or family sessions.

In contrast to the Family Service Association, the number of sessions the clients received was not contractually predetermined at the onset of counseling. The number of interviews was to be an individual matter between worker and client and would vary from case to case. The type of treatment offered was therefore defined as Continued Service.

Agency III

The Westchester Jewish Community Services was the third agency to participate in this study. The stated aims of this multi-service setting is to provide the Westchester suburban communities with a wide range of counseling, guidance and mental health services. These include a family
mental health clinic, family counseling, child guidance, educational and vocational services, homemaker services, care for the aging, family life education, and the Whitehill Counseling Service.

In a meeting with the agency director and other administration and research personnel, it was decided that the Whitehill Counseling Service was the appropriate unit for this study to take place in light of the sample criteria. The majority of clients who are seen at Whitehill present family relationship problems, the method of treatment is regular scheduled face to face individual and/or family sessions and, as in agencies I and II, clients continue with the same social worker who saw them on their first visit to the agency. Similar to Agency II, the number of sessions that clients at Whitehill received was not contractually predetermined at the onset of counseling. The number of sessions was to be an individual matter between worker and client and would vary from case to case. Similar to Agency II, the type of treatment for clients seen at Whitehill was defined as Continued Service.

Following administrative approval to engage clients and personnel as participants in the research, arrangements were made to meet with the workers who were designated as potential participants and their cooperation was obtained. The workers were told that their participation would require
filling out some check lists and handing clients, who had been designated as study cases, three different colored sealed envelopes at three predetermined times during the course of treatment and a complete set of instructions would accompany the testing material for workers and clients. They were advised that the study included only social workers with MSW degrees and their clients from two other anonymous agencies as well; that the study was focused on helping us to understand better what makes social casework work best and it may give us some valuable clues to refine our treatment process. They were told that I would meet with them at the conclusion of the study to share the full details of the research and that individual results would be made available, in confidence, to any worker who wished to see how their own clients scored.

There were 14 social workers from Agency I who were asked to participate, and all agreed except one. Twelve were asked to participate from Agency II and 12 agreed. However, only five workers from this agency were actually able to participate due to transfers of personnel and a lack of client subjects who met the criteria from the East Rockaway office. Five social workers from Agency III were asked to participate and all agreed. There were, then, 13 workers from Agency I providing planned short-term service and 10 workers from Agencies II and III providing continued service, participating
in the study.

All of the workers had majored in casework and had from 3 to 27 years professional experience. The mean number of years in professional practice was 12. Three of the workers had obtained post-MSW degrees or certificates in specialized areas of drug counseling, psychotherapy and counseling psychology. All of the workers except one had some post-MSW professional education.

The Clients

The client subjects were adult men and women who applied for treatment at the three agencies between October 1974 and June 1975. To qualify as a subject, clients had to be married, currently living with their spouse, and must have verbally expressed, at the time of application, the desire for treatment of a marital problem and/or child related problem. The basis for including clients who initially requested help for both types of problems was an assumption that there is a systemic interaction between marital and parental difficulties.

Clients who met these initial criteria but were assessed, at intake, by their social workers, as possibly needing institutionalization within the near future were not included. This criteria was placed on sample selection to exclude individuals who were overtly psychotic and probably
unreliable as subjects in an out-patient setting.

These perimeters were roughly drawn so as to achieve some degree of homogeneity in a potentially widely diverse population of clients while maintaining the potential for a reasonably large sample. It was assumed that family relationship problems were relevant areas of concern for social work practitioners and that there would be a sufficient number of clients in this category to provide an adequately large sample.

Within the above criteria, there was an original total of 91 individuals from the three agencies who agreed to participate in all phases of the study. Of these 91, eight were dropped because they approached their research tasks so inappropriately or incompletely as to make their data useless. Of the 83 remaining clients 75 specifically expressed a desire for help with a marital problem or both a marital and parent-child problem. Eight clients requested help for a child related problem only. Forty-five of the 83 clients were seen at Agency I by 13 social workers in planned short-term service with an average of 3.5 clients per worker. Combining Agencies II and III, there were 38 clients seen in continued service by 10 workers with an average of 3.8 clients per worker.

There were 53 female and 30 male client subjects between the ages of 19 and 57. The mean client age was 35 and
the spouses' average age was 36. They were married between one to 37 years with 12 years as the average length of marriage. Clients had from 0 to 4 children with a mean of 2 children living at home. Fifteen percent of clients were married before and 37 percent had been in counseling before. The average family weekly net income was $250.00 and the average number of rooms in the home was 6.8. Four percent of clients had less than a high school education, 66 percent graduated from high school and 30 percent graduated from college. Twenty-eight percent of clients were not employed, 19 percent were employed part-time, and 53 percent had full-time jobs.

Sample Selection Procedure

All clients who were to be seen by the worker subjects and who were married, currently living with their spouses and who said they wanted help with a marital and/or child related problem at the time of the telephone application were designated as potential study cases. This designation was made prior to the clients' first in-person interview with their social worker.

Because of different agency policies, the telephone application, the process of assignment to a social worker, and the manner of designating clients as potential study cases differed among the three agencies. In Agency I, a secretary
took incoming calls from prospective clients and assigned
the client to whichever worker had an appropriate opening.
At that time, initial information on the presenting problem
and current family composition was recorded on a face sheet.
Clients who met the criteria were designated as potential
study cases by the secretary before the clients' first visit
to the agency. The secretary kept a record of this activity
which this researcher reviewed twice a week.

In Agency II, a secretary also received the client's
first call and recorded the presenting problem and current
family composition on a face sheet. The face sheet was re-
viewed by the agency director who then assigned the client to
a worker. The face sheet was then immediately returned to a
file which this researcher reviewed twice a week and selected
all cases that met the criteria to be a potential study case
before the first in-person interview, designating those
clients as potential study cases.

In Agency III, initial screening for the designation
of potential study cases was accomplished by agency personnel
without the direct involvement of this researcher. Clients
either called the Whitehill division directly or calls were
channeled to the Whitehill secretary when requests were
appropriate to the function of the division and the client
would be able to pay the fee. Assignment was then made ac-
cording to whichever worker had an appropriate opening.
When workers reviewed the face sheet for newly assigned clients prior to the first in-person interview, the worker then selected all cases that met the criteria to become potential study cases. This was done on a first come first served basis. Through the use of a quick response answering service, this researcher was able to respond within the hour to calls regarding criteria that were raised from time to time by the workers. The social worker who had that first professional telephone contact and first sessions with the client, then automatically became that client's worker. This differed from the procedure in Agencies I and II, where the initial designation as potential study case was made by the secretary and the researcher. The criteria were written out and constantly available to the workers in Agency III, but the interpretation of the above criteria was made by the worker without the involvement of the researcher unless the researcher was voluntarily contacted by telephone.

In Agencies I and II a packet of the testing material accompanied the face sheet which the worker was given prior to the first in-person interview for each study case assigned to that worker up to a maximum of five study cases. In Agency III, each worker was given, at the onset of this study, five packets of testing material to be used on a first come first served basis with every client who met all study criteria. If more were needed, more were mailed to the worker.
In all three agencies, all workers in the study at the time of the first in-person interview, uniformly determined if the potential study case met final criteria. These Final Study Criteria were 1) the client must still be living with his/her spouse; 2) the client must be able to read English; and 3) the client must not seem to be entering a process of institutionalization. If the final criteria were met, the client was asked by the worker at the conclusion of the first in-person interview to participate in the study.

In order to account for possible worker bias during the final criteria selection process, a formal record was kept of the number of clients designated as potential study cases in Agencies I and II and the number of cases that met final criteria as determined by the worker. When a client was designated as a potential study case but the worker believed that the case was not appropriate for the study, the packet was returned with the worker's notation, "did not meet criteria." Of all the clients designated as potential study cases in Agencies I and II, only four packets of testing material were returned because of problems in meeting final criteria.

In Agency III, the worker also determined if the client met final criteria. Because the workers in this agency judged if clients met criteria at both levels of determination, the possibility for worker bias was increased in this setting.
To account for this possibility, an informal record was kept of the rate of entry of clients into the study from Agency III as compared to the rate of entry of clients into the study from Agencies I and II. It was observed that the rate of entry seemed equal for clients from Agency III as compared to the rate of entry of clients from the other two settings.

Methods of randomly assigning clients to the study from a larger pool of those who met all criteria were considered. However, to insure having a sufficient amount of data to conduct multiple variable analyses, random assignment of client subjects to the study was rejected. All clients who applied to the agencies within the research time-parameters of October 1974 to June 1975, met the criteria and were asked to participate, presumably had an equal chance to be a subject.

Still, it was assumed that some client self-selection occurred. In order to determine how much client self-selection was involved, a formal bookkeeping method was employed to count the number of clients who were asked to participate and refused. When a client refused to participate, the packet of testing material was returned to this researcher with the worker's notation "client refused to participate." From the three agencies together, there were seven clients who refused to participate. Nevertheless, it is still assumed that this.
did not account for all self-selection that may have occurred on the part of workers and clients. Additionally, the workers were told that they had a quota of five cases which were to complete all scheduled research tasks. Because many workers reached their quotas before June 1975, clients who would have been caught as subjects escaped because their worker's quota was filled.

**The Measurement Instruments**

To answer the study questions with this sample of clients reporting family related problems, the Locke-Wallace Marital Adjustment Test and eight concepts on the Semantic Differential were employed as pretest and post-test marital and psychological behavior measures. A client self-report check list developed by the Family Service Association of America on improvement, deterioration or no change in family functioning was given at post-test only. The 64 item Barrett-Lennard Relationship Inventory was used to measure the client's perception of the four factors of accurate empathy, congruity, regard and unconditional positive regard provided by the worker. In addition, there were three forms devised by this researcher that obtained the data classified as aspects of the client (see appendix 1), aspects of the worker (see appendix 2), and aspects of the treatment (see appendix 3).
The Locke-Wallace Marital Adjustment Test was developed as a short 15 item self-administered instrument with a possibility for scores ranging from 2 to 158 points (see appendix 4). The most fundamental and repeated items from a number of other adjustment tests of considerably greater length were selected by Locke and Wallace to create the fifteen items on the adjustment test. The authors assumed that the length of a marital adjustment test could be reduced in this manner without a loss of validity and reliability.1

Reliability was established by testing 236 subjects. The split-half technique was corrected by the Spearman-Brown formula obtaining an r of .90. Validity was established by dividing the 236 subjects into two groups of maladjusted and well adjusted in their marriages as determined by objective observational data. By then using the marital adjustment test, the mean score for the well adjusted group was found to be 135.9, while the mean score for the maladjusted group was 71.7. This difference was considered significant because the critical ratio was 17.5. For a more detailed report on these tests of reliability and validity see appendix 5.

The Semantic Differential developed by Osgood, Suci and Tannenbaum has been used extensively to measure attitudes,

feelings, values and meaning and the interrelationship between conceptual structures in social science research.\(^2\)

The instrument is self-administered with instructions provided by the authors (see appendix 6). It is relatively simple in design and execution but the amount of data that can be subjected to statistical manipulation is considerable.

It is based on the fact that how a person behaves in a situation depends in part on what that situation means or signifies to the person. The logic of the Semantic Differential is that a sign, whether it is a word, a phrase, a picture, or sound carries meaning to an individual that represents the significance of which the sign is a mediating representation. For example, the signs MEN or WOMEN or MY ACTUAL SELF or MARRIAGE or SEX, etc. are representational gestalts which give rise to attitudes, feelings and values in terms of what that sign means to the person. The individual responds to the linguistic symbol according to its meaning as represented in the person's semantic space.\(^3\)

The semantic space is conceived of as 3 axes (x, y and z) representing the dimensions or factors of evaluation,


potency, and activity. However, other dimensions can be added. One or more dimensions can be used and others can be selected as well as the three noted above. The dimensions are in turn represented by a selection of bi-polar opposite adjective pairs. Any concept that is judged by the subject is done so in terms of the descriptive adjective pairs that are opposite in meaning, such as good-bad, strong-weak, tense-relaxed, etc.  

The subject can check any one of seven spaces between the bi-polar opposite adjective pairs and scores can be obtained by numbering each space +3 to -3 with the middle space noted as 0, and +3 representing the positive end of the continuum. The second method of scoring involves numbering the spaces 1 through 7 with 7 representing the positive pole. This latter method avoids the necessity of dealing with negative numbers and was the one employed for this study.  

Reliability of the Semantic Differential was obtained by correlating test and retest scores of 40 items in a sample of 100 subjects resulting in an n of 4,000 with a coefficient of .85. In a test of the instrument's relative reliability over different periods of time it was found that the average error of measurement over a three week period is no more than one scale unit. Because there are no other commonly accepted quantitative criteria of meaning, face validity was employed.  

4Ibid., pp. 31-75  5Ibid., pp. 76-124.
Scores obtained from different concepts were statistically compared to determine the similarity of meaning. By inspection one can conclude if the statistically determined clusters have face validity. In another test, voters' attitudes toward two presidential candidates were found to predict voting patterns at the five percent level of significance. For a more detailed report on these tests of reliability and validity see appendix 7.

Concepts chosen for this study were: MEN, WOMEN, CHILDREN, MARRIAGE, and MY MARITAL PARTNER (see appendices 8-12). In these appendices the dimensions or factors of the semantic space are noted in parentheses adjacent to each adjective pair. There is the freedom to select any sets of bipolar adjectives which seem appropriate to the chosen dimensions of the concept. Osgood, Suci and Tannenbaum provide a large varied selection of pretested adjective pairs known through pretesting to be more loaded on a specific factor or dimension. For the purposes of this study, adjective pairs appropriate to the selected concepts were chosen from these lists.

The concepts MY ACTUAL SELF (AS), MY LEAST LIKED SELF (LLS), and MY IDEAL SELF (IS) were also selected following a review of earlier research by James Dyal who utilized the

\[\text{Ibid.}, \text{pp. 53-61.}\]
ratio of scores on these concepts to obtain a derived score which Dyal calls "ego satisfaction."\(^7\) (For a copy of the instruments see appendices 13, 14, 15.) Other researchers sometimes use the two concepts AS and IS only to obtain a measure of the subject's self-ideal congruence or the relationship between the actual and ideal. The value of including the concept LLS is that it provides an additional dimension to the measurement of the self concept. The persons' concept of their actual self is seen not only in relationship to what the person would like to be but in relationship to what the person does not want to be as well. This involves an assumption that people have some idea or an internalized image of the kind of person they would like to be as well as who they would not like to be. Presumably individuals aspire to be more like their ideal self image and less like the qualities about themselves that they do not like. The LLS and IS can be visualized as representing two opposite poles of a continuum within which the AS is free to vary in any direction. As the AS approaches the IS and moves away from the LLS ego satisfaction increases to a maximum of 1.000. As the AS approaches the LLS and moves away from the IS ego satisfaction decreases to a minimum of .000. This ratio is expressed by the formula

\[ \text{ratio} = \frac{\text{AS} - \text{LLS}}{\text{IS} - \text{LLS}} \]

\(^7\)Ibid., pp. 241-243.
ego satisfaction = LLS-AS/LLS-IS.  

The adjective pairs used in this study for the concepts forming this self-ideal congruity measure were identical to the ones used by Dyal in his study of 124 college students. Dyal also computed rank-order correlations between the ego satisfaction index and scores on the Taylor Manifest Anxiety Scale. The correlation for all scales combined was small but significant (r = .29 p < .05).

The concepts MEN, WOMEN, and CHILDREN were chosen as measurements of clients' feelings and attitudes about other people in general. The ego satisfaction metric was chosen as a measure of clients' feelings and attitudes about themselves while the concepts MARRIAGE and MY MARITAL PARTNER were intended to represent clients' feelings and attitudes about the institution of marriage and their marital partner.

The Family Service Association client check list (see appendix 16) that was employed for this study, is a 13-item form covering the client's perception of family relationships, feelings about the problems and coping with the

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8This ratio is another expression of the self-ideal congruity model usually used in research involving the Rogerian concept of the self-structure. Other studies using the self-ideal congruity model, typically utilize the Q sort technique which required that a research technician be present to conduct the experiment. Employing the Semantic Differential in a similar way broadened the possibilities for using different data collection techniques than those required by the Q sort.
problems. It was taken as a complete discrete unit from a larger form of other change indices. Of all the other indices developed by FSAA, this section was believed to be most appropriate for the purposes of this study. As of this writing, the instrument's reliability has not yet been established. Content validity is supported by its apparent face validity to practitioners. A major shortcoming is the fact that the accuracy of the items reported is dependent on the respondent's memory of the initial status of the family at intake.

Despite these shortcomings, the instrument was selected for two major reasons. It was this researcher's belief that clients' personal opinions about their therapy, similar to any other consumer product, are perceptions that need to be seriously considered. The second reason was the opportunity provided to cross-validate this instrument, which is assumed to measure change, with other established, valid, reliable before and after measures.

The 64-item Barrett-Lennard Relationship Inventory (see appendix 17) is a self-administered instrument containing 16 items for each of the four factors of accurate empathy, congruity, regard, and unconditional positive regard. A revised 40-item inventory which was used by Greene in his study of the perception of therapeutic conditions as a dependent variable was considered but was rejected in favor of the 64 item original version. This decision followed a pilot
pretest of the two instruments for their relative variability (see appendix 18). In the original version that was employed, each group of 16 items for each of the four factors are sub grouped into eight positive and eight negative items. All of the 64 items can be answered in terms of the degree to which the subject agrees or disagrees with the statement. The four factors can be tallied as sub-scores as well as combining them into a total ECRU score. Barrett-Lennard also supplies a printed scoring sheet to facilitate tabulation (see appendix 19). For reliability and validity of the original Relationship Inventory see appendix 20.

Data Collection Schedule

All client subjects were pretested for baseline marital and psychological behavior data as well as for data covering aspects of the client, directly after their first session, before they left the agency premises. Methods of testing all study clients directly before their first session were considered but all seemed unwieldy. Having the workers personally ask their clients to participate and to give the clients personally the appropriate test material at the end of the first session seemed easier to manage.

Clients were tested directly after the fifth session before leaving the agency premises for their perception of the four relationship factors. In choosing the end of the
fifth counseling session, the major consideration was that the further the point was placed from the first session, the greater the possibility that early terminators would be lost before they could be tested for their perception of the four relationship factors. It was also assumed that by the end of the 5th session the client would have experienced enough counseling to respond to the instrument.

The post-test point for criteria measures differed according to the type of service. Clients receiving planned short-term service were to be tested at the end of 12 sessions (or less if they terminated sooner) while clients receiving continued service were tested at the end of 20 sessions (or less if they terminated sooner). For the clients who were seen in PSTS, post-test was originally placed at the end of 12 counseling sessions because of the reality that, by contract, counseling normally concluded at the 12th session. However, because individual contracts occasionally extended beyond 12 sessions, post-testing occurred as late as 15 sessions for some clients in PSTS. When contracts extended beyond 12 sessions, workers contacted the researcher to gain permission to post-test the client at that later time.

Choosing the end of the 20th session as the outer limit on post-test for clients in continued service was based on several considerations. There was a limit on the amount of time that agency personnel and clients could be involved
in the project and to meet the research time table it was necessary for all data collection to be completed by the fall of 1975. The agency director from one of the CS agencies advised this researcher that approximately 80 percent of all their clients concluded treatment by the 20th session and in an earlier study of planned short-term casework, the median number of sessions for clients receiving continued service was 19. From the findings in this same study, which showed appreciably higher rates of improvement or alleviation for PSTS clients, it was assumed that clients receiving PSTS would score higher on outcome than clients receiving CS, if the CS clients were also post-tested at 12 sessions. Presumably, this difference would be associated with the PSTS process. The extra 8 session allowance for CS clients was an attempt to compensate for the concentrated effects of the PSTS process.

Some of the PSTS clients, following their post-test, continued on after negotiating another contract for more sessions and some CS clients continued on in treatment following their 20th session post-test. The scope of this study did not include data on final outcome at closing for

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10 Ibid., pp. 220-226.
those who continued beyond the post-test time. To account for variance due to the influence of having just terminated, data were collected on whether or not the client was continuing on. To account further for variance in outcome scores due to the number of counselling sessions, data were gathered on the actual number of counselling sessions that each client received.

At the time that clients were presented with the post-test material, the worker filled out the check list covering items regarding that client's treatment. Also each of the 23 workers in the study filled out the check list covering areas of their professional education and experience.

The Data Collection System

The self-administered questionnaires and tests were enclosed in stamped self-addressed envelopes which were, in turn, closed by a seal. The seal could be broken by the appropriate subject, the contents removed, filled out and placed back in the envelope which was then resealed in the normal fashion prior to mailing. The envelopes were uniformly red, yellow, green and white to facilitate their identification as to what point they were to be given to the client by the worker during the course of treatment. Codes were used to identify clients, workers and agencies while maintaining confidentiality. Each set of envelopes for each
study case was enclosed in an individual packet which each worker received at the time of case assignment prior to the first session. A master instruction sheet for the worker was also included in each packet with additional instructions attached to each of the four envelopes. A flow chart was designed to control and keep track of the packets that were given to the workers who gave the various envelopes to the clients at predetermined points per the instructions. For an extensive explanation of this method and its rationale see appendix 21. The questionnaire which obtained data on the workers' experience and professional background was personally given to workers during the process of data collection by this researcher.

All of the tests and questionnaires given to the client at pretest were stapled together in the following order: directions for the client and items covering aspects of the client, the marital adjustment test, the semantic differential test instructions and then the eight semantic differential concepts. The SD concepts were in the following order: WOMEN, MY ACTUAL SELF, MY MARITAL PARTNER, MEN, MY LEAST LIKED SELF, MARRIAGE, CHILDREN, MY IDEAL SELF. For post-testing, the order was the same and the FSAA check list was the last item in the group of instruments.
Data Yield and Scoring Procedures

Ninety-one clients agreed to participate but data from only 83 were used. Eight clients had returned instruments that were either inappropriately filled out or the responses were so incomplete as to make their material useless. Consequently, these eight were dropped from the study.

Of the remaining 83 subjects, 44 completed all pre-test and post-test measures and the perception of the four relationship factors. Four of these 44 had dropped out of treatment in absence against the worker's advice but completed and returned post-test material that was mailed to them. Termination in absence was defined as follows: Sometime after completing the fifth session of treatment but before the scheduled post-test time, the client cancels or breaks three consecutive appointments with the worker, or it is clear to the worker that the client will not be coming back. Whenever this happened the worker mailed the post-test material to the client (see step 3 on master instructions in appendix 26).

There were 11 more clients who completed pretest measures and the perception of the four relationship factors but dropped out later in absence against the advice of the worker and did not return completed post-test material that
was subsequently mailed to them. Because these eleven and
the above four who did complete the mailed post-tests were
identical with respect to having terminated against the ad-
vice of their worker and because a sub-group of four was too
small for separate data analysis, the four mailed post-tests
were dropped from the study. That left 15 client subjects
who provided pretest data and perception of the four relation-
ship factors only. There were 28 more client subjects who
completed pretest measures only, having dropped out of treat-
ment before the fifth session.

Therefore, for data analysis there were pretest marital
and psychological behavior data as well as the demographic
data on aspects of the client and aspects of their workers
for all 83 clients. Fifty-five clients provided this baseline
data as well as the perception of the four relationship
factors. Forty went the full route by completing all three
phases of testing with data that was used for analysis (the
four mailed post-tests were dropped from the original 44
completors).

All 23 worker subjects completed the questionnaire
designed to obtain data on aspects of the worker. For the 55
client subjects, who went at least as far as five sessions of
treatment, completing the first and second steps of data col-
lection, worker subjects completed the check lists on aspects
of the treatment. A plan to have workers also fill out the
treatment process check-list for those who dropped out prior to the fifth session was considered but rejected. The major intent of this research was focused on those who went at least as far as the fifth session.

Items 5, 6, and 8 on the workers' aspects of the treatment process check list (see appendix 3) combined, generated behavioral data which determined the four outcome groups. Item 6 stated if the client had just terminated or was continuing on in treatment. Item 5 stated if the worker advised a terminating client not to terminate and item 8 stated if it was necessary for the worker to mail the post-test material to the client because the client terminated in absence and thereby had not received the post-test material at their last in-person session.

From the data that were generated with this method, four outcome categories emerged. In category "1" there were eleven client subjects who, at post-test, had just completed their last in-person interview, concluding treatment without the worker advising against it. In category "2" there were 29 clients who, at post-test, were continuing on in treatment. Category "3" was composed of the fifteen clients who went beyond the fifth session but later dropped out against the advice of their workers. Category "4" was composed of the twenty-eight client subjects who dropped out of treatment prior to the fifth session.
There was another potential category of clients who could have terminated against the advice of their worker but came in for a last session completing post-testing with the material handed to them by the worker at the end of that last session. However, no clients behaved this way in the study. All clients who terminated without the worker advising against it were also clients who completed post-testing at the agency, using the material that was given to them by their worker directly after their last session.

Subjects' scores on the Locke Wallace Marital Adjustment test were determined by computing the sum of the numerical value placed on each item by Locke and Wallace. These values are noted in brackets on the copy of the instrument in appendix 4. The possible range of scores was from 2 to 158.

All semantic differentials were scored in the following way. Subject response on each adjective pair was first given its value of 1 to 7, according to the polarity, where 7 was the positive pole. A mean score was computed for each of the factors for each of the concepts by the formula

\[ \frac{\text{sum of factor items}}{\text{n of factor items}}. \]

Also, an overall mean score for each of the concepts, without consideration of the discrete factors was computed by the formula

\[ \frac{\text{sum of total concept items}}{\text{n of total concept items}}. \]
Therefore, scores for each factor or for each concept itself could vary from 1.00 to 7.00.

Scores for the FSAA check list were computed by the use of a formula that was also developed by the FSAA. While permission was granted by FSAA to employ the instrument for the purposes of this study, permission was originally not granted to cite the exact formula for computing the change score (see appendix 27). However, since that original communication, the formula has been published and permission was granted for it to appear in this document (see appendix 27-A).

The FSAA formula for computing the change score is:

\[
\frac{(\text{Better Evals} - \text{Worse Evals}) \times 10}{\text{Total number of Evaluations}} = \text{Change Score}.
\]

This formula yields a +10.0 to -10.0 score. If the client does not complete the final question, due to answering on the previous one that no action was taken on the problem, the change score would range from +10.0 to -9.0. The number of checks in the "better," "same," and "worse" columns are totaled. The "not a problem" column is not totaled. A "yes" response for making a decision on the problem is scored as "better" while a "no" is scored as "same." A response of "yes" on taking specific action and finding it helpful is scored as "better" while "yes" and making things worse is scored as "worse." Any other combination is scored as "same." The total number of evaluations (the denominator of the formula) includes all
"better," "same," and "worse" evaluations. For a more detailed description of this scoring procedure, the reader is referred to the publication source that is cited in appendix 27-A.

The Barrett-Lennard Relationship Inventory was scored by using the tabulation sheet supplied by Barrett-Lennard in appendix 19. The scoring sheet is self-explanatory. Some researchers may find a different method of tabulation without using negative numbers, but the original method explicated on the scoring sheet is not difficult to become accustomed to. Each factor can generate scores from -48 to +48 and total ECRU (sum of factor scores) can generate scores from -192 to +192.

Items on the remaining questionnaires measuring aspects of the client, aspects of the worker and aspects of the treatment were given codes which are entered on copies of the instruments in the appendices. Whether or not focus was on the marital relationship was determined by the absence or presence of x's and √'s noted on the yellow envelope by the worker which was given to the client at the end of the fifth session (see appendix 23). If neither a check mark nor an x was placed on the envelope, the focus item was scored as not on the marriage. If either of these marks appeared on the envelope, focus was scored as directly or indirectly on the client's marriage.

Considering the quantity of information that was gathered on each of the 40 clients who completed the study as
well as the remaining 43 who did not, upon acquiring the data they were immediately transcribed on coding sheets and thereafter keypunched for subsequent computer analysis. All of the findings to be reported in the following chapter are the results of computer analysis by means of an IBM-370 computer based at City College of the City University of New York. All analyses employed the statistical library package developed at the University of California, Brain Research Center, and known collectively as the BMD package (Dixon, 1973). The program most heavily employed was the stepwise multiple regression program BMD 02R.
Chapter IV

RESULTS

The principal findings of this study concern inter­relationships among 42 variables generated by the 40 clients who completed all phases of the study. Summaries for these variables are listed in Table 1, organized into several domains and coded according to their future citation forms in this chapter. The first 12 variables pertain to the client, six of which are coded nominally or ordinally, the other six being continuous variables. The next three variables pertain to the worker, the following five to the system which relates the worker to the client. The next two variables are post-test case status variables, the first mostly specifying the nature of the client's treatment plan (ten of the eleven completors were seen in PSTS), the second quantifying the worker's assessment of treatment success. The next five variables specify the client's perception of the therapeutic conditions collected, as will be recalled, at the fifth session of treatment. The next variable defines clients' perceptions, at the time of post-test, concerning how beneficial their treatment has been as measured by the convenient practical FSAA instrument. The final set of variables
### TABLE 1

**SUMMARY OF VARIABLES FOR 40 CLIENTS COMPLETING STUDY**

<table>
<thead>
<tr>
<th>CLIENT VARIABLES</th>
<th>N</th>
<th>Code</th>
<th>N</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>C 1 Client Sex</td>
<td>13</td>
<td>Men</td>
<td>(1)</td>
<td>27</td>
</tr>
<tr>
<td>C 2 Client previously in treatment</td>
<td>18</td>
<td>Yes</td>
<td>(1)</td>
<td>22</td>
</tr>
<tr>
<td>C 3 Client Education</td>
<td>2</td>
<td>Less than H.S.</td>
<td>(0)</td>
<td>23</td>
</tr>
<tr>
<td>C 3 Client Education</td>
<td>15</td>
<td>College or more</td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>C 4 Client Employment</td>
<td>12</td>
<td>Unemployed</td>
<td>(0)</td>
<td>9</td>
</tr>
<tr>
<td>C 4 Client Employment</td>
<td>19</td>
<td>Full-time</td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>C 5 Client Married Before</td>
<td>9</td>
<td>Yes</td>
<td>(1)</td>
<td>31</td>
</tr>
<tr>
<td>C 6 Spouse Married Before</td>
<td>6</td>
<td>Yes</td>
<td>(1)</td>
<td>34</td>
</tr>
<tr>
<td>C 7 Client Age (Years)</td>
<td></td>
<td>x: 35.35</td>
<td>s: 9.04</td>
<td></td>
</tr>
<tr>
<td>C 8 Spouse Age (Years)</td>
<td></td>
<td>x: 36.77</td>
<td>s: 9.85</td>
<td></td>
</tr>
<tr>
<td>C 9 Current Marriage (Years)</td>
<td></td>
<td>x: 12.08</td>
<td>s: 9.30</td>
<td></td>
</tr>
<tr>
<td>C 10 Family Income (Scaled)</td>
<td></td>
<td>x: 4.82</td>
<td>s: 1.03</td>
<td></td>
</tr>
<tr>
<td>C 11 No. of Children Residing with Client</td>
<td></td>
<td>x: 1.90</td>
<td>s: 1.10</td>
<td></td>
</tr>
<tr>
<td>C 12 No. of Rooms in Home</td>
<td></td>
<td>x: 6.80</td>
<td>s: 1.65</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WORKER VARIABLES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>W 1 Worker Sex</td>
<td>10</td>
</tr>
<tr>
<td>W 2 Worker Education (Scaled)</td>
<td></td>
</tr>
<tr>
<td>W 3 Worker Experience (Years)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SYSTEM VARIABLES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>S 1 Treatment Plan</td>
<td>21</td>
</tr>
<tr>
<td>S 2 Treatment Focus on Marriage</td>
<td>27</td>
</tr>
<tr>
<td>S 3 Treatment Modality</td>
<td>77</td>
</tr>
<tr>
<td>S 4 Treatment Group</td>
<td>77</td>
</tr>
<tr>
<td>S 5 Number of Sessions</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>POST-TEST CASE STATUS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>C 51 Completed Treatment with Worker’s Approval</td>
<td>29</td>
</tr>
<tr>
<td>C 52 Worker Assessment of Goal Fulfillment</td>
<td>18</td>
</tr>
<tr>
<td>C 52 Worker Assessment of Goal Fulfillment</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PERCEPTION OF THERAPEUTIC CONDITION VARIABLES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>E Empathy</td>
<td>x: 31.00</td>
</tr>
<tr>
<td>C Congruence</td>
<td>x: 34.15</td>
</tr>
<tr>
<td>R Regard</td>
<td>x: 29.58</td>
</tr>
<tr>
<td>U Unconditional Positive Regard</td>
<td>x: 19.88</td>
</tr>
<tr>
<td>ECRU SUM of Preceding Four Variables</td>
<td>x:114.61</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CLIENT PERCEPTION AT POST TEST</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FSAA Family Service Association of America Scale</td>
<td>x: 6.39</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PRE-POST ATTITUDE MEASURES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MARSAT Locke-Wallace Marital Satisfaction Scale</td>
<td>73.65</td>
</tr>
<tr>
<td>MARRIAGE</td>
<td>4.29</td>
</tr>
<tr>
<td>PARTNER Marital Partner Semantic Differential</td>
<td>4.65</td>
</tr>
<tr>
<td>MEN</td>
<td>5.02</td>
</tr>
<tr>
<td>WOMEN</td>
<td>5.11</td>
</tr>
<tr>
<td>CHILDREN Children Semantic Differential</td>
<td>5.50</td>
</tr>
<tr>
<td>EGOSAT Self-Ideal Congruence Semantic Differential</td>
<td>.546</td>
</tr>
</tbody>
</table>
is for the several attitude measures which were administered at the start of treatment and at post-test.

A first screening of the variables in Table 1 revealed substantial intercorrelations between the pre- and post-test attitude measures. At first, consideration was given to defining a set of outcome measures which were simply difference scores between pre- and post-measures, but this idea was abandoned when it became apparent that the behavior of a few clients was distorting the data, by virtue of having checked off the top of any scale at pretest and therefore had nowhere to go but down. At this juncture, recourse was had to the normalization procedure first devised by Yale psychologists to handle attitude change data in response to World War II propaganda. Following their model, attitude changes were scaled according to a fraction, in which the numerator is the difference between pre- and post-scores and the denominator is the difference between the smaller of pre- and post-scores and the ceiling of the measure. This yields a metric in which the person whose attitude improves as much as it possibly can will achieve a value of +1.0, whereas a person whose attitude descends as much as possible

---

will achieve a score of -1.0. In the case of positive changes the score was computed in traditional form, namely post - pre/ceiling of instrument - pre which yields a metric where the maximum achievable score is +1.0. A problem arises, however, in the case of those subjects who descend in their attitudes. For these subjects, if one were to compute attitude change scores in the original way devised by Hovland, a negative change score could occur of potentially infinite size, e.g. a client who on pretest begins at maximum possible score and thereafter descends to any lower value. To cope with clients whose attitudes descend, the denominator for these clients was defined as ceiling - post, thereby assuring that the negative changes would never be greater than -1.0, in symmetry with the maximum positive change of +1.0.  

Table 2 presents means and standard deviations for these adjusted measures of attitude change. In addition, an eighth variable has been constructed (change index) which is based upon the sum for each client of his seven change scores.  

---

2It should also be noted that the original formula published in Experiments on Mass Communication (Hovland, Lumsdaine, and Sheffield, 1949) and called "the effectiveness index," penalized negative changes less severely than it rewarded positive changes, thereby leading to potentially spurious assertions of positive change when in fact none may have occurred. For a further statistical demonstration of this Type One error, see appendix 28. Louis J. Gerstman, "On Unbiased Personal Indices of Change." Personal Communication from Louis J. Gerstman to Oscar Korte, April 1976.
## TABLE 2
ADJUSTED MEASURES OF ATTITUDE CHANGE

<table>
<thead>
<tr>
<th>Marital Satisfaction</th>
<th>( \bar{x} )</th>
<th>( s )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.107</td>
<td>0.324</td>
</tr>
<tr>
<td>Marriage S.D.</td>
<td>0.129</td>
<td>0.504</td>
</tr>
<tr>
<td>Marital Partner S.D.</td>
<td>0.002</td>
<td>0.265</td>
</tr>
<tr>
<td>Men S.D.</td>
<td>0.092</td>
<td>0.369</td>
</tr>
<tr>
<td>Women S.D.</td>
<td>0.043</td>
<td>0.386</td>
</tr>
<tr>
<td>Children S.D.</td>
<td>-0.025</td>
<td>0.468</td>
</tr>
<tr>
<td>Ego Satisfaction</td>
<td>0.312</td>
<td>0.491</td>
</tr>
<tr>
<td>Change Index</td>
<td>0.660</td>
<td>1.805</td>
</tr>
<tr>
<td>(Sum of Preceding 8 Variables)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
scores.

Table 3 presents the test of the first research question of this study, to wit, what is the relationship between the client's perception of therapeutic conditions (the four relationship factors and their sum ECRU) and outcome criteria scores. In this table are presented correlations between each of the five measures of therapeutic conditions and nine outcome measures, the eight specified in Table 2 as well as the ex post facto FSAA measure. Considering that this table defines 45 possible relationships, on a chance basis one would expect that no more than one of the relationships would be significant at the 1% level, and no more than two at the 5% level. Instead it is observed that twenty-one of the relationships are significant at the 1% level and another ten at the 5% level. Without a doubt, then, there are significant positive relationships between these fifth session perceptions and those indices of attitude change.

More specifically, several of the outcome measures are better predicted than others. Indeed, all predictions of women (semantic differential), ego satisfaction and change index are significant at the .01 level. On the other hand, no prediction of marriage (S.D.) and child (S.D.) is significant at the .01 level.

Table 3 additionally presents the correlations of the FSAA instrument with the other measures of attitude change.
### Table 3

**Correlation of Perception of Therapeutic Conditions with Measures of Attitude Change and FSAA**

<table>
<thead>
<tr>
<th>Outcome Measures</th>
<th>Empathy</th>
<th>Congruence</th>
<th>Regard</th>
<th>Unc. Reg.</th>
<th>Sum ECRU</th>
<th>FSAA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital Satisfaction</td>
<td>301</td>
<td>202</td>
<td>339*</td>
<td>422**</td>
<td>374*</td>
<td>529**</td>
</tr>
<tr>
<td>Marriage SD</td>
<td>283</td>
<td>274</td>
<td>380*</td>
<td>366*</td>
<td>386*</td>
<td>251</td>
</tr>
<tr>
<td>Marital Partner SD</td>
<td>303</td>
<td>096</td>
<td>300</td>
<td>446**</td>
<td>336*</td>
<td>364*</td>
</tr>
<tr>
<td>Men SD</td>
<td>444**</td>
<td>396*</td>
<td>254</td>
<td>451**</td>
<td>463**</td>
<td>212</td>
</tr>
<tr>
<td>Women SD</td>
<td>518**</td>
<td>539**</td>
<td>534**</td>
<td>465**</td>
<td>603**</td>
<td>327*</td>
</tr>
<tr>
<td>Children SD</td>
<td>350*</td>
<td>180</td>
<td>258</td>
<td>066</td>
<td>238</td>
<td>136</td>
</tr>
<tr>
<td>Ego Satisfaction</td>
<td>587**</td>
<td>507**</td>
<td>498**</td>
<td>502**</td>
<td>612**</td>
<td>376*</td>
</tr>
<tr>
<td>Change Index</td>
<td>632**</td>
<td>513**</td>
<td>582**</td>
<td>581**</td>
<td>677**</td>
<td>466**</td>
</tr>
<tr>
<td>FSAA</td>
<td>255</td>
<td>248</td>
<td>515**</td>
<td>334*</td>
<td>399*</td>
<td></td>
</tr>
</tbody>
</table>

Decimals omitted for typographical convenience

*p<.05 two-tailed) df = 38

**p<.01 two-tailed) df = 38
Although no predictions had been made regarding these relationships, it is noteworthy that the FSAA instrument is highly correlated with marital satisfaction and change index \( (p < .01) \) and moderately correlated with marital partner (S.D.), women (S.D.) and ego satisfaction.

A useful way to interpret the \( r \) correlations is to see them as the proportion of variance in one variable (or system of variables) that can be predicted or explained by variance in another variable (or system of variables). This proportion is obtained by simply squaring the correlation coefficient \( (r^2) \) between, for example, ECRU scores and the outcome scores. Thus by inspecting table 3 we can see that the level of clients' perception of ECRU accounts for 11% to 46% of the amount that clients' scores varied above and below the means of the outcome criteria scores. For example, 14% \((.374^2)\) of the variation in the amount of change in marital satisfaction can be predicted or explained by variations in the level of clients' perception of ECRU. For the variation in change in ego satisfaction it is 37% and for the change index it is 46%.

As noted earlier, change between pre- and post-test was computed by the use of a metric which adjusted for each subject's pre-test score individually. Because the partial \( r \) method is ordinarily used but in a system that contains fewer variables, it seemed reasonable to compare the two
different methods statistically to see if they achieved similar results. This comparison was performed on the relationship between the perception of therapeutic conditions and the pre- and post-test attitude measures. Table 3A presents the relation of the perception of therapeutic conditions to seven attitude post scores, controlled for attitude pre-scores. Inspection of Tables 3 and 3A reveals that 28 of the 35 relationships are comparable, i.e. nine in which both relationships are insignificant and nineteen in which both relationships are significant at least at the 5% level. In the remaining seven comparisons there are three occasions where the adjusted score relationships were insignificant but the partial correlations were significant, and four occasions where the situation was reversed.

For purposes of statistical summation the corresponding pairs of correlations in Tables 3 and 3A were converted to \( z \) scores according to Fisher's transformation and are presented in figure 2 as a scatter plot. As indicated on the figure, the correlation between these 35 pairs of \( z \) scores is .777, indicating that the two sets of measurements are essentially measuring similar sets of relationships. Most satisfying in the figure is the demonstration that the seven dissonant pairs of measurements are very close to their critical values as indicated by the dashed lines in the figure. A significance test reveals no significant
TABLE 3A
CORRELATION OF PERCEPTION OF THERAPEUTIC CONDITIONS
TO ATTITUDE POST-SCORES, CONTROLLED FOR
ATTITUDE PRE-SCORES

<table>
<thead>
<tr>
<th>OUTCOME MEASURES</th>
<th>PERCEPTION OF THERAPEUTIC CONDITIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Empathy</td>
</tr>
<tr>
<td>Marital Satisfaction</td>
<td>206</td>
</tr>
<tr>
<td>Marriage SD</td>
<td>210</td>
</tr>
<tr>
<td>Marital Partner SD</td>
<td>176</td>
</tr>
<tr>
<td>Men SD</td>
<td>525**</td>
</tr>
<tr>
<td>Women SD</td>
<td>472*</td>
</tr>
<tr>
<td>Children SD</td>
<td>421*</td>
</tr>
<tr>
<td>Ego Satisfaction</td>
<td>480*</td>
</tr>
</tbody>
</table>

Decimals omitted for typographical convenience

*p < .05
**p < .01  df = 37
FIGURE 2

Scatter plot of 35 correlations in Tables 3 and 3A converted to Fisher $z$-scores.

Dashed lines indicate critical values distinguishing significant from insignificant correlations.

Dissonant data points are marked with an X.
Table 3

\[
\begin{align*}
\bar{y} &= 0.379 \\
S_y &= 0.157 \\
\bar{x} &= 0.408 \\
S_x &= 0.159
\end{align*}
\]
differences between the two sets of correlation coefficients \( t = 1.602, \text{df} = 37 \). For a further descriptive comparison of adjusted change scores and partial correlations see appendix 29.

Considering the power of the perception of the therapeutic conditions to predict attitude changes, it was next decided to examine the power of system and post test case status variables to achieve the same result. Table 4 presents those findings. Following the same model as employed for Table 3, we observe that of 63 possible significant relationships only three are significant at the 1% level and five others at the 5% level. Lacking any a priori basis for predicting which relationship should be significant and which not, the results must be interpreted with great caution. Despite this, it is interesting to note the regularity with which variable S4 (treatment group) achieves modest negative relationships. This would imply the possibility, if sustained by further inquiry, that clients receiving individual treatment experience more positive changes in attitude than those receiving family treatment in social casework intervention. The only other finding which might assume importance had it been predicted in advance is the strong relationship between the worker's assessment of goal fulfillment and the client's measure of marital satisfaction and the scores on the FSAA instrument.
TABLE 4
CORRELATION OF SYSTEM AND POST-TEST CASE STATUS VARIABLES
WITH MEASURES OF ATTITUDE CHANGE AND FSAA

<table>
<thead>
<tr>
<th>OUTCOME MEASURES</th>
<th>S1</th>
<th>S2</th>
<th>S3</th>
<th>S4</th>
<th>S5</th>
<th>C_s1</th>
<th>C_s2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital Satisfaction</td>
<td>272</td>
<td>-187</td>
<td>-194</td>
<td>-288</td>
<td>249</td>
<td>-096</td>
<td>479**</td>
</tr>
<tr>
<td>Marriage SD</td>
<td>139</td>
<td>-111</td>
<td>-174</td>
<td>-321*</td>
<td>115</td>
<td>-134</td>
<td>237</td>
</tr>
<tr>
<td>Marital Partner SD</td>
<td>110</td>
<td>-207</td>
<td>057</td>
<td>-074</td>
<td>225</td>
<td>005</td>
<td>238</td>
</tr>
<tr>
<td>Men SD</td>
<td>104</td>
<td>029</td>
<td>-254</td>
<td>-325*</td>
<td>084</td>
<td>164</td>
<td>-145</td>
</tr>
<tr>
<td>Women SD</td>
<td>122</td>
<td>021</td>
<td>-373*</td>
<td>-376*</td>
<td>123</td>
<td>077</td>
<td>040</td>
</tr>
<tr>
<td>Children SD</td>
<td>110</td>
<td>185</td>
<td>-149</td>
<td>-066</td>
<td>-016</td>
<td>-121</td>
<td>006</td>
</tr>
<tr>
<td>Ego Satisfaction</td>
<td>-014</td>
<td>015</td>
<td>-267</td>
<td>-278</td>
<td>-111</td>
<td>-302</td>
<td>137</td>
</tr>
<tr>
<td>Change Index</td>
<td>160</td>
<td>-050</td>
<td>-332*</td>
<td>-412**</td>
<td>104</td>
<td>-131</td>
<td>186</td>
</tr>
<tr>
<td>FSAA</td>
<td>-012</td>
<td>-131</td>
<td>184</td>
<td>154</td>
<td>-047</td>
<td>-220</td>
<td>464**</td>
</tr>
</tbody>
</table>

Decimals omitted for typographical convenience.
Variables labelled as cited in Table 1
*p < .05, two-tailed)
**p < .01, two-tailed) df = 38
To test the question of how successfully the perception of therapeutic conditions predicts attitude change in comparison with other possible predictors, a series of step-wise analyses were performed in which various combinations of variables were introduced. One such analysis employed all seven of the variables in Table 4 with no improvement in predictions beyond those already indicated in Table 4, i.e. no system or criteria variables combined to improve the few significant relationships already indicated in that table.

The situation was markedly different when client variables, worker variables and the perception of therapeutic conditions were intercombined as shown in Table 5. In that table are presented the results of four prediction runs for each of the nine previously established outcome variables. On these runs the computer is invited to account for the variation in a critical variable from any combination of a specified set of independent variables. The program commences by selecting the best single relationship and then successively improves on that relationship by adding, in turn, that next variable which has the highest partial correlation. At each step the contribution of each next variable is evaluated by an F test, so that the run terminates when any next variable contribution is an insignificant one (p > .05). Of course, it can also be the case that a run "never gets off the ground," meaning that even the first
entering variable is not a significant predictor. Of the 36 runs described in Table 5, this outcome occurred twelve times, principally in predicting outcomes from the three worker variables (8 times), the remainder when predicting outcome from the client variables (4 times). For these runs the cell entries merely list the correlation achieved by the first entering variable. The remaining cells describe the results of the significant runs, the number of the steps indicated by the number of variables that are cited (coded according to their labels in Table 1).

To evaluate Table 5 for any outcome variable, it is useful to contrast the results of the client, worker and ECRU runs with the fourth run in which any of 27 variables were permitted to enter. That latter run specified the best possible predictions that can be achieved when the computer is invited to select, however advantageously, from any of the relevant variable domains. With this proviso in mind, it is possible to sort the outcome variables into three groups, depending on the differential success with which they are predicted by client or ECRU variables. It is observed then that only in marital satisfaction and marital partner do client variables serve as better predictors than ECRU variables, whereas there is near equality for women. For the remaining six predictions, ECRU variables by inspection account for more variance in outcome measures than client variables.
**TABLE 3**

PREDICTIONS OF MEASURES OF ATTITUDE CHANGE AND FSAA FROM COMBINATIONS OF VARIABLES

<table>
<thead>
<tr>
<th>OUTCOME MEASURES</th>
<th>12 CLIENT VARIABLES</th>
<th>3 WORKER VARIABLES</th>
<th>5 ECRU VARIABLES</th>
<th>ANY OF 27 VARIABLES 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital Satisfaction</td>
<td>5, 12, 6, 11</td>
<td>3</td>
<td>U</td>
<td>C, 2, U, C5, C9</td>
</tr>
<tr>
<td></td>
<td>627**</td>
<td>297</td>
<td>422**</td>
<td>787**</td>
</tr>
<tr>
<td>Marriage SD</td>
<td>11</td>
<td>3</td>
<td>ECRU</td>
<td>C11, S4, S3</td>
</tr>
<tr>
<td></td>
<td>.309</td>
<td>248</td>
<td>386*</td>
<td>577**</td>
</tr>
<tr>
<td>Marital Partner SD</td>
<td>4, 9, 10, 7, 12</td>
<td>2</td>
<td>U</td>
<td>U, C9, C, S5, C4</td>
</tr>
<tr>
<td></td>
<td>623**</td>
<td>219</td>
<td>446**</td>
<td>699**</td>
</tr>
<tr>
<td>Men SD</td>
<td>1</td>
<td>2</td>
<td>ECRU</td>
<td>R, C4, C8</td>
</tr>
<tr>
<td></td>
<td>302</td>
<td>153</td>
<td>540**</td>
<td>623**</td>
</tr>
<tr>
<td>Women SD</td>
<td>12, 3, 1</td>
<td>3</td>
<td>ECRU</td>
<td>C10, S3</td>
</tr>
<tr>
<td></td>
<td>594**</td>
<td>088</td>
<td>603**</td>
<td>739**</td>
</tr>
<tr>
<td>Children SD</td>
<td>1</td>
<td>1</td>
<td>E</td>
<td>E, C2</td>
</tr>
<tr>
<td></td>
<td>274</td>
<td>182</td>
<td>350*</td>
<td>481**</td>
</tr>
<tr>
<td>Ego Satisfaction</td>
<td>12</td>
<td>2</td>
<td>ECRU</td>
<td>C8, W2, C2, S1</td>
</tr>
<tr>
<td></td>
<td>262</td>
<td>194</td>
<td>612**</td>
<td>753**</td>
</tr>
<tr>
<td>Change Index</td>
<td>1, 12, 5</td>
<td>3</td>
<td>ECRU</td>
<td>C10, S3</td>
</tr>
<tr>
<td></td>
<td>628**</td>
<td>437*</td>
<td>677**</td>
<td>765**</td>
</tr>
<tr>
<td>FSAA</td>
<td>7</td>
<td>1</td>
<td>R</td>
<td>R, C8, C7, C12, S3</td>
</tr>
<tr>
<td></td>
<td>326*</td>
<td>160</td>
<td>515**</td>
<td>740**</td>
</tr>
</tbody>
</table>

1The 20 variables in this table plus the 7 variables in Table 4, coded according to Table 1. Decimals omitted for typographical convenience. Variables are keyed according to their number in Table 1. Variables listed in the order of their selection by computer.

*p < .05, two-tailed\(\) df = 38

\(\implies\) **p < .01, two-tailed\(\) df = 38
Parenthetically it should be noted that for each of the nine outcome measures in Table 5, there always exists a combination of the total 27 predicting variables which does a better job of predicting outcome than is done by any homogeneous set of variables, such as client variables or ECRU variables. When, however, one examines the combinations employed by the computer to achieve these high predictions, no simple recipe emerges. About the only regularity that emerges is that the program selects a mixture of variables from the several domains: it always selects the most powerful ECRU variable and then improves its prediction by collecting a client, worker, system or post-test case status variable which best improves its prediction. There is no doubt in all but one of these open-ended runs that the ECRU variables are the cornerstone of each prediction. It should be noted that each predicting variable is listed in the cell according to the order in which it was selected by the computer.

Considering the central importance of the perception of therapeutic conditions to these results, it seemed reasonable to inquire whether they themselves might not in some degree be predictable from a knowledge of variables collected before their measurement in the study. To this end further stepwise regression analyses were performed as summarized in Table 6.

Each ECRU variable was first predicted from a knowledge


<table>
<thead>
<tr>
<th>RELATIONSHIP FACTORS</th>
<th>16 INITIAL VARIABLES</th>
<th>7 INITIAL ATTITUDE MEASURES</th>
<th>ANY OF 23 MEASURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empathy</td>
<td>C1, C9, C2</td>
<td>Egosat Women</td>
<td>C1, Egosat</td>
</tr>
<tr>
<td></td>
<td>564**</td>
<td>441*</td>
<td>C12, C5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>683**</td>
</tr>
<tr>
<td>Congruence</td>
<td>C12</td>
<td>Children</td>
<td>Children,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Women</td>
</tr>
<tr>
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<td></td>
<td></td>
<td>C2, Men</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>568**</td>
</tr>
<tr>
<td>Regard</td>
<td>C12</td>
<td>Children</td>
<td>C12, Women,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Men, Egosat,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>C7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>746**</td>
</tr>
<tr>
<td>Unconditional Positive Regard</td>
<td>C12, C7</td>
<td>Marriage</td>
<td>Marriage, C12,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>C3, Partner,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Egosat</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>673**</td>
</tr>
<tr>
<td>SUM ECRU</td>
<td>C12, C5, C7, C9</td>
<td>Children</td>
<td>C12, Egosat,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>C7, C9, Women</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Children</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>726**</td>
</tr>
</tbody>
</table>

Decimals omitted for typographical convenience.

Participating variables are keyed according to their number in Table 1

*p < .05, two-tailed) df = 38

**p < .01, two-tailed) df = 38
of any of the first sixteen variables listed in Table 1 (i.e. twelve client variables, three worker variables, and a knowledge of treatment plan PSTS, CS). Thereafter they were predicted from a knowledge of the seven pre-test attitude measures; finally they were predicted from a joint knowledge of these 23 variables taken together. As can be seen in the table, each of the ECRU variables is very well predicted from the wide open runs, suggesting that much of a client's perceptions are preshaped at the very start of casework intervention. This point is underscored when we focus on the initial variable runs. In none of these predictions or in the wide open runs do any but client variables (and initial attitude variables in the wide open runs) enter despite the availability to the computer of three worker variables and the PSTS, CS system variable.

As can be seen in Table 6, the perception of therapeutic conditions is consistently predicted at the 5% level from clients' initial attitudes. However, it should be pointed out that following an inspection of each individual correlation, almost all of the predictions of the four relationship factors and ECRU from initial attitudes were in the negative direction. The one exception to this was the attitude toward children which consistently showed a significant positive correlation with the perception of congruence, regard and sum ECRU. This means that for all of the initial attitudes
except for the attitude toward children, clients who scored lower on initial attitude tended to perceive later higher levels of therapeutic conditions while those who scored higher on initial attitudes tended to perceive lower levels of therapeutic conditions.

A final analysis was commenced to determine whether it might not be possible to distinguish between the 40 clients who completed this study and the remaining 43 clients who did not complete the study. The only information available on all 83 clients was that employed for the predictions in Table 6, i.e. the sixteen initial variables and the seven pre-test attitude measures. Sadly, it was found that not one of the 23 variables differentiated the two groups, the best of them being C5 (client married before) at a paltry $r = .181$.

Somewhat better success was achieved in distinguishing the 40 clients who completed the study from the 15 clients who dropped out of treatment against the workers' advice after session number 5. To be sure none of the aforementioned 23 variables differentiated these cases but owing to the fact that those clients completed their perception of therapeutic conditions measures some discrimination was achieved. Table 7 presents the results of this analysis wherein it is observed that on all of the measures these fifteen clients have lower scores. All of the differences, except for regard, are significant at the .05 or .001 level.
### TABLE 7

**PERCEPTION OF THERAPEUTIC CONDITIONS**

**BY TWO GROUPS OF CLIENTS**

<table>
<thead>
<tr>
<th>RELATIONSHIP FACTORS</th>
<th>Forty Clients Who Continued Treatment or Concluded with Concurrence of Worker</th>
<th>Fifteen Clients Who Terminated Against Advice of Worker</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\bar{x}$</td>
<td>$\bar{s}$</td>
</tr>
<tr>
<td>Empathy</td>
<td>31.00</td>
<td>8.71</td>
</tr>
<tr>
<td>Congruence</td>
<td>34.15</td>
<td>10.04</td>
</tr>
<tr>
<td>Regard</td>
<td>29.58</td>
<td>13.29</td>
</tr>
<tr>
<td>Unconditional Positive Regard</td>
<td>19.88</td>
<td>11.69</td>
</tr>
<tr>
<td>SUM ECRU</td>
<td>114.61</td>
<td>37.20</td>
</tr>
</tbody>
</table>
Chapter V

DISCUSSION

The purpose of this study, as outlined in Chapter I, was to provide some answers to the question: under what conditions is social casework intervention more or less effective? To this end three research questions were raised. The first question concerned the relationship between the perception of therapeutic conditions and outcome scores. In this sample with these outcome criteria, the relationship between the two domains of variables are positive and significant $r = .334 \ (p < .05)$ to $r = .677 \ (p < .001)$. When the level of clients' perceptions of therapeutic conditions ascends above the mean, outcome scores also ascend above the mean. When the level of clients' perceptions of these factors descends below the mean, outcome scores also descend below the mean.

It should be noted that by inspection, a correlated matrix of all of the four relationship factors together showed a high degree of intercorrelation ($r = .54$ to $r = .74$), which increases the reliability of each of these discreet dimensions of the clients' experience of the therapeutic relationship. Likewise, all four factors highly correlate with ECRU or the sum of the four factors ($r = .81$ to $r = .87$). These high correlations increase the validity and reliability of the
measure of ECRU as well as the individual relationship factors that make up the total ECRU score.

The data also showed that ECRU, relative to the individual relationship factors, tended to predict a greater proportion of outcome variance than any one factor alone. By inspecting Table 3, it can be observed that ECRU predicted slightly more outcome variance in five of those 9 outcome measures than any one individual relationship factor. In the remaining four outcome measures, individual factors predicted a greater proportion of variance than ECRU but no individual factor except unconditional positive regard was able to predict the different outcome scores to any level of significance with the same regularity as ECRU. Because the individual relationship factors correlated more highly with ECRU than with each other and because of the regularity with which ECRU predicted the level of outcome scores, the total ECRU score can be considered as a composit score that probably best represents clients' general perceived experiences of therapeutic conditions that are provided by their social workers. The similarity in the amount of times that unconditional positive regard also predicted outcome scores to a level of statistical significance, indicated that in this study perceived levels of this specific relationship factor might have been somewhat more important than the other individual relationship factors.
The remaining individual relationship factors did not predict outcome scores with the same regularity as perceived unconditional positive regard and the sum ECRU scores. Because no initial assertions were made as to what relationship factor was likely to be more closely associated with outcome and because these differences in predictive power were not submitted to tests of significance, no generalizations can be made about what specific factor is most likely to be positively associated with outcome. The central importance of these findings is that in this sample of clients' receiving counseling from social workers, the level of clients' perception of ECRU and the individual ECRU variables were important conditions under which more or less change was made. Scores on every outcome criterion were predicted to a level of significance by at least one relationship factor or ECRU.

The predictive power of ECRU as compared to the four relationship factors as well as the other twenty-two potential predictors can be seen in answering the second and third questions. The second question asked if the perception of the four relationship factors accounts for as great or greater a proportion of the variance in outcome as any other variable measured. Again, differences in predictive power between the ECRU variables and the other variables were not submitted to significance tests. By inspection of Tables 4 and 5 it can be seen that for change in attitudes toward marriage,
men, women, change in ego satisfaction, and the change index, sum ECRU predicted as great or greater a proportion of variance in outcome as the twelve initial client variables grouped together, the three initial worker variables grouped together, any one of the system variables, and the two of the post-test case status variables (for attitude change toward men, regard was able to improve ECRU's prediction of outcome).

The remaining four of these marital and psychological behavior measures and client assessment of improvement change measures were predicted to a significant degree by individual relationship factors. However, in two of these four remaining measures (marital satisfaction and marital partner), groups of the twelve initial client variables were able to predict a greater proportion of outcome variance than any of these single individual relationship factors. On the remaining two outcome measures, perceived regard was the strongest predictor of scores on the FSAA instrument and empathy was the only predictor of change in attitude toward children.

Therefore, in five of the seven marital and psychological behavior outcome criteria measures, the change index and in clients' subjective assessment of improvement, the sum ECRU or an individual ECRU variable accounted for as great or greater a proportion of the outcome variance as any other variable or domain of variables measured. This is underscored by the fact that the ECRU variables together or
individually accounted for as great or greater a proportion of outcome variance even when there was the opportunity for individual variables from the separate domains to build on each other and improve the prediction of outcome. Also, there was no combination of variables from another domain or single variable from another domain that predicted outcome scores with an equal amount of regularity as ECRU or unconditional positive regard.

A similar pattern showing a dominance of perceived therapeutic conditions was seen when the four relationship factors and sum ECRU competed in the stepwise analysis with all twenty-two potential predictors of outcome together in one large group of all twenty-seven variables (see Table 5, 4th column). This relates to the third question in the study, namely what combination of variables predicted the greatest proportion of outcome variance.

For the seven marital and psychological behavior measures, the change index, and the FSAA client assessment of improvement, combinations of all twenty-seven variables measured were always able to predict a greater proportion of outcome variance than any single variable or any domain of variables. However, as noted in the previous chapter, no specific combination of the total twenty-seven variables grouped together emerged as regular predictors of those outcome measures. Therefore, in response to the third question in this study, it was found that of
all variables measured there was no consistent combination of variables that predicted the greatest proportion of outcome variance. No generalizations can be made about any one combination of all twenty-seven variables that appeared in these open runs.

However, except for the prediction of change in marital satisfaction, ECRU or one of the individual ECRU variables (eight out of nine times) was first selected by the computer and variables from other domains and/or from the same domain of relationship factors were able to improve that prediction of outcome. For the prediction of change on the Locke-Wallace Marital Satisfaction test, social workers' assessment of change ($r = .479$) was a slightly stronger predictor than clients' perception of unconditional positive regard ($r = .422$).

This demonstrates three important facts. First, we again can see the clear trend for ECRU or an individual relationship factor to predict as great or greater a proportion of outcome variance than any other single variable measured. Second, it demonstrates that ECRU or a single ECRU variable was the cornerstone on which all but one prediction of outcome was built. This relates to the point made in Chapter II that the worker-client relationship is the cornerstone of social casework intervention. Third, it demonstrates that ECRU or an ECRU variable is necessary to bring about positive change but it is not sufficient to account for all of the change.
that occurs.

While other variables besides the four factors and ECRU were also able to predict some outcome variance as measured by the adjusted difference in pre- and post-test marital and psychological behavior scores, the change index, and scores on the FSAA instrument, no other variables besides the perception of therapeutic conditions were able to predict or improve the prediction of which clients were likely to drop out of treatment against workers' advice. This shows that the level of clients' subjective experience of the amount of empathy, congruence, and unconditional positive regard as well as the total perceived therapeutic conditions (ECRU) were the only predictors of who will probably continue treatment or successfully conclude treatment as opposed to those who will be premature terminators after the fifth session. This finding is especially important to those concerned with understanding why some clients prematurely drop out of counseling and others do not.

Despite the significant consistent associations between clients' perceptions of therapeutic conditions and outcome, a direct causal assertion cannot be made because the independent variable was not experimentally manipulated. Because of the degree to which other findings in different types of treatment and with different client populations are congruent with these findings a very strong case can be made for a
causal hypothesis. Further research is needed, utilizing an experimental design, before definite conclusions can be made regarding a linear cause and effect relationship between therapeutic conditions and outcome in social casework practice.

Because subjects were not randomly assigned to the study and because the sample only represented clients who, on the first telephone contact with the agencies reported family related problems, no generalizations can be made from this sample to all clients who are seen in face-to-face interviews by all social workers. Additionally, no generalizations can be made to clients who are helped through the use of other interventive methods besides regularly scheduled interviews with the same worker. It will be recalled that of the 83 clients who began the study, only 40 completed all phases of data collection. The other 43 either ended prior to the fifth session or dropped out after the fifth session against the worker's advice. Therefore, some self selection was involved with those who completed all phases of the study. Had all 83 stayed long enough for post testing, other variables might have emerged as consistent predictors of outcome scores. On the other hand, the range would have increased, possibly reinforcing the findings obtained with the 40 subjects.
If some workers received feedback from clients who started in the study first, it is possible that these workers could figure out by themselves that the relationship between change and the perception of the worker was being measured. With clients who started later in the study, workers could then tend to try more strongly to convince those to participate where it was felt that the client would probably change more and more toward whom the worker initially felt more of a sense of empathy, warmth and regard. Because there was a record kept of how many clients met initial criteria but later did not participate after all, and the degree to which this happened was observed to be minimal (as specified in Chapter III), it is assumed that this bias in sample selection was kept to a minimum.

It is also important to keep in mind that outcome as defined in this study was not final outcome at closing for twenty-nine of the forty subjects who completed all aspects of data collection. This investigation was designed to measure a section of treatment. For some of the forty it was the total treatment \( n = 11, 10 \) PSTS and 1 CS) and for the rest \( n = 29, 11 \) PSTS who renegotiated another contract, and 18 CS) it simply represented a portion between the first session and post-test. Consequently, no
assertions can be made about final outcome at closing for those twenty-nine who continued on. The trajectory of any one client's outcome scores could modify as treatment progressed just as any one client's perception of therapeutic conditions could be modified. It will be recalled that of these forty clients who completed all phases of the study, the eleven who terminated at post-test had ended treatment without the worker advising against it, while the remaining twenty-nine were continuing on. Thus it was possible that the act of concluding treatment with the concurrence of the worker could result in higher positive change scores due to a feeling of satisfaction, believing that one had just successfully ended treatment.

In order to see if differences in outcome could be accounted for from a knowledge of whether clients were continuing on or concluding at the time of post-test without their workers' advising against it, a specific comparison of differences in outcome for the forty completors and continuors in treatment can be seen by inspecting Table 4 (Cₚₙ). The highest correlations were as follows: Change in ego satisfaction correlated \( r = .30 \) and change as measured by the FSAA instrument correlated \( r = .22 \) with the group of eleven clients who terminated
without the worker advising against it. However, significance did not reach the 5% level. This indicated that only a very small and insignificant proportion of variance in outcome can be accounted for by a knowledge of which clients completed treatment in only two out of nine measures of outcome. In the remaining seven measures, the difference between outcome at closing and outcome as defined as a section of treatment between pre- and post-test was almost perfectly null, with the highest correlation at \( r = .16 \). In terms of outcome scores, then, it made very little difference whether or not clients concluded treatment at post-test or were continuing on.

It is also important to keep in mind that outcome as defined in nine out of ten of the outcome measures involved clients' subjective attitude behaviors. These measures involved what might be called internal behaviors as distinguished from overt behavior and actions that can be measured by objective behavioral criteria. There was only one exception to this: namely the post-test case status variable that distinguished the fifteen clients who terminated against the advice of their worker as opposed to the forty who did not overtly behave this way. Because client's subjective
experiences of the workers were the predictive variables of major importance, the study mainly measured the relationship between two sets of subjective responses, namely the perception of therapeutic conditions and attitude change. Had the outcome measures involved additional objectively observed behavior, the results might have been different in this sample of clients.

Theoretically, internal behaviors and overt behaviors tend to be congruent. But in some situations, attitudes and actions may be dissonant and the degree of dissonance that can be tolerated might vary according to the individual. As reviewed in Chapter III, all of the measurement instruments except the FSAA change indices were validated with some objectively observed behavior but still they actually measured subjects' subjective perceptions and attitudes. As noted above, the only measure of overt behavior in this study was the post-test case status variable that distinguished the fifteen who dropped out against workers' advice and the forty who did not overtly behave this way. Unfortunately, no post-test attitudes were available on the fifteen who dropped out, so correlations between attitude change and this overt behavior
could not be done in this study.

This study focused on clients' subjective perceptions of therapeutic conditions and was not concerned with the degree to which clients' perceptions of their own experiences with their workers matched judges' ratings of workers from tape recorded sessions. As noted in Chapter I, some earlier studies showed low correlations between therapists' ratings, clients' ratings, and judges' ratings of empathy, congruence, regard, and unconditional positive regard that is provided by therapists. As also noted, those who first began research into the possible effects of ECRU on outcome, assert that the different measurement techniques are tapping different aspects of the same thing.

Clients' perceptions of their workers' verbal and non-verbal behavior in this study was assumed to represent the way in which clients' experienced their workers. But this experience may be somewhat different from the way in which objective judges experience and rate the same workers' verbal behavior recorded on magnetic tape. Lewin's model of the life space may offer some explanation for this lack of correlation between subjectively perceived and objectively observed therapeutic conditions. In this model, the individual is seen as a perceptual-motor, innerpersonal system, whose experiences occur within an encompassing psychological environment representing that person's current psychological reality. This psychological
environment contains the totality of possible facts which are capable of determining an individual's behavior at a given point in time. In terms of Lewin's model, clients' experiences of their workers within the psychological environment is a subjective, phenomenological reality in the client's life space. The level of the perception of therapeutic conditions is determined by both the clients' needs and goals and the workers' actual behavior as perceptual-motor behavior and innerpersonal experiences are interrelated with actual events in the psychological environment.

In Lewin's terms, the life space is surrounded by what he calls the foreign hull which contains various physical facts that may intrude into the psychological environment and effect changes therein. The introduction of a tape recorder into the interview situation may represent an intrusion into the current life space from the foreign hull which modifies the quality of the worker-client interaction. This intrusion could place the interaction at some variance from the original perception of therapeutic conditions which existed before or after the introduction of the tape recorder. Further research is needed to determine if there is a differential influence of perceived therapeutic conditions and objectively

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2 Ibid., p. 211.
observed therapeutic conditions on the same sample with the same outcome criteria in social casework practice.

The focus of this study was not on why there is a positive correlation between clients' experience of the ECRU variables and outcome. However, some speculations can be made. A primary theoretical explanation for the positive association between perceived therapeutic conditions and outcome in this study is offered by Rogers who first identified these factors and their theoretical effect on therapeutic outcome. As outlined in Chapter II, when experiencing higher levels of these relationship factors, the client is provided with a supportive atmosphere where he can feel free to disclose himself openly and experience his true thoughts and feelings. The experience of these positive therapeutic conditions enables the client then to accept his thoughts and feelings as part of his real self and he grows to be more self accepting. Theoretically, this leads to greater self-ideal congruence which reverberates through his total life experience and results in improved adjustment in other areas as well. However, Rogers' belief that high levels of therapeutic conditions, defined as the sum of accurate empathy, congruence, regard, and unconditional positive regard, are sufficient to bring about the positive changes was not confirmed in this study. The perception of ECRU alone as a predictor of outcome was sufficiently powerful to predict, at maximum, 46% of the variance in the change
index. This is a very large proportion of variance but it leaves 54% more of the variance accounted for by other variables, including ones that were not measured. Therefore, as earlier indicated, the experience of high levels of ECRU may be necessary conditions associated with positive change as maintained by most theoreticians but it was not sufficient to account for all of the positive change that did occur as measured by these outcome criteria.

Other reasons for the positive association between the perception of therapeutic conditions and outcome could be that when clients in this study experienced higher levels of ECRU it was the necessary condition to disclose themselves enough to provide sufficient material for workers to help them. It probably was the necessary condition for clients to feel receptive to whatever framework of meaning that the social workers placed on their behavior and helped them to feel cooperative in maintaining the working alliance. It is evident that the experience of low levels of the ECRU variables had the reverse influence on the working alliance for the fifteen who quit against the advice of the worker.

Clients' perceptions of the workers' responses may have influenced clients' attitudes about themselves as they experienced their worth and value as reflected in the behavior of some important other person in whom clients invested certain powers of judgment. As clients subjectively perceived
and experienced these attitudes from their social workers, it may have been not only generalized to self attitudes but it may have been generalized to other relationships outside the treatment situation as well, resulting in changes in those other relationships. The perception of these four factors are probably related to the total interaction process between worker and client which in itself is a learning experience in relating to other people besides the worker. Because most aspects of daily living involve relationships with other people, it is conceivable that discovering new ways of relating through experiential learning with the worker could have effected adjustment in a wide range of life situations. Also some clients may have had abilities that were not realized because of inhibitions related to a poor sense of self-esteem or feelings of personal worthlessness, helplessness and unlovability. By experiencing high levels of the ECRU variables, these clients gradually came to value their selves more highly, thereby releasing their potential for positive change.

The purpose of this study was to measure the association between clients' perceived experiences of therapeutic conditions and outcome. The study was not intended to determine what influenced clients to perceive their workers the way they did, but some speculations can be made here as well. As noted in Chapter II, Greene found some evidence to support the hypothesis that there is a positive association between
the congruity in cognitive style on the part of workers and clients and the level of clients' perception of the four relationship factors. This lends support to the possibility that the nature of the perception of therapeutic conditions is, in part, a function of the interaction system between clients and workers.

While the data from this study showed that clients' perceptions of their workers were well predicted from a knowledge of twenty-three initial variables, only two consistent patterns emerged. There was some regularity in the number of times that the computer selected variable C12 (number of rooms in the client's home) as one of the predictors of clients' perceptions of ECRU and the four factors. The association was in the positive direction which meant that more rooms in the home was associated with higher perceived levels of therapeutic conditions. This variable (which did not correlate with income, education, or employment of self or spouse) was one that regularly improved the prediction of outcome as well and is discussed below at greater length.

It is also recalled that there was a general negative correlation between initial attitudes as measured at pretest and the perception of therapeutic conditions measured later at the fifth session. Those whose attitudes toward self and attitudes toward others, including the initial subjective perception of marital adjustment, were low, later perceived higher levels of therapeutic conditions. For those
whose initial attitudes were higher, the reverse was true. The one exception to this, as noted earlier in Chapter IV, was the initial attitude toward children which consistently had a positive correlation with later perceived therapeutic conditions. Because of this difference in the direction of correlations and because no initial predictions were made concerning the source of clients' perception of the worker, this suggestive finding must be interpreted with caution. Nevertheless, it indicates a need for further research into the origins of the perception of therapeutic conditions from a knowledge of clients' attitudes at the start of treatment and possibly some aspects of their living space.

Considering the negative correlations that were found with the other initial attitude scores, one can speculate that individuals who initially scored lower on marital satisfaction, ego satisfaction, attitudes toward marriage, the marital partner, men and women, were seen by their worker as sicker or in need of more support acceptance and nurturing. Consequently, those clients could have objectively received higher levels of the ECRU variables. Clients who had scored lower on these initial attitudes could also be reflecting a history of low self-esteem and poor relationships with other adults, including their spouse. These clients, seeking comfort and help from another adult, might defensively perceive and rate that person as different from others in a positive way because
that is what he wants and needs to experience.

It is possible that the nature of the experience of ECRU is determined by how much change already occurred by the time the perception was measured at the fifth session. This speculation is supported by prior research. Cartwright and Lerner found that clients who are defined as having a greater need to change achieve higher change scores than those who are defined as having less of a need to change. The level of the need to change was, in their study, determined by the degree of congruence between the perceived actual self (the client's description of himself as he is at present) and ideal self (the client's description of himself as he wants to be when therapy has been completed). If one assumes that the self-ideal congruity measure in the Cartwright and Lerner study was comparable to the measure of ego satisfaction in this study, the following speculations can be made. As those clients who had a greater need to change as reflected in lower initial scores on ego satisfaction began to improve, they may have tended to report on the relationship inventory, a higher assessment of the worker who was felt to be responsible for the positive change. Reporting this perception on the inventory may have concretized the perception and could reinforce the positive direction of change which had already begun. For those who started out higher on ego satisfaction and made less change, the reverse process.

may have occurred.

All of the reasons that clients experienced higher or lower levels of the four relationship factors remain a question to be further determined by future research. Because the clients in this study were outpatients and not severely disoriented schizophrenics, a large portion of the perception was probably shaped by the workers' actual responses to them. However, other variables undoubtedly influenced how the clients perceived the experiences with their workers within their psychological environment.

Other Findings

As was seen in the data presented in Table 4 (Sl), the treatment plan defined as planned short-term service and continued service did not show a significant difference in outcome on any of the outcome indices. In seven of these nine change measures the correlations were in the positive direction but insignificant. Due to CS being coded as 1 and PSTS coded as 0, this positive association was in favor of the CS clients indicating that these clients might have done a little better on these outcome scores than those receiving PSTS. The remaining two criteria measures (ego satisfaction and FSAA) showed an almost perfect null relationship to treatment plan, indicating that these two measures relative to the other seven might have been pulled slightly in the direction of PSTS. Here it will be remembered that ten of the eleven
completors were in PSTS and their scores on ego satisfaction and FSAA were slightly higher than of those who were continuing on. In view of past research which found that clients in PSTS did as well or better than those seen in CS, it was at first puzzling as to why the PSTS group did not have a better showing in outcome scores. An inspection of the correlations between the ECRU variables and the treatment plans provides a possible answer.

It was not reported in the findings but the correlation between treatment plan and ECRU was $r = .03$, almost a perfect null relationship. This shows that the level of the perception of the sum total of the four relationship factors was, by chance, equal for clients seen in both treatment plans and there was no significant difference in outcome (individual correlations with the four factors were also null). Because the level of the perception of therapeutic conditions was equal for both groups, scores were free to vary according to treatment plan without interference from the level of perceived therapeutic conditions. Had, by chance, either one of the treatment plans consisted of clients who, as a group, perceived significantly higher levels of ECRU, it may have resulted in that treatment plan correlating significantly higher with the majority of outcome criteria scores.

The Reid and Shyne study of the relative effectiveness of PSTS and CS was cited in Chapters I and II. In that study
PSTS clients did significantly better on some indices than those receiving CS. Cases were randomly assigned to the two different treatment plans but no measure was taken of clients' experience of therapeutic conditions. Had this variable been measured by Reid and Shyne, it might have been found that despite random assignment those receiving PSTS also happened to perceive higher levels of therapeutic conditions. If that in fact happened, were the higher scores obtained by the planned short-term group, the result of the PSTS process, or the level of the experience of ECRU?

It should be pointed out that the comparison of relative outcome scores for PSTS and CS groups in this study is limited by the fact that the two difference treatment plans were not practiced in the same agency. Therefore other aspects of the different agency systems could also have influenced outcome independent of the treatment plan itself. Nevertheless, these findings suggest a need to include a measure of ECRU as an intervening variable in further comparisons of the relative effectiveness of different treatment plans with different outcome criteria as well.

One of the more provocative additional findings was the association between the number of rooms in the home and outcome. This variable, in competition with eleven other client variables (Table 5), appeared four out of nine possible times in the stepwise analyses, improving the prediction of
outcome. In competition with fifteen other initial variables (Table 6), the number of rooms in the home appeared three out of five possible times in predicting any of the four relationship factors and the ECRU score. As the sole predictor of regard, it alone reached $r = .57$ ($p < .01$). In competition with 22 other variables in predicting the five measures of perceived therapeutic conditions, number of rooms appeared four out of five possible times as a variable that improved the prediction. These findings point to a possible systemic association between the number of rooms in clients' homes, the perception of therapeutic conditions and outcome. In all of the above noted relations, the number of rooms maintained positive correlations in all of its predictions and improvement of predictions of outcome, the perception of ECRU and the four individual relationship factors.

An inspection of a matrix showing every variable correlated with every other variable shows that the number of rooms in the home does not correlate with income, education, or employment. While the number of rooms in the home is associated with the perception of therapeutic conditions and outcome, the nature of its interrelationship with other variables in predicting ECRU and outcome is not clear. Because these findings show a potential influence of this indicator of living space, independent of income, education and employment, on the perception of the ECRU variable and on the degree
of change; further research is indicated to discriminate the
exact influence of this variable.

Another suggestive explorative finding that was not
directly related to the three specific research questions
were the predictions of outcome from a knowledge of whether
the client was seen alone or with other members of the family.
As can be observed in Table 1, S4 (treatment group), seven-
teen clients were seen individually and no other family mem-
bers received treatment. Thirteen were seen with the spouse
while ten were seen with spouse and child. One would expect
that the more members of a client's family that were seen,
the greater would be the chance that the client would experi-
ence more change. However, as seen in Table 4 (S4), on all
but one prediction of outcome from treatment group, clients
seen alone obtained higher outcome scores than those seen
with other family members. In four out of the nine possible
hits, the correlations were at the 5% to 1% level of signifi-
cance.

Because the perception of the four relationship factors
could have influenced this trend, the correlations between
treatment group and the perception of therapeutic conditions
was inspected. The correlations were not significant with
ECRU and with three of the four individual relationship fac-
tors. However, empathy correlated $r = -0.358 \ (p < .05)$ with
treatment group. Because individual treatment was coded 1,
treatment with spouse was coded 2, and treatment with spouse and child was coded 3, this negative correlation showed that those receiving individual treatment also experienced higher levels of empathy. If perceived empathy influenced outcome through its high correlation with ECRU and the other three individual factors, then that may explain why those receiving individual treatment did somewhat better than when other family members were seen as well.

The nature of the outcome criteria could also have been responsible for those in individual treatment scoring higher on outcome than those seen in family treatment. Had there been measures of objectively observed communication patterns between family members, those receiving family treatment might have done better in this study. As noted in the previous chapter, this suggestive finding, which indicates that clients who are seen individually and perceive higher levels of empathy, tend to experience higher outcome scores than those who receive family treatment, merits further investigation in future studies.

One more additional finding is worth mentioning. It will be recalled that in Chapter II there was a discussion of Rogers' theory of the nuclear position of the self system and the summary of the study conducted by Turner and Vanderlippe which compared scores on a self-ideal congruity measure with scores on other adjustment indices. In their sample of
College students a trend was seen for greater self-ideal congruence to be associated with higher adjustment scores on the other independent indices. Because of the availability of data it seemed worthwhile to see if a similar relationship could be found in this study between the self-ideal congruity measure (ego satisfaction) and the other marital and psychological behavior measures. This additional exploration, not directly related to the three research questions, seemed worthwhile for a second reason as well. The importance of clients' experience of the level of accurate empathy, congruence, regard, and unconditional positive regard as formulated by Carl Rogers is theoretically related to the nuclear position of the self system which would be expected to correlate with other adjustment measures as in the Turner and Vanderlippe study.

To see if there was a significant positive relationship between ego satisfaction and the other marital and psychological behavior measures, two correlational matrices were constructed for clients' pre-test scores and clients' post-test scores, which appear in Figure 3. In that figure the significant correlations are circled. By inspection, it can be seen that at pre-test ego satisfaction did not correlate to a significant level with any other measure which disconfirms the findings of Turner and Vanderlippe and the Rogerian theory of the nuclear position of the self system. However, at
Pre- and post-test correlations of seven marital and psychological behavior measures.

Correlations which reached statistical significance are circled.
<table>
<thead>
<tr>
<th></th>
<th>Pre-Test</th>
<th></th>
<th>Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar Sat</td>
<td>811</td>
<td>744</td>
<td></td>
</tr>
<tr>
<td>Marriage</td>
<td>687</td>
<td>690</td>
<td></td>
</tr>
<tr>
<td>Partner</td>
<td>326</td>
<td>185</td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>435</td>
<td>516</td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>004</td>
<td>465</td>
<td></td>
</tr>
<tr>
<td>Children</td>
<td>127</td>
<td>368</td>
<td></td>
</tr>
</tbody>
</table>

Decimals omitted for typographical convenience

\[ p < .05 = 312 \]
\[ p < .01 = 403 \] df = 38
\[ p < .001 = 501 \]
post-test, the correlations between ego satisfaction and all other marital and psychological behavior measures correlated to the 5% level of significance which now supports Rogers' theory and the findings of Turner and Vanderlippe, whose study was conducted with a normative population.

From this one can infer the possibility that as treatment progressed, these clients became more like a normative population and Rogers' theory of the nuclear position of the self system primarily relates to a normative population. Unfortunately, the data in figure 3 does not specify the direction of influence between ego satisfaction and the other measures. Because the direction of influence is so unclear this finding only supports Rogers' belief that the self system and other areas of adjustment are positively interrelated but does not necessarily support his belief that changes in the self system influenced changes in other areas of adjustment.

It is possible that both ego satisfaction and the other criteria were mutually influenced by another variable such as the experience of ECRU. It is of additional interest to note the different patterns of the correlations at pre-test and at post-test. While a formal factor analysis was not conducted, it appears, by inspection, that three distinctly separate clusters of relationships developed over the course of treatment. At post-test there is the cluster of
marital measures, the cluster of attitudes toward other people and the cluster of interrelationships between ego satisfaction and all other measures. Except for the significant interrelations between the marital measures, the other distinct clusters were not evident at pre-test.

The discussion in this chapter focused on the power of the perception of therapeutic conditions, relative to other variables measured to predict outcome, and as the key sub-system in networks of predictors. Clearly these perceptions of the four relationship factors, their influence on outcome, and the conditions that shape the perception are an important topic of future research, education, and training in social work practice that includes the delivery of individualized services. Other suggestive findings not directly related to the three research questions were also reviewed.
Chapter VI

CONCLUSIONS AND RECOMMENDATIONS

In this exploratory field study, utilizing a correlational design, it was found that compared to twenty-two other variables, client's subjective experience of the level of accurate empathy, congruence, regard, and unconditional positive regard communicated by their social workers were the most consistent predictors of outcome. One or more of these ECRU variables were always positively associated with every one of the ten outcome criteria measures. The ECRU variables accounted for as great or greater a proportion of the variance in eight out of ten measures as any other variable or domain of variables measured and were consistently the cornerstone variables on which systems of predictors of outcome were built.

Considering, then, the central importance of clients' experience of these therapeutic conditions in this study one can confidently conclude that further study and research is relevant in order to determine the universality of these findings in social casework and to discriminate the precise origins of clients' experience of the level of the ECRU
variables. From the strength of the association between these perceived therapeutic conditions and outcome, one can reasonably hypothesize a causal relationship which could be tested within an experimental design. One can also hypothesize that there will be a similar association in other samples of social casework intervention.

In future studies of the relationship between the ECRU variables and outcome, one might consider multiple measurements over time of the outcome or change criteria and multiple measurements over time of the ECRU variable. This design would have the advantage of a more exact measurement of the covariance between therapeutic conditions and client improvement than could be obtained with the before-after correlational design employed in this study. Multiple measurements of the ECRU variables, however, would require the use of unobtrusive observational techniques that would gather data on social workers non-verbal as well as verbal behavior.

As an alternative model to stepwise analysis, where the computer determines the order in which independent variables are entered into the prediction equation, one might consider entering antecedent variables prior to entering the ECRU variables. This would provide a control on antecedent conditions by partializing out their effect first. One could then see how the ECRU variables survive as outcome predictors.

In future studies that relate the predictive power of the system of ECRU variables with other sets of variables, it
might be more meaningful to measure also ones that pertain to clients' social environment. These could include ratings of clients' communities for the availability of social utilities, a qualitative rating of the neighborhood and home as well as the ratio of family members to number of rooms in the home as an index of crowding. Because initial client variables in this study were able to predict the level of clients' experience of ECRU as well as outcome, future studies should include a more careful selection of initial variables that pertain to aspects of the client. These could include a diagnostic categorization of the client or a measure of the level of the client's experience of incongruity, a rating of the severity of the problem, ego strength, clients' expectations about the services, the motivation for help, and the degree of clients' hope. Also in measuring clients' employment it might be more meaningful to discriminate between those who are unemployed and are housewives from those unemployed who are not housewives.

Consistent with the findings that were related to the three research questions, some specific conclusions and recommendations can be made for the areas of social casework research, practice, and education.

Research

The use of multiple regression techniques with a large
number of variables utilizing the adjusted change score as was employed in this study offers a potential model of exploratory investigation aimed at discriminating systems of variables which consistently predict outcome. In future studies that compare the relative predictive power of the highly innercorrelated system of ECRU variables with other systems of variables, it might be more meaningful to include other domains of variables that have already been found to be highly integrated systems of predictors.

When systems of variables are identified which consistently facilitate client improvement and systems are identified which consistently deter client improvement, we are better equipped both to improve the practice of social casework and to test modified techniques and interventive models more accurately by accounting for the influence of these systems of variables. We may also fairly ask if there is not a host of different recipes of variables that influence outcome with different groups of clients which can be uncovered with similar research techniques.

The strength of the association between the level of client's perception and experience of the ECRU variables and outcome was sufficiently high in this sample with these outcome criteria to warrant further exploration of the relationship between these variables and outcome with different samples of clients, different models of social casework
intervention and with different outcome criteria. If the perception of these relationship factors is eventually shown to account for such a large proportion of outcome variance with different kinds of samples it would then be clearly evident that clients' experience of the level of the ECRU variables needs to be accounted for in all further studies of the relative effectiveness of all approaches to social casework intervention, especially if random assignment is not possible.

With comparable samples of clients seen in regularly scheduled face-to-face interviews in similar kinds of settings as were studied in this investigation, it would be prudent to include a measure of the perception of the ECRU variables as intervening variables when comparing different models or types of intervention to outcome. Such different models or types of intervention might be family, group, individual, planned short-term service, planned long-term service, crisis intervention, the psychosocial approach, the functional approach, and even behavior modification.

In the field of education, it is by now commonly accepted that IQ scores and scores on reading tests are positively associated. When various reading programs are compared for their relative ability to improve reading skills, IQ scores are included as intervening variables especially when random assignment to different groups is not possible.
Similarly, clients' perceptions of the four relationship factors may serve the same function in influencing outcome scores for clients who are helped by social caseworkers. If two or more models or types of casework treatment are compared according to outcome, it could be, by chance alone, that one group of subjects experienced higher levels of the four factors independent of the models of treatment being tested. In such an event, results could be obfuscated by the failure to account for the independent influence of the ECRU variables.

**Practice**

If the same positive association is found between clients' experience of the ECRU variables and outcome in a cross section of other social casework interventive models, one can confidently conclude that in all social casework practice, skill in relationship and the science of human relationships are indeed vital areas of understanding. These areas can be seen as essential in mobilizing potentials in the individual and in mobilizing or creating resources in the community.

If the focus of intervention is on clients' feelings about themselves, clients' relationships with family members, and feelings and attitudes about other people, it is likely that clients' experience of the level of ECRU that is
communicated by their social workers' influences change more than any other aspect of the treatment system, aspects of the client or aspects of the worker. In these cases, then, social workers need to be especially aware of their own verbal and non-verbal communications that facilitate or deter their clients' experience of higher levels of ECRU.

If the focus of intervention is to help provide legal, financial, housing, employment, educational services, etc., the level of experienced ECRU might be important factors that facilitate or deter clients in disclosing themselves and their individualized needs and then to use the service that is offered. Intervention in the macro system level might not include such an intense ongoing relationship with an individual or family who are defined as the client. The point of focus could be a larger encompassing system or network of systems. Nevertheless, the social caseworker would still need to form relationships, however, brief, with human representatives of the target system. Regardless of the intensity and duration of these relationships with representatives of the larger encompassing system(s), it is possible that social workers' ability to generate higher levels of some aspects of ECRU could play an important part in the success of the intervention. These are considerations that need to be explored in future research.

As was discussed in Chapter I, and as seen in the
Results chapter, clients' perceptions of the level of the ECRU variables is, in part, influenced by a complex system of interacting variables. However, as also noted in Chapters I and V, clients' experience of the level of empathy, congruence, regard and unconditional positive regard is probably influenced in a major way by social workers' actual verbal and non-verbal behavior with the client, insofar as the client is an outpatient and is not a severely disoriented schizophrenic.

A next research step, then, could be to discover if there are specific verbal and non-verbal behaviors of social caseworkers in the practice of their professionally related tasks that are observed to generally facilitate and behaviors that are observed to generally deter clients' experiencing higher levels of ECRU as measured by the Barrett-Lennard Relationship Inventory. It may be additionally helpful to correlate worker communications, within existing typology models, with levels of ECRU that are experienced by clients.

If there are specific verbal and non-verbal behaviors that in general facilitate the experience of higher levels of ECRU and they can be identified and classified they can become specific points of orientation in supervisory discussions of the worker-client relationship and in the workers' own self-observation. Identifying worker behavior that facilitates and behavior that deters clients' experience of
higher levels of ECRU could also provide a means to identify and select workers for an experimental group treating randomly assigned clients whose average change scores are compared to matched controls who receive no social casework help. This clinical or practice effectiveness research model differs from the previous gross method of treating all workers in experimental groups as if they were homogeneous.

**Education**

The implication of these findings for social casework education depends on future research which would demonstrate a similar positive association between ECRU and outcome in a cross section of samples. There are, however, strong indications that Rogerian theory, the research generated by client-centered explorers, and some of the writings of Nicholas Hobbs are important study material in a casework curriculum.

If we are able to identify and classify social workers' verbal and non-verbal behavior that tends to generate higher levels of client experienced ECRU, these behaviors could then become one of the focal points in didactic social work education and in seminars on the process of human interaction. Future social work research could also determine means of identifying individuals who are likely to generate
low levels of ECRU with most clients. This could then have further implications as one of the many criteria for the admission of social casework candidates.

The following comments cannot be directly supported from the data and are recognized as being highly speculative. It might be possible that with considerably more study, thought, and research some positive statements might be forwarded about relationships between basic elements of experienced ECRU (or relationship factors yet to be discovered) and the early prevention of emotional suffering and social disfunctioning. The communication of higher levels of the ECRU variables by social workers may not just be a therapeutic technique or a style of employing other techniques as part of the process of "cure." The basic elements of experienced ECRU could also be basic elements of daily living that are as related to emotional and social well being as the quality of the air that we breath is to our physical health.

Children learn and parents learn, often in a structured way, cognitive tools, acceptable social behavior and ways of relating and feeling from professional social workers and educators. Is it not possible that beginning at a very young age, children and the parents of these children can be similarly taught, experientially, specific identifiable verbal and non-verbal behaviors involved in generating conditions that facilitate others to experience higher levels
of accurate empathy, genuineness, regard, unconditional positive regard and other enabling relationship processes?
APPENDICES
APPENDIX I

SERVICE PROJECT

The [Name of Agency] is conducting this study as part of our ongoing program to increase the benefits of services to our clients. We thank you for joining us in this important endeavor.

Your part will be to fill out this questionnaire plus two more which will be given to you by your counselor at some later date. Your answers to all of the questions will be treated confidentially.

After you have finished filling out this questionnaire, put it in the red envelope, seal the envelope and drop it off at the reception desk before leaving the building today. In order for your answers to be useful, the questionnaire must be filled out now. Please fill it out completely. For your convenience there is a pen in the envelope for you.

1. Date ______________________ __


3. Your age [raw] The age of your spouse (husband or wife) [raw]

4. How long have you been married to your present spouse [raw]

5. Have you been married before [yes=1, no=2]
   If yes, how many times [raw]

6. Has your spouse been married before [yes=1, no=2]
   If yes, how many times [raw]

7. Are there any children living with you [yes=1, no=2]
   If yes, how many are living with you [raw]

8. What is the family weekly income (average take-home in dollars)
   circle the amount 300 and over


10. Did you graduate from High School [yes=2]
    College [yes=2]
    [not H.S.=0, yes H.S.=1]

11. How many rooms do you have in your apartment or house [raw]

12. Have you been in counseling before [yes=1, no=2]
    If yes, was it here [yes=1, no=2]

PLEASE GO ON TO THE NEXT PAGE
APPENDIX 2

The number that you have drawn will be your code which you will need to use throughout the project. It will prevent the data that belongs to you and your clients from getting mixed up with others. **Do not write your name on any of the material. Use only your code number.**

Please make provisions for remembering your code as no one but you will have a record of it belonging to you personally. After you have filled out this questionnaire, put it in the attached envelope and seal the envelope.

**************************************************************

1. Your code number________________

2. Do you have a M.S.W. Degree: yes____ no [No = disqualification]
   If no, what other degree do you have___________________________

*3. Please list any other degrees or certifications beyond the degree noted in question "2". [Each additional degree = 1]___________________________

*4. Do you attend workshops and/or seminars sponsored by schools of Social Work, N.A.S.W., or other Social Work organizations besides this agency's seminars or workshops: yes [1] no [0]
   If yes, has it been: Very frequently [3]
   Occasionally [2]
   Very seldom [1]

*5. Have you, within the past year, regularly attended this agency's seminars, workshops or case presentations: yes [1] no No = 0

6. How many hours a week do you receive supervision Not coded

*7. Have you taken courses at a:
   Psychotherapy or Psychoanalytic Institute, yes [1] no [0]
   Family Therapy Institute, yes [1] no [0]
   other institute, yes [1] no [0]

8. How many years of professional experience have you had [raw]

9. If you graduated from a School of Social Work, was your major:
   Casework [1]
   Groupwork [2]
   Generic [3]
   Other [4]

[*Total of starred items = Worker education score*]

PLEASE GO ON TO THE NEXT PAGE
10. In terms of your professional practice, have you had experience in the following:

[These items were not coded and were not used]

Individual treatment, none, some, much, exclusively

Group treatment, none, some, much, exclusively

Family treatment
(seeing more than one family member) none, some, much, exclusively

Crisis Intervention and/or Quick Response none, some, much, exclusively

Community Organization and/or Systems Brokerage none, some, much, exclusively

11. In the event of the remote possibility that you might forget your code number, you can use both the 1st letter of your mother's first name and the 1st letter of your father's first name as a substitute code.

First letter of your mother's first name____
First letter of your father's first name____
APPENDIX 3
SERVICE PROJECT

Please answer the following questions in terms of this client. When you have finished, put the form back in the white envelope, seal the envelope and drop it in the mail. It is important that it be filled out and mailed as soon as possible.

1. Your code number_____

2. Date________________

3. How many times have you seen this client [raw]


5. If this client has ended treatment, did you advise the client not to terminate at this time: yes [1] no [2]


   mostly [3]

   somewhat [2]

   not at all [1]

8. Was it necessary to mail the GREEN envelope to this client: yes [1] no [2]

9. Have you also been having sessions with any members of this client's family: yes __ no __

   If yes, who was the family member(s) (wife, husband, child, etc.)

   ____________________________

Was the other family member(s) seen by you for:

[ ] Modality

   Indiv. only =1

   Indiv. & Family =2

   Family only =3

[ ] Individual sessions, yes __ no __

[ ] Joint and/or family sessions, yes __ no __

[ ] Others seen:

   None =1

   Spouse =2

   Spouse & Child =3

10. Has another worker in this agency been having sessions with any member of this client's family: yes __ no __

    If yes, who was the family member(s) ____________________________

11. Has any member of this client's family been recently seen elsewhere: yes [1] no [2]

    If yes, who was the family member(s) spouse =1, child =2, other =3

12. Any comments that you have would be welcomed. Use the back of this form if necessary. ____________________________
APPENDIX 4

MARITAL ADJUSTMENT TEST

1. Check the dot on the scale line below which best describes the degree of happiness, everything considered, of your present marriage. The middle point, "happy," represents the degree of happiness which most people get from marriage, and the scale gradually ranges on one side to those few who are very unhappy in marriage, and on the other, to those few who experience extreme joy or felicity in marriage.

<table>
<thead>
<tr>
<th>Very Unhappy</th>
<th>[0]</th>
<th>[2]</th>
<th>[7]</th>
<th>[15]</th>
<th>[20]</th>
<th>[25]</th>
<th>[35]</th>
<th>Perfectly Happy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

State the approximate extent of agreement or disagreement between you and your mate on the following items. Please check each column.

<table>
<thead>
<tr>
<th>Item</th>
<th>Always Agree</th>
<th>Almost Agree</th>
<th>Occasionally Disagree</th>
<th>Frequently Disagree</th>
<th>Almost Disagree</th>
<th>Always Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Handling family finances</td>
<td>[5]</td>
<td>[4]</td>
<td>[3]</td>
<td>[2]</td>
<td>[1]</td>
<td>[0]</td>
</tr>
<tr>
<td>4. Demonstrations of affection</td>
<td>[8]</td>
<td>[6]</td>
<td>[4]</td>
<td>[2]</td>
<td>[1]</td>
<td>[0]</td>
</tr>
<tr>
<td>5. Friends</td>
<td>[5]</td>
<td>[4]</td>
<td>[3]</td>
<td>[2]</td>
<td>[1]</td>
<td>[0]</td>
</tr>
<tr>
<td>6. Sex relations</td>
<td>[15]</td>
<td>[12]</td>
<td>[9]</td>
<td>[4]</td>
<td>[1]</td>
<td>[0]</td>
</tr>
<tr>
<td>7. Conventionality (right, good, or proper conduct)</td>
<td>[5]</td>
<td>[4]</td>
<td>[3]</td>
<td>[2]</td>
<td>[1]</td>
<td>[0]</td>
</tr>
<tr>
<td>8. Philosophy of life</td>
<td>[5]</td>
<td>[4]</td>
<td>[3]</td>
<td>[2]</td>
<td>[1]</td>
<td>[0]</td>
</tr>
</tbody>
</table>

10. When disagreements arise, they usually result in: husband giving in [0], wife giving in [2], agreement by mutual give and take [10].

11. Do you and your mate engage in outside interests together? all of them [10], some of them [8], very few of them [3], none of them [0].

12. In leisure time do you generally prefer; to be "on the go" [1], to stay at home [0]. Does your mate generally prefer; to be "on the go" [2], to stay at home [1].

13. Do you ever wish you had not married? Frequently [0], occasionally [3], rarely [8], never [15].

14. If you had your life to live over, do you think you would marry the same person [15], marry a different person [0], not marry at all [11].

15. Do you confide in your mate; almost never [0], rarely [2], in most things [10] in everything [10].
APPENDIX 5

RELIABILITY AND VALIDITY--MARITAL ADJUSTMENT TEST

Locke and Wallace determined reliability and validity of the marital adjustment test with a sample of 118 husbands and 118 wives. Because the husbands and wives were not related spouses, the sample presented 236 marriages. The mean age of the husband was 29 years and of the wives 30 years. Thirty-seven percent of all the subjects were college graduates and all lived in the Los Angeles area. Fifty-four percent of husbands engaged in professional and semiprofessional occupations; 58 percent of wives listed occupation as housewife and the majority of the remainder were in clerical, skilled and semiskilled occupations. Forty percent of husbands and 48 percent of wives had no children; 39 percent of husbands and 27 percent of wives had only one child. The mean length of marriage was 5.6 years for husbands and 5.3 years for wives.

The reliability coefficient was computed by the split-half technique and was corrected by the Spearman-Brown formula with an r of .90. Of the 236 subjects 48 were known to be maladjusted in their marriage. Extensive case data corroborated this for 31 of the subjects, 29 of whom were clients of the American Institute of Family Relations. Seventeen cases
were recently separated or divorced, making a total of 22 males and 26 females in the maladjusted group. The group of 48 was matched for age and sex with 48 subjects in the sample judged to be exceptionally well adjusted in their marriage by friends who knew them well.

For the well adjusted group, the mean adjustment score was 135.9, while the mean score for the maladjusted group was 71.7. This difference was considered significant because the critical ratio was 17.5. Also, only 17 percent of the maladjusted group achieved scores of 100 or more while 96 percent of the well-adjusted group obtained scores of 100 or more. Locke and Wallace conclude these figures indicate that the adjustment test clearly differentiates between individuals who are well-adjusted and those who are maladjusted in marriage, and therefore the test has validity since it seems to measure what it purports to measure, e.g. marital adjustment.
APPENDIX 6

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

Here is how you are to use these scales:

If you feel that the concept at the top of the page is very closely related to one end of the scale, you should place your check-mark as follows:

fair __X________________________: unfair

OR

fair: __________________________: __X_unfair

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

strong __________: __X____________________: weak

OR

strong: __________________________: __X____________________: weak

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

active __________: __X____________________: passive

OR

active: __________________________: __X____________________: passive

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

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

safe: __________________________: __X____________________: dangerous

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

THIS __________: __X____________________: NOT THIS

(2) Be sure you check every scale for every concept do not omit any

(3) Never put more than one check-mark on a single scale.

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

PLEASE GO ON TO THE NEXT PAGE.
APPENDIX 7

RELIABILITY AND VALIDITY--SEMANTIC DIFFERENTIAL

Osgood, Suci and Tannenbaum report on test-retest correlation data gathered to obtain reliability coefficients. All findings in their summary, including the two reported here, support the assumption of reliability. In a sample of 100 subjects, test and retest were correlated across the 100 subjects, and the 40 items resulting in an n of 4,000 with coefficient of .85. In a test of the instrument's relative reliability over different periods of time, eight groups of subjects with 25 subjects per group were given a 100 item semantic differential at two different times. The intervals between testing varied for the different groups as follows: 3, 6, 12, 20, and 30 minutes, 1 day, 1 week and 3 weeks. It was found that from the most conservative estimate, the average error of measurement for the Semantic Differential over a three-week period is no more than one scale unit.

An instrument is said to be valid when by observation it measures what it is supposed to measure. It can also be said that an instrument is valid when it correlates with scores on another independent criterion of that which is being measured. Because the Semantic Differential is supposed to measure meaning, validity could be established through
correlation with another independent criterion of meaning. However, because there are no other commonly accepted quantitative criterion of meaning, face validity was employed. Several examples of the instrument's face validity is outlined by the authors in terms of the natural clustering of concepts which have obvious similarities. For example, the D-Matrix technique, which determines statistically how close individuals associate different concepts, was employed to locate ten concepts within three distinct clusters. Through statistical analysis of data from each concept, WHITE ROSE BUDS, GENTLENESS, and SLEEP formed one cluster having similar meaning; HERO, VIRILITY, and SUCCESS formed another, and QUICKSAND, FATE and DEATH formed the third, with the concept METHODOLOGY isolated by itself. The instrument is said to have face validity when most people would cluster these concepts in much the same way without using the differential. The authors leave it to the reader to conclude if these clusters are valid.

Examples of correlation between the Semantic Differential and other independent external criteria are reviewed. One example was a comparison across 58 subjects between scores on the instrument in terms of attitudes toward two presidential candidates and the subjects' actual voting patterns in the 1952 election. The results were positive and significant at the 5 percent level by the Dixon-Mood "sign test." When the evaluation scales were added, prediction rose to the 1
APPENDIX 8

WOMEN

[Pot]* weak ______:______:______:______:______:______:______ strong

[Act]** slow ______:______:______:______:______:______:______ fast

[Act] active ______:______:______:______:______:______:______ passive

[Eva]*** worthless ______:______:______:______:______:______:______ valuable

[Eva] fair ______:______:______:______:______:______:______ unfair

[Pot] large ______:______:______:______:______:______:______ small

[Act] dull ______:______:______:______:______:______:______ sharp

[Pot] deep ______:______:______:______:______:______:______ shallow

[Eva] beautiful ______:______:______:______:______:______:______ ugly

*Potency
**Activity
***Evaluation

PLEASE GO ON TO THE NEXT PAGE
APPENDIX 9

MEN


PLEASE GO ON TO THE NEXT PAGE
CHILDREN

[Eva] pleasant ______:____:____:____:____:____:____ unpleasant

[Eva] loud ______:____:____:____:____:____:____ soft

[Eva] fragrant ______:____:____:____:____:____:____ foul

[eva] bad ______:____:____:____:____:____:____ good

[Eva] relaxed ______:____:____:____:____:____:____ tense

[Eva] timely ______:____:____:____:____:____:____ untimely

[Eva] cruel ______:____:____:____:____:____:____ kind

[Eva] awful ______:____:____:____:____:____:____ nice

[Eva] sweet ______:____:____:____:____:____:____ sour

[Eva] sick ______:____:____:____:____:____:____ healthy

PLEASE GO ON TO THE NEXT PAGE
APPENDIX 11

MARRIAGE

[Eva] full _____:_____:_____:_____:_____ empty

[Eva] worthless _____:_____:_____:_____:_____ valuable

[Eva] meaningful _____:_____:_____:_____:_____ meaningless

[Eva] sad _____:_____:_____:_____:_____ happy

[Eva] bad _____:_____:_____:_____:_____ good

[Eva] sweet _____:_____:_____:_____:_____ sour

[Eva] painful _____:_____:_____:_____:_____ pleasurable

[Eva] successful _____:_____:_____:_____:_____ unsuccessful

[Eva] stable _____:_____:_____:_____:_____ changeable

[Eva] beautiful _____:_____:_____:_____:_____ ugly

[Eva] incomplete _____:_____:_____:_____:_____ complete

[Pot] weak _____:_____:_____:_____:_____ strong

PLEASE GO ON TO THE NEXT PAGE
APPENDIX 12

MY MARITAL PARTNER

[Rec]* interesting _____:_____:_____:_____:_____ boring

[Pot] shallow _____:_____:_____:_____:_____ deep

[Eva] unsuccessful _____:_____:_____:_____:_____ successful

[Eva] graceful _____:_____:_____:_____:_____ awkward

[Eva] cruel _____:_____:_____:_____:_____ kind

[Pot] soft _____:_____:_____:_____:_____ hard

[Rec] colorless _____:_____:_____:_____:_____ colorful

[Eva] sociable _____:_____:_____:_____:_____ unsociable

[Eva] tasty _____:_____:_____:_____:_____ distasteful

[Pot] severe _____:_____:_____:_____:_____ lenient

[Eva] pessimistic _____:_____:_____:_____:_____ optimistic

[Eva] beautiful _____:_____:_____:_____:_____ ugly

[Pot] weak _____:_____:_____:_____:_____ strong

[Eva] good _____:_____:_____:_____:_____ bad

*receptivity

PLEASE GO ON TO THE NEXT PAGE
APPENDIX 13

MY ACTUAL SELF

[Eva] happy ___:____:____:____:____:____:____: sad
[Eva] unfair ___:____:____:____:____:____:____: fair
[Cat]*inflexible ___:____:____:____:____:____:____: adaptable
[Pot] deep ___:____:____:____:____:____:____: shallow
[Eva] clean ___:____:____:____:____:____:____: dirty
[Pot] small ___:____:____:____:____:____:____: large
[Cat] calm ___:____:____:____:____:____:____: excitable
[Pot] weak ___:____:____:____:____:____:____: strong
[Act] hot ___:____:____:____:____:____:____: cold
[Act] active ___:____:____:____:____:____:____: passive
[Dya]** relaxed ___:____:____:____:____:____:____: tense
[Eva] pleasant ___:____:____:____:____:____:____: unpleasant
[Eva] dishonest ___:____:____:____:____:____:____: honest
[Act] slow ___:____:____:____:____:____:____: fast
[Eva] valuable ___:____:____:____:____:____:____: worthless
[Eva] healthy ___:____:____:____:____:____:____: sick
[Eva] ugly ___:____:____:____:____:____:____: beautiful
[Act] dull ___:____:____:____:____:____:____: sharp
[Cat]self-assertive ___:____:____:____:____:____:____: submissive
[Eva] bad ___:____:____:____:____:____:____: good

*From the Cattel personality inventory (Dyal)
**Added because of its relevance (Dyal)

PLEASE GO ON TO THE NEXT PAGE


APPENDIX 14

MY LEAST LIKED SELF

[Eva] worthless _____:________:________:________:______ valuable
[Act] sharp _____:________:________:________:________:______ dull
[Eva] dirty _____:________:________:________:________:______ clean
[Dyn] tense _____:________:________:________:________:______ relaxed
[Eva] beautiful _____:________:________:________:________:______ ugly
[Act] passive _____:________:________:________:________:______ active
[Pot] large _____:________:________:________:________:______ small
[Act] cold _____:________:________:________:________:______ hot
[Act] fast _____:________:________:________:________:______ slow
[Eva] sick _____:________:________:________:________:______ healthy
[Cat] adaptable _____:________:________:________:________:______ inflexible
[Pot] shallow _____:________:________:________:________:______ deep
[Eva] good _____:________:________:________:________:______ bad
[Cat] submissive _____:________:________:________:________:______ self-assertive
[Cat] excitable _____:________:________:________:________:______ calm
[Eva] fair _____:________:________:________:________:______ unfair
[Eva] sad _____:________:________:________:________:______ happy
[Pot] strong _____:________:________:________:________:______ weak
[Eva] unpleasant _____:________:________:________:________:______ pleasant
[Eva] honest _____:________:________:________:________:______ dishonest

PLEASE GO ON TO THE NEXT PAGE
### APPENDIX 15

#### MY IDEAL SELF

<table>
<thead>
<tr>
<th>Category</th>
<th>Trait</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Pot]</td>
<td>strong</td>
<td>weak</td>
</tr>
<tr>
<td>[Eva]</td>
<td>sick</td>
<td>healthy</td>
</tr>
<tr>
<td>[Cat]</td>
<td>adaptable</td>
<td>inflexible</td>
</tr>
<tr>
<td>[Cat]</td>
<td>calm</td>
<td>excitable</td>
</tr>
<tr>
<td>[Eva]</td>
<td>unpleasant</td>
<td>pleasant</td>
</tr>
<tr>
<td>[Act]</td>
<td>cold</td>
<td>hot</td>
</tr>
<tr>
<td>[Dya]</td>
<td>relaxed</td>
<td>tense</td>
</tr>
<tr>
<td>[Eva]</td>
<td>clean</td>
<td>dirty</td>
</tr>
<tr>
<td>[Eva]</td>
<td>good</td>
<td>bad</td>
</tr>
<tr>
<td>[Pot]</td>
<td>large</td>
<td>small</td>
</tr>
<tr>
<td>[Eva]</td>
<td>happy</td>
<td>sad</td>
</tr>
<tr>
<td>[Cat]</td>
<td>submissive</td>
<td>self-assertive</td>
</tr>
<tr>
<td>[Eva]</td>
<td>fair</td>
<td>unfair</td>
</tr>
<tr>
<td>[Eva]</td>
<td>ugly</td>
<td>beautiful</td>
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<tr>
<td>[Act]</td>
<td>active</td>
<td>passive</td>
</tr>
<tr>
<td>[Eva]</td>
<td>worthless</td>
<td>valuable</td>
</tr>
<tr>
<td>[Eva]</td>
<td>honest</td>
<td>dishonest</td>
</tr>
<tr>
<td>[Act]</td>
<td>dull</td>
<td>sharp</td>
</tr>
<tr>
<td>[Pot]</td>
<td>shallow</td>
<td>deep</td>
</tr>
<tr>
<td>[Act]</td>
<td>slow</td>
<td>fast</td>
</tr>
</tbody>
</table>
APPENDIX 16

People who have been to agencies sometimes find that, regardless of what they come about, there are changes in how the members of the family get along together. Would you say that since you started at the agency there has been any change for the better or for the worse in the way the members of your family: (check one column for each item.)

<table>
<thead>
<tr>
<th></th>
<th>BETTER</th>
<th>SAME</th>
<th>WORSE</th>
<th>NOT A PROBLEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talk over problems, listen to each other, share feelings</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Handle arguments and work out differences.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accept and help each other, pay attention to each other's needs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feel toward each other (how close and comfortable, how you enjoy each other)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How husband and wife get along sexually</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Get along in other ways</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(How? __________________________)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When people work on their problems at an agency, they sometimes find that there is a change in how they feel about those problems and the way they handle them. Would you say that you personally have noticed since then any change for the better or worse in:

The way you feel about your problems (how worried, overwhelmed, angry, confused, guilty, etc.) | BETTER | SAME | WORSE |
The way you understand your problems (what they are and who or what contributes to them) |        |      |       |
The kinds of ideas you have on what to do about your problems (what should or should not be tried) |        |      |       |
The way you work with others in handling problems (talking things over instead of fighting or avoiding, etc.) |        |      |       |

Since coming to the agency, have you actually...
Made any decisions on what to do about your problems? __ yes __ no
Taken any specific action on your problems? *yes* __ no

*If you have taken some action, did this turn out to...

____ help with your problem  ____ make things worse
____ make no difference  ____ can't tell yet
APPENDIX 17

Below are a variety of ways that one person may feel or behave in relation to another person.

Please consider each statement with reference to your present relationship with your counselor at this agency.

Mark each statement in the left margin, according to how strongly you feel that it is true, or not true, in this relationship. PLEASE MARK EVERY STATEMENT. Write in +3, +2, +1, or -1, -2, -3 to stand for the following answers:

+3: Yes, I strongly feel that it is true.
+2: Yes, I feel that it is true.
+1: Yes, I feel that it is probably true, or more true than untrue.
-1: No, I feel that it is probably untrue, or more untrue than true.
-2: No, I feel that it is not true.
-3: No, I strongly feel that it is not true.

1. He respects me as a person.
2. He wants to understand how I see things.
3. His interest in me depends on the things I say or do.
4. He is comfortable and at ease in our relationship.
5. He feels a true liking for me.
6. He may understand my words but he does not see the way I feel.
7. Whether I am feeling happy or unhappy with myself makes no real difference to the way he feels about me.
8. I feel that he puts on a role or front with me.
9. He is impatient with me.
10. He nearly always knows exactly what I mean.

11. Depending on my behavior, he has a better opinion of me sometimes than he has at other times.

12. I feel that he is real and genuine with me.

13. I feel appreciated by him.

14. He looks at what I do from his own point of view.

15. His feeling toward me doesn't depend on how I feel toward him.

16. It makes him uneasy when I ask or talk about certain things.

17. He is indifferent to me.

18. He usually senses or realizes what I am feeling.

19. He wants me to be a particular kind of person.

20. I nearly always feel that what he says expresses exactly what he is feeling and thinking as he says it.

21. He finds me rather dull and uninteresting.

22. His own attitudes toward some of the things I do or say prevent him from understanding me.

23. I can (or could) be openly critical or appreciative of him without really making him feel any differently about me.

24. He wants me to think that he likes me or understands me more than he really does.

25. He cares for me.

26. Sometimes he thinks that I feel a certain way, because that's the way he feels.

27. He likes certain things about me, and there are other things he does not like.

28. He does not avoid anything that is important for our relationship.

29. I feel that he disapproves of me.

30. He realizes what I mean even when I have difficulty in saying it.
31. His attitude toward me stays the same: he is not pleased with me sometimes and critical or disappointed at other times.

32. Sometimes he is not at all comfortable but we go on, outwardly ignoring it.

33. He just tolerates me.

34. He usually understands the whole of what I mean.

35. If I show that I am angry with him, he becomes hurt or angry with me too.

36. He expresses his true impressions and feelings with me.

37. He is friendly and warm with me.

38. He just takes no notice of some things that I think or feel

39. How much he likes or dislikes me is not altered by anything that I tell him about myself.

40. At times I sense that he is not aware of what he is really feeling with me.

41. I feel that he really values me.

42. He appreciates exactly how the things I experience feel to me.

43. He approves of some things I do, and plainly disapproves of others.

44. He is willing to express whatever is actually in his mind with me, including any feelings about himself or about me.

45. He doesn't like me for myself.

46. At times he thinks I feel a lot more strongly about a particular thing than I really do.

47. Whether I am in good spirits or feeling upset does not make him feel any more or less appreciative of me.

48. He is openly himself in our relationship.

49. I seem to irritate and bother him.

50. He does not realize how sensitive I am about some of the things we discuss.
Whether the ideas and feelings I express are "good" or "bad" seems to make no difference to his feelings toward me.

There are times when I feel that his outward response to me is quite different from the way he feels underneath.

At times he feels contempt for me.

He understands me.

Sometimes I am more worthwhile in his eyes than I am at other times.

I have not felt that he tries to hide anything from himself that he feels with me.

He is truly interested in me.

His response to me is usually so fixed and automatic that I don't really get through to him.

I don't think that anything I say or do really changes the way he feels toward me.

What he says to me often gives a wrong impression of his whole thought or feeling at the time.

He feels deep affection for me.

When I am hurt or upset he can recognize my feelings exactly, without becoming upset himself.

What other people think of me does (or would, if he knew) affect the way he feels toward me.

I believe he has feelings he does not tell me about that are causing difficulty in our relationship.
APPENDIX 18

PRETEST OF RELATIONSHIP INVENTORY

The original 64 item Barrett-Lennard Relationship Inventory and the 40 item revised version of the same instrument were pretested in a pilot study for their relative variability. Two groups of adult clients, who were seen by two separate field placement groups of second year social work students from the Adelphi University School of Social Work were the subjects for this pilot study. Both groups of client subjects were seen in individual one-to-one and/or family sessions for family related and individual adjustment problems.

The pilot study was conducted in the Spring of 1974. Student workers gave the relationship inventory to their clients in a sealed envelope with an enclosed stamped self-addressed envelope. Accompanying the inventory was a statement to the client that their responses would be held in confidence. Spaces were available for the client to note their sex and how many sessions they had with their worker.

The following chart demonstrates differences in mean and variance scores obtained by using the two different versions. While the consistently higher mean and variance scores for the 64 item version could represent differences between the two groups of students, it could also be a function of
differences in the instrument. Because the 64 item version appeared to generate scores that had greater freedom to vary, it was selected as the instrument that could have the potential of picking up a wider range of variance in subjects' perceptions of the 4 relationship factors.
### Pretest of Relationship Inventory

#### 40 Item Revised Version

<table>
<thead>
<tr>
<th>Relationship Factor</th>
<th>Mean</th>
<th>Variance</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empathy</td>
<td>23.00</td>
<td>43.83</td>
<td>6.62</td>
</tr>
<tr>
<td>Congruity</td>
<td>28.69</td>
<td>36.73</td>
<td>6.06</td>
</tr>
<tr>
<td>Regard</td>
<td>24.77</td>
<td>20.03</td>
<td>4.48</td>
</tr>
<tr>
<td>Unconditional positive regard</td>
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</tr>
<tr>
<td>Sum ECRU</td>
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<td>450.08</td>
<td>21.22</td>
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</tbody>
</table>

#### 64 Item Original Version

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<th>Mean</th>
<th>Variance</th>
<th>Standard Deviation</th>
</tr>
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<td>10.05</td>
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<tr>
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<td>36.19</td>
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<td>10.85</td>
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<tr>
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<td>72.52</td>
<td>8.52</td>
</tr>
<tr>
<td>Unconditional positive regard</td>
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<tr>
<td>Sum ECRU</td>
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<td>899.47</td>
<td>29.99</td>
</tr>
</tbody>
</table>

**N = 13**
Sex: 9 females, 4 males
Ages: \( \bar{x} = 33.78 \)

Number of sessions at which subject was tested \( \bar{x} = 10.76 \)

[Number of hours worker and client knew each other]

**N = 16**
Sex: 13 females, 3 males
Ages: \( \bar{x} = 36.06 \)

Number of sessions at which subject was tested \( \bar{x} = 15.88 \)

[Number of hours worker and client knew each other]
### APPENDIX 19

**RELATIONSHIP INVENTORY**

64 item forms

**SCORING SHEET**

**Type of relationship**

<table>
<thead>
<tr>
<th>Level of Regard</th>
<th>Emp. Understandg.</th>
<th>Uncond. of Regard</th>
<th>Congruence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Items</td>
<td>Answer</td>
<td>Positive Items</td>
<td>Answer</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
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<td>15</td>
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<td>44</td>
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Sum (for neg. items) -1 x Sum. Sub-total #2

Total Score: each scale

Grand Total: all scales
APPENDIX 20

RELIABILITY AND VALIDITY--RELATIONSHIP INVENTORY

Reliability was established by Barrett-Lennard with a sample of forty undergraduate students reporting on the perceived response of their parents. Test-retest correlations were .86 to .92 for subscores and .92 for the total score over a two to six week period. Using a sample of seventy-nine undergraduate students, Mills and Zytowski obtained correlations ranging from .80 to .86 on subscores. Responses were regarding the subjects' relationship with their mothers measured twice during a three week interval.

The process by which the Relationship Inventory was developed seems to ensure that it could be regarded as either positive or negative expressions of the variables it was designed to represent. Items were carefully selected as representing the operational expression of client-centered theory. A formal content validation procedure was performed by giving formal directions and definitions to five judges, who were all client-centered counselors. The judges then classified each item as either a positive or negative indicator of the variable in question. Neutral ratings were given to any item regarded irrelevant or ambiguous, and such items were eliminated.
Direct criterion-based checks have not been possible due to the absence of alternative established measures of theoretically equivalent dimensions.

The positive findings reported by Greene support the underlying theory. "As of December 1969, the inventory was used in seventy-two studies. Positive correlations have been reported between Relationship Inventory scores and such variables as judges' ratings and patient outcome. Regarding the correlations between the Inventory and other measures, it is important to bear in mind that the varying perspectives would not coincide since each is a reflection of a different frame of reference."
Appendix 21

THE DATA COLLECTION SYSTEM

Because there were twenty-three social workers in the study with a quota of five clients per worker, a potential was created for a maximum of 115 client subjects who, as a group, would need to be tested 345 times over the course of three testing periods should all workers fill their quota and all client subjects continue in treatment long enough to complete all research tasks. Workers were required to fill out a check list for each client who went as far as the fifth session which generated 115 more potential testings in addition to one questionnaire for each of the twenty-three workers to fill out once regarding their own professional background. Summing up the number of potential observations which the data collection system needed to handle, resulted in a potential 483 separate individual testings required for all of the subjects in the study. These testings needed to be timed to occur at predetermined moments for each case with little interference in the process that was being studied. Therefore, it was necessary for this researcher to devise an economical, unobtrusive data collection system that would accomplish this task and which would require a
minimum of supervision by one person.

To accomplish this purpose, a packet was designed by this researcher to contain all testing materials required for each individual worker-client pair along with full instructions to cover any eventuality. All material in each packet was stamped with an individual series of numbers that identified both the client and agency. All material in all packets used in Agency I was stamped with a 4-digit code ending in an odd number, all from Agency II had a 4-digit code ending in an even number, and all from Agency III had a 3-digit code.

Prior to the assignment of client subjects, workers filled out the questionnaire concerning their own professional background and were assigned a code number which they wrote on a space provided on the questionnaire. At the time that worker subjects were given their code numbers, beginning with the digits 0001 they were told that it would be necessary for them to use this code regularly throughout the data collection process as the means of identifying themselves and it would be used later to obtain personally their own clients' scores. In addition, workers were asked to note, on the professional background questionnaire, the first letter of their mother's first name and the first letter of their father's first name to be used in the event they forgot their code numbers. This regressive directive was included in
order to discourage worker subjects from forgetting their individual codes and as a back-up device to identify data. As it turned out, only four workers forgot their original individual codes and needed to revert to their parents' names instead. The purpose for employing a coding system to identify data rather than names, was to enable workers as well as clients to feel free to participate honestly without fear of their data resulting in any personal negative consequences.

The packet contained all testing materials. All pre-test material, along with instructions to the client (see Appendix 1) and a pen for the client were enclosed in a self-addressed stamped red envelope which was closed by a seal and clearly stamped "seal to be broken by client only." Attached to the envelope were final instructions to the worker regarding exactly how the envelope was to be presented (see Appendix 22).

The Relationship Inventory to be presented to the client at the end of the fifth session was enclosed in a yellow envelope along with instructions for the client taking the test and a pen. The self-addressed stamped envelope was closed with a seal and clearly stamped "seal to be broken by client only." There were final instructions for the worker attached to the envelope regarding exactly how the envelope was to be presented to the client. In addition, the
instructions attached to the yellow envelope asked the worker to indicate with an x or a checkmark (✓) if the worker was directly or indirectly attempting to influence the client's marital relationship (see Appendix 23).

All post-test material for all client subjects was enclosed in a green envelope along with instructions for the client (see Appendix 24A) and a pen. This green, stamped, self-addressed envelope was also closed with a seal and stamped "seal to be broken by client only." There were final instructions for the worker which were attached to the envelope regarding exactly how the envelope was to be presented to the client if the client was able to receive the green envelope in person (see Appendix 24). In the event that the client ended treatment in absence there was a larger manila envelope in the packet which contained a letter to the client requesting the client to complete the post-test material (see Appendix 25). The green envelope was then to be attached to the letter, put in the larger manila envelope, and mailed to the client.

The worker check list regarding aspects of the treatment was enclosed in a white self-addressed stamped envelope. It was also closed with a seal and clearly stamped "seal to be broken by worker only."

The red, yellow, green, and white envelopes were wrapped in the master instruction sheet and bound with a
rubber band. The exposed side of the master sheet was stamped "instructions." See Appendix 26 for a copy of the master instruction sheet. The original master instruction sheet was 8-1/2" x 14" to facilitate reading the print. The copy in this document was reduced in size.

The packet itself was a large case record size kraft envelope with a string tie. One side was printed with twelve numbered rows of lines for PSTS cases and twenty numbered rows of lines for CS cases. There were three printed columns titled "session number," "date," and "comments." This was to encourage the worker to relate to the packet regularly during the course of treatment and to facilitate keeping track of the sessions. It was hoped that the worker would be able to use the packet easily in conjunction with the case record and would associate it as a treatment tool. In addition, there was a space provided on the packet for the worker to record the name of the client.

In addition to contacts by workers who had specific questions, workers were contacted by mail and telephone at regular intervals throughout the data collection process. These contacts were composed of three basic communications. First, the workers were congratulated on how well the data collection process had begun or was progressing in their agency and in the other two as well. Second, they were asked if there were any questions and if an envelope was about due
to be given to a client. Third, they were asked to make certain that packets remained identified with the appropriate client and did not get mixed up.

For the worker and client: subjects in Agencies I and II, a flow chart was designed to keep track of the packets. Whenever a packet was assigned to a case, it accompanied the face sheet and was placed in the worker's mailbox to be received by the worker prior to the first in-person interview. A check mark was then placed in one of five boxes on the flow chart following the worker's name, which indicated that a packet had been assigned to that worker. Whenever testing material was returned because the client refused to participate or because the client did not meet final criteria or because a client ended treatment before the fifth session, the check mark was erased, preparing room for another.

In Agency III it was necessary to give each worker simply five packets to keep in their desk to be used with specific client subjects up to a maximum of five clients. If a worker needed more packets because several needed to be aborted, this researcher was contacted and more packets were mailed to the worker.

Because the items on the Relationship Inventory specifically referred to the worker as he or she, packets were designated as male or female with regard to the worker's sex. Therefore, female workers received "female packets" and
male workers received "male packets."

The purpose for choosing different colors for the envelopes was to facilitate easy identification by the worker. The second reason was based on an assumption that individuals tend to respond more attentively to material that is attractively colored. Following the same assumption, the marital adjustment test was printed on blue paper, the semantic differential was printed on yellow, the FSAA check list was printed on buff, and the remainder were printed on white paper.
APPENDIX 22

INSTRUCTIONS FOR WORKER

(RED ENVELOPE)

Please advise the client that as part of our ongoing program to increase the benefits of our services to clients, we are asking that he or she cooperate with us by filling out 3 questionnaires over the course of time that they are seen. (The client need not be told when the remaining two questionnaires will be given.)

Tell the client that the questionnaires are easy and quick to fill out and that their answers to the questions will be treated confidentially. If the client accepts, please thank them for their cooperation.

There is one requirement: The client must be willing to fill out this 10 minute questionnaire, WITHOUT YOUR ASSISTANCE, BEFORE HE OR SHE LEAVES THE BUILDING TODAY.

Tell the client that this envelope contains a questionnaire to fill out. A pen is provided for this purpose in the sealed red envelope. After completing it, they are to put the questionnaire back in the envelope, seal the envelope and drop it off at the reception desk for mailing. Instructions are enclosed in the envelope for the client.

Don't forget to write your code number on the envelope and remove these instructions before giving the envelope to the client.

If the client refuses to participate, write that on this red envelope before mailing back to me per instructions.
APPENDIX 23

INSTRUCTIONS FOR WORKER
(YELLOW ENVELOPE)

If the client has been given the red envelope and has had five sessions with you, give him or her this envelope as step 2. Remind the client of their earlier agreement to participate and that this is the next step. Again let the client know that their answers on the questionnaire will be treated confidentially.

The questionnaire, which will take about 5-10 minutes to finish, SHOULD BE FILLED OUT BEFORE THEY LEAVE THE BUILDING TODAY. A pen for the client is in the yellow envelope.

Tell the client that this envelope contains a questionnaire to fill out, WITHOUT YOUR ASSISTANCE. After completing it they are to put it back in the envelope, seal the envelope and drop it off at the reception desk for mailing.

Don't forget to write your code number on the envelope and remove these instructions. If the client refuses to participate further, please write that on this yellow envelope before mailing back to me per instructions.

If, in general, you are attempting to directly influence the client's marital relationship, indicate this by entering an X next to your code number. If, in general, you are attempting to indirectly influence the client's marital relationship, indicate this by entering a √ next to your code number. If generally there is no conscious attempt on your part to influence the client's marital relationship, simply enter your code number as usual on the yellow envelope.
APPENDIX 23A

SERVICE PROJECT

This is the second step in our project to increase the benefits of our services to you. Please answer the questions below and go on to the next page. When you have finished, put it in the yellow envelope, seal the envelope and drop it off at the reception desk for mailing. For your convenience there is a pen in the envelope. Your answers to the questions will be held in confidence and not even your counselor will know what answers you personally give.

***************

1. Date

2. How do you feel right now:
   Elated
   Happy
   Neutral (neither one way nor the other)
   Sad or blue
   Depressed

PLEASE GO ON TO THE NEXT PAGE
APPENDIX 24

INSTRUCTIONS FOR WORKER

(GREEN ENVELOPE)

If steps 1 and 2 have been completed, we have acquired some valuable knowledge. When the client completes the questionnaire in this envelope, we will have the keystone for making that knowledge useful.

Urge the client to accept the envelope and to fill out the questionnaire BEFORE HE OR SHE LEAVES THE BUILDING TODAY AND WITHOUT YOUR ASSISTANCE. Please thank the client for their helpful participation. You may again wish to remind them of the confidentiality of the questionnaire.

Tell the client that this envelope contains the last questionnaire to fill out. Again, there is a pen in the envelope which they can keep. After finishing the questionnaire, they are to put it back into the envelope, seal the envelope and drop it off at the reception desk for mailing.

Don't forget to write your code number on the envelope and to remove these instructions before giving the envelope to the client. If the client refuses to participate any further (unlikely if they have come this far), please write that on the green envelope before mailing back to me per instructions.
This is the last questionnaire that you will be given to fill out. We again thank you for being part of this project. Please fill out all of the attached forms. Even though you may feel that you have answered some of the questions, please answer all of the questions anyway.

After you have finished filling out this questionnaire, put it in the green envelope, seal the envelope and drop it off at the reception desk before leaving the building today. For your convenience, there is a pen in the envelope for you. As before, your answers will be held in confidence.

Date ___________________
APPENDIX 25

[Letter to clients who terminated in absence—printed on agency letterhead]

Dear

As you recall, while being seen at [Name of agency] you were asked to participate in our Service Project by filling out three questionnaires. Two of these were already given to you by your counselor and we again thank you for your helpful cooperation in filling them out. Your responses on these questionnaires will be most valuable to our research program which is to increase the benefits of services to our clients. In order to complete your part in this project, it is important to fill out the third and last questionnaire which is enclosed in the attached green envelope.

This last part will give us the information that we need in order to include your thoughts and feelings in the study. We are asking that you please fill out the attached forms, put them back in the green envelope and drop it in the mail as soon as possible. As before, your answers will treated confidentially.

Very truly yours,

Oscar Korte, CSW ACSW
APPENDIX 26

INSTRUCTIONS (For Planned Long-Term Cases)

In this packet there are red, yellow, green and white sealed envelopes. Below are the 4 step instructions for their use. If you follow the steps correctly, you will make the red, yellow, green and white envelopes disappear.

PLEASE READ THESE INSTRUCTIONS THROUGH CAREFULLY BEFORE BEGINNING. For the study to be a success, it is necessary to follow the 4 steps accurately. These instructions will be in each packet that will be in each study-case folder for you. When you have been able to complete all 4 steps with 4 clients, you will have filled your quota.

On the back of this packet is a chart to record the dates of each session that you have with the client through the 20th interview. This is for your convenience to help you remember to take the steps.

DO NOT GO ON TO A STEP WITHOUT FIRST COMPLEting THE PREVIOUS ONE.

Step 1 1st Interview: The RED envelope is to be given to the client at the conclusion of your 1st session with him or her. Attached to the envelope are instructions for presenting it to the client. Write your code number on the envelope. If, after you follow the instructions on the envelope, the client does not take the red envelope, you cannot complete this step. If you cannot complete this step, mail this envelope and all remaining envelopes in the packet back to me.

Step 2 5th Interview: The YELLOW envelope is to be given to the client at the conclusion of your 5th session with him or her. Instructions are attached to the envelope for its presentation to the client. Write your code number on the envelope. If, after you follow the instructions on the envelope, the client does not take the yellow envelope or you know that this is the last session, you cannot complete this step. If you cannot complete this step, mail this envelope and all remaining envelopes in the packet back to me.

Step 3 Step 3 can be completed in any one of 3 ways:

a. Give the client the GREEN envelope at the conclusion of the 20th session with you. Instructions for its presentation are attached to the envelope. Write your code number on the envelope.

b. If the client ends prior to the 20th session, The GREEN envelope is to be given to the client at that earlier termination session.

c. If, after completing step 2, the client has cancelled or broken 3 consecutive appointments with you or it is clear that you will no longer be seeing him or her, mail this envelope to the client and go on to step 4. Inside the packet there is a blank kraft envelope for mailing. Inside the kraft envelope there is a letter to the client for this purpose. Attach the letter to the green envelope before dropping it in the agency mail.

If you are unable to complete this step in any of the above 3 ways, mail this envelope and all remaining envelopes in the packet back to me.

Step 4 When the above 3 steps are completed in sequence, all of the colored envelopes will be gone. Now open the white envelope. It is for you.

IMPORTANT

If at anytime between step 1 and step 2 you know that you will no longer be seeing the client, mail all remaining envelopes back to me.

†If you are unable to complete all 4 steps with this client, notify that the packet was terminated and you need a new one. This also applies when the client drops out before the first session with you.

REMEM BER

In order for a client to qualify for the study there are the following criteria.

1. The client must be married, living with the spouse and able to read English.
2. The client must not be in the process of institutionalization.

If the client does not meet these criteria, send all of the envelopes back to me. Then notify that the client did not meet the criteria, the packet was terminated and you need a new one.

§ There is a large kraft envelope in this packet which is self addressed to me. It can be sent through the agency mail. Also, if you have any questions, please call me at (212) 523 1718 or at my answering service (212) 44-6853. Oscar Korte
May 2, 1973

Mr. Oscar Korte
86-36 Avon Street
Jamaica Estates, New York 11432

Dear Mr. Korte:

I was very interested to learn from Dr. Beck about your interest in utilizing certain sections of our client questionnaire in connection with your doctoral thesis. While we normally restrict use of this instrument and our change score procedures to Member Agencies, I am happy to give permission to you to use them in your proposed study, subject to a few basic conditions which I trust you will understand. Those that we consider essential are as follows:

1. We ask you to limit circulation of your questionnaire for the duration of your study to those individuals and agencies who need to see it in connection with recruitment of cooperating agencies, contacts with participating clients, or academic review of your project. If later you have requests from others to use your questionnaire, these requests should be directed to us if those involved wish to use the sections that came from our client questionnaire.

2. We ask that you limit circulation of the instructions for computing the change score to your academic advisors and to those whom you may wish to employ to do the actual work of computation. They should not be shared with participating agencies or with other individuals wishing to use your instrument without first seeking our permission.

3. We ask that you acknowledge in your thesis, and also in any subsequent publications about your findings, the source of those components which were provided by FSAA.

4. We ask that you share with us your findings insofar as they relate to the cross-validation of your outcome measures. (FSAA will agree to carry any Xeroxing expenses related to this sharing process.)

We would appreciate a letter from you confirming your acceptance of these understandings.

We are also glad to give you permission to cite in your thesis proposal our data on the relative power of various client and service characteristics to predict the change score. In addition, we will share with you as soon
as feasible any other findings that you may need in connection with your research, provided these are available without additional computer runs or staff work on analysis.

We in turn would appreciate seeing a copy of your thesis proposal when it is ready and a copy of your questionnaires. We will observe the same understandings in regard to use of your material that we are asking you to use in regard to ours.

In closing, I want to express on behalf of Dr. Beck and myself our enthusiasm over the prospect of your exploring in depth some of our most important findings about the importance of the counselor-client relationship. We also feel that, should our change score instrument prove to yield results consistent with your other outcome measures, this would be a fact of considerable utility to us.

Dr. Beck asks me to thank you for the references you sent and for the copy of the Barrett-Lennard questionnaire. We both wish you well in your study.

Sincerely yours,

Clark W. Blackburn
General Director
May 21, 1976

Mr. Oscar Korte, C.S.W.
86-36 Avon Street
Jamaica Estates, N.Y. 11432

Dear Mr. Korte:

I was delighted to learn last week about the findings of your thesis project and have shared the good word with others. We are all gratified by the relatively high levels of validation you obtained when you tested certain components of the FSAA change score against other outcome measures. As you will see from my response to the criticisms of Dr. Schuerman (copy enclosed), your findings in this regard will be very helpful to us and our Member Agencies since the use of the FSAA change score is being extended to numerous local follow-up studies.

In regard to your specific request for some adjustment in our original understanding, we are glad to give permission for you to cite the actual formula for the computation of the change score in your dissertation. We recognize that this permission represents a revision of the earlier understanding with Mr. Blackburn. Actually, the change presents no problem currently because the full instructions for the computation of the change score have now been published. (See pages 49-52 of How to Conduct a Client Follow-Up Study, by Dorothy Falls Beck and Mary Ann Jones, published by FSAA in 1974. When Mr. Blackburn wrote you on May 2, 1973, no decision had yet been made as to whether and how the change score procedures would be released.) We would appreciate your citing this later source, but have no objection to your citing in addition the earlier source that you actually used in your dissertation computations.

We very much appreciate your offer of a copy of your dissertation. FSAA would find this very useful indeed. Personally, I look forward to seeing it and want to study it in detail at the earliest date that is feasible for you. I will be glad to reciprocate by lending you for a time a copy of the Ohio student project report that I mentioned as soon as it is returned. Meanwhile, our congratulations on carrying through successfully this very difficult step in your career.

Sincerely yours,

Dorothy Falls Beck, Ph.D.
Director of Research

Encl.
APPENDIX 28

ON UNBIASED PERSONAL INDICES OF CHANGE

Louis J. Gerstman

One of the most common research designs in the social sciences involves assessing the effects of some intervention on the movement of a critical variable (CV). Typically the CV is measured before (CV1) and after (CV2) the intervention, with the expectation that CV2 will not exceed CV1 if there is no effect, and that CV2 will exceed CV1 if there is an effect. In this design a problem arises when one wishes to examine individual differences, since Ss typically vary widely in their CV1 scores, thereby necessitating some adjustment for differential possibilities of change.

A widely accepted adjustment stems from the World War II propaganda research of Hovland, Lumsdaine and Sheffield (HLS), in which changes are scaled according to "room for improvement (HLS, p. 292)." Thus an S's change index is expressed as

\[
\frac{CV2 - CV1}{ceiling - CV1} \tag{1}
\]

Assuming a ceiling score of 100, a change from 80 to 90 is presumed equivalent to a change from 60 to 80, both registered as a change index of 0.50, i.e., each S. has improved half
the distance possible for him.

Occasionally, however, a score changes for the worse, i.e., \( CV_2 < CV_1 \). In those cases HLS propose that the change index be computed as

\[
\frac{CV_2 - CV_1}{CV_1},
\]

thereby yielding a negative number "which measures the decrease as the proportion of maximum decrease possible (HLS, p. 285)." Employing this formula, an \( S \) who changes from 90 to 80 is no longer equivalent to an \( S \) who changes from 80 to 60. The former yields a change index of \(-0.11\), the latter a change index of \(-0.25\).

It is argued here that this treatment of negative changes introduces a computational bias, such that, in the absence of any actual change between \( CV_1 \) and \( CV_2 \), an average positive increase may be recorded. A simple correction for this bias is achieved by computing negative changes according to the formula

\[
\frac{CV_2 - CV_1}{\text{ceiling} - CV_2}.
\]

The difference between employing Formula (2) and Formula (3) for negative changes is aptly summarized in Table 1, using the four examples already cited. Let us assume there were only four \( Ss \) who, on the average, did not change between \( CV_1 \) and \( CV_2 \).
Table 1

<table>
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<th>Subject</th>
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<th>CV2</th>
<th>Change Index (1) + (2)</th>
<th>Change Index (1) + (3)</th>
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</tr>
<tr>
<td>S2</td>
<td>60</td>
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<td>0.50</td>
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</tr>
<tr>
<td>S3</td>
<td>90</td>
<td>80</td>
<td>-0.11</td>
<td>-0.50</td>
</tr>
<tr>
<td>S4</td>
<td>80</td>
<td>60</td>
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<td>-0.50</td>
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<td>77.5</td>
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</table>

Nonetheless, the HLS formulas yield an average change index of 16 per cent while the corrected change index yields an appropriate average change index of zero.

It can be shown by Monte Carlo methods that the size of the bias introduced by Formula 2 varies with the average value of CV1, becoming larger as CV1 approaches the ceiling, shrinking to zero as CV1 approaches the midpoint of CV, and becoming increasingly negative as CV1 approaches zero. For all values of CV1, replacing Formula 2 with Formula 3 eliminates the bias altogether.

In summary, unbiased indices of change can be achieved by computing the fraction

\[
\frac{CV2 - CV1}{\text{ceiling} - CV_{\text{min}}} \quad (4)
\]

where \( CV_{\text{min}} \) is the smaller of CV1 or CV2. Such an approach
eliminates the primacy of CV1, permitting the lower of the two CV measurements to specify the range of scale being used by the subject. Additionally, it eliminates the dubious assumption implicit in HLS that positive changes are ceiling-oriented whilst negative changes are floor-oriented.

Reference
Hovland, C.I., Lumsdaine, A.A., and Sheffield, F.D.
APPENDIX 29

ADJUSTED CHANGE SCORES VERSUS PARTIAL CORRELATIONS

Ordinarily if one wished to intercompare the relationships between two systems of measurement, when one of them is conditional upon a prior measurement, the standard approach would be to report partial correlations between the two systems having controlled for effects of the prior measurement. The reported partial correlations would be the single best descriptor of the relations of the group taken as a whole.

If, however, one knows in advance that one is dealing with a multivariate system, in which other variables potentially influence the cases in varying ways (e.g. sex of client, treatment plan, worker's experience, etc.) it is sensible to devise a new metric for that variable most closely linked to the prior measurement. The resulting scores will be individually adjusted as opposed to being adjusted in an average way.

In the partial correlation technique, individuals' post-test scores are adjusted by the average of the total sample pretest scores. The adjusted change scores, as used in this study, adjust for the effect of each individual's pretest score on the same individual's difference or change score. In partial r adjustments, everyone's post-test score is adjusted to their relative standing in the pre-score distribution.
But the adjustment is a consequent of a general equation applied to all cases. With the adjusted difference scores, the possibility is increased for subjects to assume a novel ranking not predictable from either the pre-scores or post-scores taken separately. The resulting change scores provide a set of numbers representing attitude change that varies for each subject independent of how the group behaved.
BIBLIOGRAPHY


Mullen, Edward J. "Differences in Worker Style in Casework." Social Casework, 50, 6 (June 1969), 347-353.


