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THE EFFECTS OF SIMULATED CLIENT-PSYCHOTHERAPIST VALUE SIMILARITY AND THERAPIST NONPOSSESSIVE WARMTH ON CLIENT TRUST AND ATTRIBUTION OF THERAPEUTIC EFFECTIVENESS

by Robert G. Hlasny

Thesis presented to the School of Graduate Studies of the University of Ottawa as partial fulfillment of the requirements for the degree of Doctor of Philosophy in Clinical Psychology

Ottawa, Canada, 1979

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CURRICULUM STUDIORUM

Robert G. Hlasny was born on November 26, 1950 in Athol, Massachusetts. He received his Bachelor of Arts degree with a major in Psychology from Boston College (Chestnut Hill, Massachusetts) in 1972. His Master of Arts degree in Clinical Psychology was obtained from Xavier University (Cincinnati, Ohio) in 1974.

ABSTRACT

In response to gaps in the literature, the present study used a simulated design to investigate the effects of (a) client-therapist terminal value similarity, with two levels (66 2/3% similar and 33 1/3% similar), and (b) therapist nonpossessive warmth, with two levels (high and low), on client trust for the therapist and client attribution of therapeutic effectiveness.

A total of 160 male undergraduate students served as subjects. For the main study, 80 subjects completed the terminal value portion of the Rokeach Value Survey. Two weeks later each subject was presented the simulated values of a psychotherapist whose values were high or low in similarity to the subject's own values, as well as a description of the therapist as high or low in nonpossessive warmth. He was then asked to rate his trust for the therapist and his expectation of the therapist's effectiveness, as well as his responses to a number of posttest questions.

The main statistical analysis consisted of two 2 X 2 analyses of variance. The results demonstrated main and interaction effects of value similarity and warmth on client trust. When either value similarity or warmth was low, the high condition of the other variable elicited higher trust ratings than the low condition. When either value

similarity or warmth was high, the addition of the other variable did not contribute further to client trust. These interaction effects were interpreted in terms of a ceiling effect wherein the necessary level of positive affect for an increase in trust was elicited by either value similarity or warmth, such that both stimuli together did not contribute further to this maximal level. In regard to client attribution of therapeutic effectiveness, main effects of both value similarity and warmth were demonstrated, with high conditions eliciting higher effectiveness ratings than low conditions.

The results are discussed in relation to their contribution to the clinical trust literature, the client-therapist attitudinal and value similarity literature, and the nonpossessive warmth literature.

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CHAPTER I

REVIEW OF THE LITERATURE

This section presents literature relevant to interpersonal trust, values in psychotherapy, and therapeutic nonpossessive warmth. Emphasis is placed on the client's trust of the therapist as it relates to the therapist's and client's attitudinal and value similarities and to the therapist's warmth. The review of the literature concludes with a statement of the problem and the research hypotheses.

Interpersonal Trust

In studying interpersonal trust in the communication process, Giffin (1967) defined trust as "reliance upon the communication behavior of another person in order to achieve a desired but uncertain objective in a risky situation" (p. 105). Communication in this context means for Giffin (1967) "the oral-aural-visual exchange of messages, including meaning conveyed by words and by means other than words" (p. 105), or more generally, for Weaver (1949), "all of the procedures by which one mind may affect another" (p. 95).

It appears that these definitions of communication

would describe many kinds of interpersonal encounter and would include in their description the interpersonal dynamics that take place in the psychotherapeutic process. It is on this assumption that the study of interpersonal trust in the communication process is considered relevant to the study of the client's trust in the therapeutic situation. While the trust literature is not neatly divided into the communication and psychotherapy contexts, it may be useful to make this division for the purpose of clarity.

A. The Communication Process

Giffin (1967) wrote of two kinds of interpersonal trust in the communication process: trust of a speaker by a listener, and trust of a listener by a speaker. As the client engages in both speaking and listening in the process of psychotherapy, it appears obvious that the client is subject to experiencing trust, or the lack of it, in both (or either) contexts.

Listener trust for a speaker. The trust that a listener can have for a speaker has been described by Hovland, Janis, and Kelley (1953), and they identified this kind of trust by the term "source credibility." They defined source credibility as the resultant value of "(1) the extent to which a communicator is perceived to be a source of valid assertions (his 'expertness'),

and (2) the degree of confidence in the communicator's intent to communicate the assertions he considers most valid (his 'trustworthiness')" (p. 21).

Several studies employing factor analysis have investigated the nature of the trust that the listener has for a speaker, and they have provided some support for the proposal of Hovland et al. (1953). Andersen (1961) developed and presented 22 bipolar adjective pairs to 130 undergraduate college students and requested them to score by semantic differential 16 living prominent individuals. The data were factor analyzed and rotated, and seven factors were found to account for 57% of the variance. The first factor was labeled "evaluative" and was loaded heavily by items related to intelligence, character, and goodwill. The second factor was labeled "dynamism" and was related to scales such as strong-weak, fast-slow, and aggressive-unaggressive.

A similar study of 91 undergraduate students scoring 83 pairs of bipolar adjectives was conducted by Berlo (1961). Students were asked to give semantic differential ratings of various public news sources (including popular people and newspapers), and the combined data were analyzed by four factor analyses. As reported by Berlo's co-worker, Lemert (1963), the three main factors were labeled "safety," "qualification," and "dynamism" according to the four factor analyses unanimously. The safety factor was

related to such scales as honest-dishonest, and openminded-closeminded; the qualification factor was related to scales such as trained-untrained and informed-uninformed; and the dynamism factor was represented by such adjective pairs as colorful-dull and extroverted-introverted.

Markham (1965) studied the ratings of 596 undergraduates on 55 bipolar adjective pairs of filmed newscasters who were unknown to the subjects. The data were factor analyzed and produced ten factors, the three strongest of which were labeled "reliable-logic-evaluative" (related to scales such as illogical-logical, and disorganized-organized), "activity" (e.g. uninteresting-interesting) and "nice-guy" (e.g. unsympathetic-sympathetic).

Other studies (McCroskey, 1966) have similarly used factor analysis of semantic differential ratings of speakers in regard to their source credibility and these studies have produced several factors. In his research review of these and other studies, Giffin (1967) perceived considerable overlap in the factors produced by different factor analyses, and he summarized and condensed the findings. His summary provides support for the existence of five factors which influence the trust that the listener has for a communicator: (1) expertness relevant to the topic under discussion, whether in the form of quantity of pertinent information, degree of ability or skill, or validity of judgment (descriptive of the expertness factor proposed by

Hovland et al., 1953); (2) reliability as an information source, whether perceived as dependability, predictability, or consistency (seemingly an element of the trustworthiness factor of Hovland et al., 1953); (3) intentions toward the listener, perceived by him as favorable or unfavorable (also an apparent element of Hovland et al.'s, 1953, trustworthiness factor); (4) dynamism of the speaker as perceived by the listener, i.e. communication behavior which appears more active than passive; and (5) personal attraction of the speaker for the listener, possibly operating without conscious perception by the listener and without his knowledge of its interaction with one or more of the four above factors. A sixth characteristic that did not receive clear factor-analytic support, but which was suggested by Giffin (1967), is the majority opinion of other listeners regarding the degree of trust that should be placed in the communicator.

Giffin later (1968) conducted factor analyses on 72 bipolar scales which had been shown to have some value in measuring source credibility, and he produced three factors of interpersonal trust, viz. expertness, character (reliability plus intentions), and dynamism, with "character" sometimes referred to as simply "reliability" (Giffin & Patton, 1971, 1974; Patton & Giffin, 1974). More recently, Giffin and McClearey (1978) conducted further factor analyses on a new collection of data and

produced essentially the same three factors of interpersonal trust, named reliability, activeness, and expertness.

In a recent study of subjects' reactions to the credibility of a source, Wright, Arbuthnot, and Silber (1977) found that two factors accounted for most of the variance explained by Giffin's original five factors. Their first factor, "evaluative disposition," included Giffin's reliability, intentions, and personal attractiveness factors, and their second factor, "expertness-activity disposition," consisted of items from Giffin's expertness and dynamism factors.

In the present study, Giffin's (1967) original five factors of trustworthiness will be used as a source of theoretical discussion, since they provide a more descriptive breakdown of Giffin's more recent factors (Giffin, 1968; Giffin & McClearey, 1978), and because they include the factors produced by other authors, e.g. Hovland et al. (1953), Wright, Arbuthnot, & Silber (1977).

Thus if the factor-analytic results of the above studies, as condensed by Giffin (1967), can be generalized to the ongoing communication process in therapy, the factors of expertness, reliability, intentions, dynamism, and attraction possibly represent therapist characteristics that influence the client's trust of the therapist, while the client fulfills the role of listener in relation to

the therapist's role as speaker.

Speaker trust for a listener. The second kind of interpersonal trust described by Giffin (1967) is the trust that a speaker can have for a listener. In the psychotherapeutic context this trust is portrayed by the trust that the client as speaker has for the therapist when the latter is listening.

In discussing the "unconditional positive regard" that the client-centered therapist has for his client, Rogers (1951) seems to attend to this issue. Rogers writes of the "sense of psychological safety" and "acceptance" that typify the atmosphere created by the therapist which allows the client to express himself openly and without fear of rejection. In Gibb's (1961) work with encounter groups he has also addressed the value of the client's trust for others when the client is in the speaking role and the others are listeners. Similar to Rogers (1951), Gibb (1961) used the term "perceived supportive climate" to refer to the atmosphere created by the listeners (as perceived by the client), allowing the client to trust them and express himself freely.

As no communication research seems to have clearly studied the kind of trust that a speaker can have for a listener, Giffin (1967) cited the above psychotherapy authors to provide pertinent literature. The next section presents the further treatment of trust in the psychotherapy

context, apart from Giffin's communication schema of the speaking and listening roles of the client and the therapist.

B. The Psychotherapy Process

It has been pointed out that the effectiveness of counseling is strongly influenced by the client's perception of the counselor's behavior (Strong, 1970; Strupp, Fox, & Lessler, 1969). More specifically, and following upon the findings of Hovland et al. (1953) in the communication context, several authors have indicated that the perception of the therapist by the client may be determined by those therapist behaviors suggestive of expertness, trustworthiness, and attractiveness (Barak & LaCrosse, 1975; Goldstein, Heller, & Sechrest, 1966; Strong, 1968). While the relatedness of trustworthiness and expertness has been suggested (Hovland et al., 1953), a recent study (Barak & LaCrosse, 1975) employing factor analysis of subjects' ratings of filmed therapy interviews provided evidence for the existence of the three distinct dimensions of perceived counselor behavior and suggested that "indeed, it seems justifiable to study the dimensions separately" (p. 474).

The literature specifically related to trust in psychotherapy includes both theoretical and experimental research. Interpersonal trust is considered by many psychotherapists an essential factor to successful therapy

(Johnson & Noonan, 1972; Rogers, 1951; Rotter, 1967; Tyler, 1965). One author has suggested that trust is a predictor of counseling success (Friedlander, 1970). The trust that a client has for his therapist or counselor is believed to effect the client's acceptance of the counselor's influence (Strong, 1968; Strong & Schmidt, 1970), the amount of risk that the client is willing to take in the therapeutic relationship (Deutsch, 1958, 1962), and other factors (Gibb, 1964). Jourard (1971a) has suggested that trust is a prerequisite for a person's willingness to self-disclose.

The nature of the relationship between trust and self-disclosure is not yet clearly defined, but a strong positive one appears to exist (Pearce & Sharp, 1973; Wheeless, 1978; Wheeless & Grotz, 1977), and several studies have indicated that trust increases subjects' willingness to self-disclose (Mellinger, 1956; Quinn, 1965; Schutte, 1974; Wheeless & Grotz, 1977).

No differences in self-disclosure between high- and low-trust subjects (as measured by the Rotter Interpersonal Trust Scale) have also been reported (McAllister & Kiesler, 1975; Vondracek & Marshall, 1971), but methodological factors in these studies may account for the nonsignificant results. In the Vondracek and Marshall (1971) study, there was a six month span between the measures of trust and disclosure, and questionnaires were distributed by mail,

possibly introducing a response set due to self-selection of respondents (Pearce & Sharp, 1973) and reducing the generalizability of the findings to situations without interpersonal contact. In the McAllister and Kiesler (1975) study the authors suggested that the trait of trust was possibly irrelevant to subjects' behavior (talking about themselves in relation to five personal topics) and was not evoked by the experimental situation. Furthermore, Rotter's Scale, used in both studies, measures the generalized level of trust in other people, rather than trust in specific individuals in specific situations, as measured in the former studies. Evidence for the lack of correlation (r=.02) between the two constructs of trust has been found (Wheeless & Grotz, 1977).

Of more relevance to the present research are the studies which have inventigated trust as a dependent variable, especially those conducted in a psychotherapy or psychotherapy analogue setting.

Trust as a dependent variable. Although not conducted in a psychotherapy setting, Paal (1975) studied the effects of three variables on subjects' attribution of trustworthiness: behavior of the actor (telling the truth or lying), situational expectancy for telling the truth (high, ambiguous, or low probability that an actor would tell the truth), and subjects' scores on the Rotter Interpersonal

Trust Scale. Attributed trustworthiness was derived from judges' ratings of subjects' paragraph descriptions of the actor's personality. High trust subjects were found to make more extreme and more confident trustworthy ratings than did low trust subjects.

In a counseling analogue study (Ryan, 1976), college age and elderly subjects were shown videotaped counseling interviews conducted by younger and older counselors. Subjects were required to rate counselor attractiveness, expertness, and trustworthiness on the Counselor Rating Form (Barak & LaCrosse, 1975). Older subjects were found to have significantly higher ratings of trustworthiness than younger subjects. Male subjects in general had more trust for the younger male counselors. Regardless of age, male subjects in general had more trust for their age peers than did female subjects.

In studying a different independent variable, Kaul and Schmidt (1971) conducted an analogue study in which 24 videotaped counseling interviews representing the four possible combinations of trustworthy and untrustworthy content and manner were shown to 32 undergraduate and graduate student subjects. Counselors portrayed as trustworthy in their content and manner of speech were clearly perceived as more trustworthy than those portrayed as untrustworthy. In addition a trustworthy manner of communication was found to be a more significant determinant of perceived counselor

trustworthiness than was a trustworthy content. Furthermore, providing a definition of trustworthiness prior to having subjects rate trustworthiness lowered their ratings slightly.

While the above two studies represented counseling situations, they did so by the use of videotaped interviews. The following two studies represented the counseling setting by placing subjects in actual interviews.

Johnson and Noonan (1972) employed pre-planned confederate responses of acceptance or rejection and self-disclosure reciprocation or non-reciprocation to statements made by naive subjects. Measuring trust by Likert scale ratings, results indicated that subjects trusted confederates more if the formers' self-disclosures were met with acceptance rather than rejection, and more if the subjects' self-disclosures were reciprocated by confederates rather than not reciprocated.

More recently, Smith (1974) studied the effects of the presence or absence of a desk between the client and therapist and of three levels of greeting response (no handshake, regular handshake, and Black handshake) on the Black client's trust for the Black counselor during the initial counseling interview. In general, no significant differences in trust were found between the two desk conditions or between the three levels of greeting response. There was a significant interaction of counselor and handshake effects on client

trust when trust was measured by the Jourard Questionnaire for Measuring Trust (completed by the client before and after the interview). There was also a significant interaction between counselor, handshake, and desk conditions, but only when trust was measured by the Counselor Global Rating (filled out by the counselor after the interview, requiring him to rate the client's trust in him). The Jourard Questionnaire, the Counselor Global Rating, and a third measure, the Carkhuff Helpee Self-Exploration in Interpersonal Processes Scale (completed by three trained raters watching the interviews) were found to be not significantly correlated in measuring the client's trust in the counselor.

C. Summary

Trust has been studied in the communication context and in the psychotherapy context. In the former setting, research usually investigates the characteristics of a speaker that lead to greater trust in him by his listeners. Factor analytic studies have indicated that such speaker characteristics as expertness, reliability, and dynamism lead to greater trust, and there is evidence that these characteristics represent therapist qualities that influence the client's trust for his therapist. In psychotherapy trust is commonly believed to have a facilitative influence on a number of processes, e.g. self-disclosure, therapeutic

success. Meanwhile, such factors as the therapist's age, his acceptance and reciprocation of the client's self-disclosures, and possibly handshake and desk conditions have been shown empirically to have some effect on the client's trust for his therapist. As other factors of theoretical relevance to client trust are investigated, a fuller understanding of this important therapeutic variable will be achieved. It is the position of this paper that both the values held by the therapist and client and the therapist's nonpossessive warmth constitute such variables which on an a priori basis have theoretical relevance to the client's trust of the therapist.

2. Values in Psychotherapy

According to Rokeach (1973), a value is defined as "an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence" (p. 5). Preferred modes of conduct, e.g. responsible, are means-oriented values and are called "instrumental values"; preferred end-states of existence, e.g. inner harmony, are ends-oriented and are called "terminal values" (Rokeach, 1973). A value system is then defined as "an enduring organization of beliefs concerning preferable modes of conduct or end-states of existence along a continuum of relative importance" (p. 5).

It seems to have been apparent for at least 30 years that values, whether those of the therapist, the client, or society, play a part in the therapeutic process. Green (1946) viewed psychotherapy historically as "an unsuccessful struggle to evaluate the role of social values" and emphasized the necessity for therapists to deal with values and to be fully aware of their involvements in this area (Peterson, 1970). While the importance of the psychotherapist's value system, expressed or unexpressed, has been emphasized by a number of authors, the significance of the relationship between the therapist's and client's value systems seems to have been studied less often. Yet it seems obvious that consideration of the therapist's values without regard for their relationship to the client's values is an incomplete treatment of the role of values in psychotherapy. In bridging the gap between the literature dealing with the therapist's values and that which addresses therapist-client value similarities, a brief overview is presented of the research which studies therapist-client attitude similarities.

A. Values of the Psychotherapist

Since the time of Green's (1946) article, the issue of values in psychotherapy has been often addressed with varying points of view. Some authors have encouraged the therapist to incorporate a value orientation into the

therapeutic process. For example, Taylor (1956) held that while the client's freedom of choice must be surely respected in the counseling process, there is a common view of what is preferable or good in most cultures which may serve as the ethical basis of counseling. She stated, "Rather than abandoning the social and moral aspects of counseling, we should strive to enlarge them, commensurate with the best and finest knowledge we have in the fields of psychology and ethics" (p. 181).

Others have focused on the need for the therapist to remain neutral in his value orientation during the therapy session, his function in this regard being primarily to non-judgmentally reflect the client's own values and/or help him to arrive at his own value orientation (Carey, 1975). This approach is perhaps best exemplified by Rogers' (1942) non-directive approach, especially in his earlier writings (Peterson, 1970).

More recently, however, a move toward viewing the therapist's values as having an inevitable influence on the client seems to have occurred (Arbuckle, 1958; Brammer & Shostrom, 1960; Browning & Peters, 1966; Viederman, 1976; Williamson, 1958). This inevitability of the influence, and the manner in which it occurs, is clearly expressed by Greben and Lesser (1976):

> In any form of ongoing therapy, the patient comes to know a great deal about the _values_ of the therapist. He begins to learn this with his knowledge of what theoretical position

> the therapist probably espouses . . ., in the reactions his therapist gives, or keeps from giving, to the things he does. All therapists enter the therapeutic situation with presuppositions, clinical and theoretical constructs, which subtly or not so subtly structure the general course of therapy (p. 627).

Lowe (1959) discussed four major value orientations of naturalism, culturalism, humanism, and theism and considered the therapist's choice of orientation an "ethical dilemma," as any counseling approach implies a value orientation and any orientation influences the client, even if unintentionally.

Walker (1956) contrasted Rogers' view of the nature of man with that of Freud, in that Rogers sees man as basically good, and capable of growing toward health, integration, and stability, where Freud negatively views man as fundamentally hostile, antisocial, and carnal. Walker pointed out that within the Freudian view, "the ultimate problem of psychotherapy becomes reconciliation in some workable fashion of the conflicting demands of a hostile and antisocial human nature with the needs of society" (p. 90). Psychotherapy for Rogers, in contrast, becomes the removal of obstacles to free the individual's natural drive toward growth, health, and adjustment. In response to Walker's (1956) article, Rogers (1957b) discussed his and Freud's philosophical concepts of the nature of man as similar to Walker's estimations, and he expressed agreement with Walker that the therapist's value

orientation or "philosophical substratum" has consequences in his psychotherapy. Rogers (1957b) commented,

> One cannot engage in psychotherapy without giving operational evidence of an underlying value orientation and view of human nature. It is definitely preferable, in my estimation, that such underlying views be open and explicit, rather than covert and implicit (p. 199).

Other authors have similarly emphasized that the therapist be aware that his personal values enter into the counseling process (Nadelson & Notman, 1977), even if hidden in such concepts as "mental health" (Ginsburg & Herma, 1953; Lowe, 1969). Thus there is apparent agreement among many authors that the values held by the psychotherapist exert an influence on the client.

While the above literature, as well as several process and outcome studies (Landfield & Nawas, 1964; Rosenthal, 1955; Seeman, Weitz, & Abramowitz, 1976), have considered the influence of the therapist's values on the client and even the influence of the client's values on therapeutic efficacy (Madell, 1976), the effects of the similarity of the therapist's and the client's values on variables in the therapeutic relationship have been investigated by few. Before turning to these studies of client-therapist value similarities, it seems appropriate to consider briefly the findings of a related area of research: that of client-therapist attitude similarities.

B. Client-Psychotherapist Attitude Similarities

A value was defined earlier as "an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence" (Rokeach, 1973, p. 5). Sounding somewhat similar, an attitude has been defined (Rokeach, 1969) as "an organization of several beliefs focused on a specific object (physical or social, concrete or abstract) or situation, predisposing one to respond in some preferential manner" (p. 159). At least three essential differences can be seen between an attitude and a value (Rokeach, 1969):

> While an attitude represents several beliefs focused on a specific object or situation, a value is a single belief that transcendentally guides actions and judgments across specific objects and situations, and beyond immediate goals to more ultimate end-states of existence. Moreover, a value . . . is an imperative to action, not only a belief about the preferable but also a preference for the preferable (Lovejoy, 1950). Finally, a value, unlike an attitude, is a standard or yardstick to guide actions, attitudes, comparisons, evaluations, and justifications of self and others (p. 160).

This distinction of attitudes and values, while emphasizing differences, at the same time implies sufficient similarity of the two concepts to render the following research relevant to the interest of the present study.

While considerable research has produced inconsistent or weak findings regarding the effects of many client-therapist similarities on therapeutic process or outcome

variables (Meltzoff & Kornreich, 1970; Ross, 1977), the area of client-therapist attitude similarities has yielded relatively consistent results. Good and Good (1972) had 87 undergraduate subjects fill out a 12-item Survey of Attitudes and presented them five days later with the same survey purportedly completed by potential counselors. These profiles represented either 17% or 83% agreement with the subjects' own attitudes, and they were asked to rate on a 7-point scale (a modification of Byrne's Interpersonal Judgment Scale) this hypothetical individual's level of sympathy for other people and their problems, understanding of other people and their problems, and effectiveness in helping other people with psychological problems. They were also required to rate their own willingness to discuss with the potential counselor their problems as related to academics, family relationships, members of the opposite sex, and emotional problems. On all seven response measures, subjects produced significantly more positive evaluations of the attitudinally similar potential counselors than of those who were dissimilar.

In a similar study Good (1975) presented a 10-item attitude survey to 47 college students and later presented the survey as filled out by a hypothetioal psychotherapist showing either 10% or 90% agreement with each subject's own profile. They then completed the Therapist Judgment Scale for the evaluation of their hypothetical psychotherapists.

In this study also, psychotherapists who were attitudinally similar to subjects were rated significantly higher for open-mindedness, ability to promote feelings of ease, understanding of people, effectiveness as a psychotherapist, personal attractiveness, and willingness to recommend to a friend. Similar results have been obtained with employees' evaluations of their supervisors (Good & Good, 1974) and with students' evaluations of their instructors (Charbassol, Docherty, & Hora, 1976; Good & Good, 1973a, 1973b; Levenson & LeUnes, 1974).

Mazer (1977) employed a similar design to that used by Good (1975), but instead asked subjects to play the role of clinical judges. Subjects first completed a scale of political radicalism and then heard a taped clinical interview (simulated) with a patient whose political attitudes were described as having high, moderate, or low similarity to their own. Attitudinally similar patients were seen as more emotionally mature, more motivated, and more self-observing when undergraduates served as judges, but not when professional mental health workers and graduate students were the judges. The importance of attitudinal similarity in clinical evaluation thus received limited support from this study.

In a study by Beutler, Johnson, Neville, Elkins, and Jobe (1975), client-therapist attitude similarity and therapist credibility were both studied as independent

variables, with attitude change and client improvement as dependent variables. Ninety-seven patients were assigned to six therapists classified as high-, medium-, and low-attitude similarity to the clients (as measured by the Situational Appraisal Inventory, Form J) and as high and low perceived credibility ("on the basis of a semantic-differential type index"). Improvement was measured by two ratings from each patient and each therapist. High client-therapist attitude similarity led to greater client improvement (but only when rated by low credibility therapists), while low client-therapist attitude similarity led to greater client attitude change. High therapist credibility fostered client improvement but did not influence attitude change. In this study the effects of client-therapist attitude similarity differed on the two dependent variables, and the influence of similarity on client trust were not measured.

While the results of Beutler et al. (1975) indicate mixed effects of attitude similarity, the above research by Good and Good (1972), Good (1975), and Mazer (1976) provide some evidence that attitude similarity between a client and therapist leads to a more positive evaluation of the therapist by the client (or of the client by the therapist).

The question remains, however, if greater trust in the therapist by the client results from such similarity.

Although not conducted in a clinical setting, a study by Panzer (1975) provided data relevant to this question by

looking at attitude similarity and source credibility, a concept similar to trust. This study investigated the effects of attitude similarity and intelligence level on source credibility and attraction. Thirty college students answered Byrne's Attitude Survey and were then given descriptions of sources with .25 or .75 attitudinal similarity (or no attitude information) to their own and with five conditions of intelligence level. Attitude similarity and intelligence level had significant effects on all measures of credibility and attraction. Of particular relevance to the present study, more attitudinally similar sources were rated as more credible than less similar sources.

One question of ultimate interest to the present study is whether value similarity between the client and therapist leads to greater trust of the therapist by the client. Since we now have some information regarding the effects of attitude similarity in clinical and other settings, let us now turn to the effects of value similarity on a client's trust for his therapist and on his attribution of therapeutic effectiveness.

C. Client-Psychotherapist Value Similarities

As the similarity of attitudes between therapist and client has been shown to have a positive effect on the evaluation of the therapist by the client, it seems likely that a similarity of values between these two individuals

might also produce such an influence. As suggested earlier, this expectation is based on the fact that attitudes and values, although distinguishable in several ways (Rokeach, 1969), are similar concepts.

In a non-clinical setting, Lemons (1975) studied the relationship of the value similarity between M.A. level counselor trainees and their supervisors to the trainees' satisfaction with the relationship and to the level of communication effectiveness within that relationship. Value similarity was measured by the correlation between the trainees' and supervisors' Value Survey profiles (completed before supervision began); level of communication effectiveness was measured by both supervisor and trainee evaluations on the Supervisory Interview Rating Scale (after 12 weeks of counseling practice and supervision); evaluation of overall satisfaction with the relationship was measured by the Relationship Inventory. Results showed low correlations of value similarity with both relationship satisfaction and level of communication effectiveness. Recommendations for further research included identifying task specific values which affect interpersonal relationships and then correlating these with demographic and personality variables of the participants in the supervision of counselor training.

In an earlier, somewhat similar study, Sikula (1970) looked at the relationship of instrumental and terminal

value similarity (Rokeach, 1973) in college roommates to their compatibility in living together. Based on a sample of 50 pairs of roommates who had stopped living together due to conflict and 50 compatible pairs, no significant differences were found between the compatible and incompatible pairs regarding their instrumental value system similarity. However, significant differences were found between the terminal value system similarity of compatible roommate pairs (mean rho correlation of .41) and that of incompatible pairs (.26). Thus compatibility of college roommates appears to be associated with a relatively higher degree of similarity of their terminal values.

Of more relevance to the present study, several studies have investigated value similarity in clinical settings. Pettit (1973) looked at the effects of the client's and therapist's values as well as the client's social class on duration in therapy. Using the Allport-Vernon-Lindzey Study of Values to measure value similarity, discrepancies between the patient's (outpatients) and therapist's values had no significant effects on duration in therapy. The meaning of these results in unclear, however, since duration in therapy may be associated with relative therapeutic success or failure. As suggested by the author, a more meaningful outcome measure, e.g. judges' ratings of improvement, might have yielded significant results.

Insignificant effects were also found by Bleyle (1973),

who studied the influence of client-counselor value similarity (measured by the Study of Values) on clients' self-concept change (measured by the Tennessee Self-Concept Scale) after brief counseling, and on clients' perception of empathy, warmth, and genuineness in the counselor (measured by the Person-to-Person Relationship Scale). Based on a sample of 34 counselors in training and 57 clients, no significant differences were found between high- and low-value similarity groups on any of the dependent measures. While no changes in self-concept were detected by the Tennessee Self-Concept Scale, it is wondered what other more subtle or more specific changes in personality might have occurred during brief counseling to which such a gross measure of self-concept was insensitive. Furthermore, in both the Pettit (1973) and Bleyle (1973) studies, it is possible that the likelihood of significant effects was decreased by the global nature of the "values" measured by the Allport-Vernon Lindzey Study of Values.

Other studies of client-therapist value similarity have yielded positive results. Welkowitz, Cohen, and Ortmeyer (1967) were interested primarily in movement toward value similarity in ongoing therapist-client dyads, using 38 therapists and 44 clients. One of their findings was that therapists with values similar to their clients (measured by the Morris (1956) Ways to Live Scale and the Strong Vocational Interest Blank) subjectively evaluated their

clients as significantly more improved than did therapists with values dissimilar to their clients. Another study (Schonfield, Stone, Hoehn-Saric, Imber, & Pande, 1969) also found such a positive correlation between the "convergence" of clients' and therapists' opinions concerning appropriate psychotherapy behavior and degree of client improvement.

More recently, Martini (1978) studied the effects of client-therapist value similarity (using the Rokeach Value Survey) and therapeutic orientation (Relationship and Behavioral) on therapist ratings of client improvement. Conducted in both in vivo (62 clients, 7 therapists) and analogue (89 "clients," 89 therapists) therapy settings, results supported the conclusion that client-therapist value similarity is significantly related to therapist ratings of client improvement, regardless of therapeutic orientation.

Of greater significance to the present study, however, is research which has investigated the client's rather than the therapist's response to client-therapist value similarity.

Using 13 graduate student therapists and 13 clients as subjects, Beutler, Pollack, & Jobe (1978) studied the effects of patient-therapist value similarity, patient acceptance of therapist values, and therapist acceptance of client values on three client-rated measures of improvement. Value similarity and value acceptance were measured by a

series of questionnaires developed by the authors which "assessed values relative to others' approval, the threatening nature of the world, God, Communism, Christianity, social laws, and premarital sexual behavior" (p. 198). Improvement was assessed after 12 therapy sessions by a patient questionnaire designed to measure satisfaction with therapy, satisfaction with the therapist, and global improvement (Wilson, Morton, & Swanson, 1971). Findings included a significant correlation ($r = .76$, $p < .01$) between global improvement and patients' acquisition of therapists' values in the seven areas. Apparently based on the measure of satisfaction with the therapist, the authors concluded that "the patient's attitude toward the therapist's values seems more strongly related to the development of trust and attraction" than does the therapist's attitude toward the patient's values.

Tessler (1975) studied the effects of client-therapist value similarity (as measured by the Morris Ways to Live Scale), therapist experience, and therapist formality on the client's relationship-centered satisfaction and on his problem-centered satisfaction (as measured by a "reaction form" completed by subjects, with seven items for each kind of satisfaction). Ninety-six university freshman women were each seen for a simulated initial therapy session by the same male therapist, and value similarity was manipulated by bogus information indicating that the therapist had

filled out the Ways to Live Scale in a manner very similar or very dissimilar to the subject. The scale consisted of five paragraphs describing different conceptions of what it means to lead a meaningful life and required subjects to rate the extent to which they personally liked each conception on a 7-point scale. Results indicated significant main effects of value similarity and formality on the client's relationship-centered satisfaction and a significant effect of therapist experience on problem-centered satisfaction. Specifically, relationship-centered satisfaction was significantly greater when subjects perceived themselves as more similar to the counselor.

Another study which has suggested a positive effect of value similarity in a counseling situation is that by Shotland (1968). In this study the median correlation between the terminal value rankings (measured by Rokeach Value Survey) of clients terminating counseling after their first interview and their counselors was .37. This correlation was significantly different from .60, the median correlation between the terminal value rankings of clients continuing beyond the first session and their counselors. These correlations were also calculated between the instrumental values of terminating clients and their counselors (.25), and between continuing clients and their counselors (.26). As these correlations were not significantly different from each other, this study provided evidence that client-

counselor terminal, but not instrumental, value similarity has a positive influence on continuation in counseling. As mentioned earlier in regard to Pettit's (1973) study, the reasons for continuation are left unclear from these results.

Thus while some studies have indicated an insignificant effect of client-therapist value similarity on certain aspects of therapy, i.e. therapy duration, client self-concept change, other studies have shown that client-therapist value similarity is associated with client improvement, relationship-centered satisfaction, and continuation in therapy.

It is postulated that there are two other areas of the therapeutic relationship that might be effected positively by client-therapist value similarity: the client's trust for his therapist and the client's attribution of the effectiveness of therapy.

Value similarity and client trust. In describing situations which involve one person's trust for another, Giffin (1967) commented that "no matter how small, there is inherent in the concept of trust at least some element of risk" (p. 105) and that this risk is taken by the trusting person in order to achieve some goal. Essential to the concept of risk seems to be the element of chance or unpredictability in relation to the attainment of the person's goal. In the context of psychotherapy this goal of the trusting person, i.e. the client, would obviously be

success in achieving the personality or behavioral changes for which the client came to therapy. It would appear that a client whose values are similar to those of his therapist should experience less risk while working toward his goal of therapeutic success, because, knowing that his therapist's values are like his own, he should perceive less the element of unpredictability (the unknown). With this reduction in risk it would seem easier to trust his therapist. Therefore, it is hypothesized that the client with more similar values to those of his therapist should trust his therapist more than a client with dissimilar values.

As a second line of reasoning, an early study by Smith (1957) revealed that subjects' acceptance of others is at least partially determined by the extent to which their values are similar. Using 28 university students (16 men, 12 women), the author presented each subject with the values (measured by the Revised Allport-Vernon Scale of Values) of two other people, simulated as similar and dissimilar to his own values. Subjects were then asked to rate on graphic scales their willingness to associate with each of them in (a) a social (leisure-time) activity, and (b) a work activity. Subjects were found to rate those with similar values significantly higher than those with dissimilar values on both measures of acceptance. With some extrapolation, it seems reasonable that if individuals are more accepting of value-similar others as social and work

associates than of value-dissimilar others, they might also have more trust for those with similar values since close relationships seem to be characterized by trust.

Finally, Giffin (1967) wrote of five factors, described earlier, which influence an individual's trust for a communicator. Briefly stated, they are: (1) expertness relevant to the topic of discussion; (2) reliability as an information source; (3) intentions toward the listener; (4) dynamism; and (5) personal attraction of the speaker for the listener. It appears that a client might make judgments (implicitly or explicitly) of the above qualities in his therapist based on a knowledge of their value similarity, and, as a result, trust that therapist to a greater or lesser extent.

More specifically, it seems reasonable that a client whose values are similar to those of his therapist should perceive the therapist as more reliable or predictable on the basis of "knowing" or understanding the values that they share. An assumption of the therapist's dynamism might result from the client's perception of their similarity, if dynamism (or activity in communication) is associated with having much in common or "knowing" each other well. Furthermore the client should perceive the therapist's good intentions and personal attraction for him according to the priciples of Byrne's (1971) model of attraction. Bryne (1971) proposed that attraction to others occurs in pro-

portion to the degree of their reinforcing capacity, and that attitudinally similar individuals tend to be reinforcing to each other (Byrne & Nelson, 1965). If value similarity functions comparably to attitude similarity, then a therapist with similar values to his client's values should be perceived as attractive and as attracted to the client. It logically follows that the client's perception of the therapist's attraction to him could lead to his perception of the therapist's good intentions toward him.

The hypothesis that client-therapist value similarity should elicit client trust for the therapist gains some indirect support from the study by Panzer (1975) cited earlier in which attitudinally similar sources were rated as more credible by subjects than attitudinally dissimilar sources. Yet this study investigated the effects of attitude rather than value similarity on source credibility, a more narrowly defined concept than trust. Furthermore it was not conducted in a clinical setting.

In the present study, based on the theoretical grounds presented above, as well as on the supportive research findings, it is hypothesized that client-therapist value similarity leads to the client's greater trust for the therapist.

Value similarity and client attribution of therapeutic effectiveness. As mentioned more briefly above, Byrne (1971) explained interpersonal attraction in terms of a reinforce-

ment-affect model. He proposed that people are attracted to other people when the latter are rewarding and become associated with the formers' good feelings. One way in which others may become rewarding is if they are attitudinally similar to the individual. This similarity provides consensual validation to the person, resulting in a positive affect which is associated with the other person. As a result that person is perceived as reinforcing and is evaluated positively (Byrne & Clore, 1970).

Since, as described earlier, the concepts of value and attitude are comparable in several ways, it appears that interpersonal value similarity, like attitude similarity, should lead to a person's positive affective association with the other person. On the basis of this assumption it seems that a therapist with similar values to those of his client should be evaluated more positively, i.e. as a more effective therapist, than one with dissimilar values to those of his client.

Previous research (Good & Good, 1972; Good, 1975) has demonstrated that clients (simulated) evaluate an attitudinally similar therapist or potential counselor more positively than an attitudinally dissimilar one for therapeutic effectiveness and for other qualities. However, no research has specifically investigated the effects of client-therapist value similarity on client attribution of therapeutic effectiveness.

D. Summary

The significance of the therapist's values in psychotherapy seems widely accepted, while the relationship between the client's and therapist's values has been studied less often. In a related area of research, clients who are attitudinally similar to their therapists tend to rate them more positively on several dimensions. Since attitudes are somewhat comparable to values, it seems likely that value similarity between a client and his therapist would also produce positive interpersonal effects. This hypothesis has received some experimental support, although not without exceptions. Yet the effects of client-therapist value similarity on the particular variables of client trust and client attribution of therapeutic effectiveness have not been studied in the literature. Based on several theoretical reasons related to the nature of value similarity and trust, as well as on the results of several studies, it appears that client-therapist value similarity would have a positive influence on the client's trust for his therapist and on the client's attribution of therapeutic effectiveness.

Let us now turn to another variable in psychotherapy that influences the interpersonal process and that, according to the position of this paper, might influence client trust and client attribution of therapeutic effectiveness: the therapist's nonpossessive warmth.

3. Therapeutic Nonpossessive Warmth

In a now classic article, Carl Rogers (1957a) presented what he described as the "necessary and sufficient conditions of therapeutic personality change" (p. 97). While the three therapeutic conditions of nonpossessive warmth, accurate empathic understanding, and genuineness (authenticity or congruence) are strongly related and interdependent (Barrow, 1977; Rogers, 1959), they can be defined individually. The present study is interested in the first of these.

A. Definition and Reasons for Effectiveness

Nonpossessive warmth, also called unconditional positive regard (Standal, 1954), is a nonjudgmental and caring acceptance of the person in his uniqueness, with all of his experiences, regardless of their nature. It is described as

> a warm caring for the client, a caring which is not possessive, which demands no personal gratification. It is an atmosphere which simply demonstrates 'I care'; not 'I care for you *if* you behave thus and so' . . . It involves as much feeling of acceptance for the client's expression of negative, 'bad,' painful, fearful, and abnormal feelings as for his expression of 'good,' positive, mature, confident and social feelings. It involves an acceptance of and a caring for the client as a *separate* person, with permission for him to have his own feelings and experiences, and to find his own meanings in them (Rogers, 1961, p. 283).

In further defining the concept, Rogers pointed out (1957a) that the presence or absence of unconditional positive regard

is not absolute but a matter of degree. As measured by a Q sort, the therapist might be said to be experiencing warmth to the extent that he and a set of judges sort items expressing warmth as characteristic of the relationship. Examples of such items include "I feel neither approval nor disapproval of the client and his statements - simply acceptance."; "I feel warmly toward the client - toward his weaknesses as well as his potentialities."; "I am not inclined to pass judgment on what the client tells me" (Rogers, 1957a, p. 98). Thus Rogers presented the concept of nonpossessive warmth not only as an intuitively felt personal experience, but also as a measurable entity to be studied in the clinical setting.

Other authors have also attempted to specify the elements that are essential to nonpossessive warmth. According to Raush and Bordin (1957), three essential components of warmth lie in the person's commitment, his effort to understand, and his spontaneity. In further elaborating the nature of warmth, Truax and Mitchell (1971) emphasized the significance of the intensity, the intimacy, and the lack of distance in the relationship characterized by warmth. They also emphasized its active, responsive nature in referring to nonpossessive warmth as "a warmly receptive nondominating attitude" and as "an outgoing positive action involving active personal participation" (p. 316).

According to Meador and Rogers (1973), the value of the

therapist's warmth in the therapeutic relationship seems to lie essentially in its effects on the client's greater acceptance of his own experiencing. When the therapist's warmth is combined with his empathic understanding of the client, a therapeutic atmosphere is created in which the client is increasingly able to become aware of and accept parts of his experience which he previously had denied or distorted because of their incongruence with his self-concept. The therapist's nonpossessive warmth particularly seems to contribute a sense of safety to this climate so that the client is more willing to take the risk of allowing these threatening experiences into awareness. Thus the client develops the ability to verbalize previously unallowable feelings, and he gains verification from the therapist's accurate understanding as well as positive acceptance of his new, changing self (Meador & Rogers, 1973).

B. Effects in Psychotherapy

The positive relationship between client change and minimal levels of therapists' nonpossessive warmth, accurate empathic understanding, and genuineness has been described theoretically (Rogers, 1957a, 1961) and demonstrated experimentally in a profuse body of literature (Barrett-Lennard, 1962; Halkides, 1958; Rogers, 1962; Truax & Carkhuff, 1967; Rogers, Gendlin, Kiesler, & Truax, 1967). As an example of this early research, in his review of some

of the findings of a five-year research program conducted by Carl R. Rogers, Eugene T. Gendlin, and Charles B. Truax at Mendota State Hospital, Truax (1963) reported a study which compared levels of unconditional positive regard in successful and unsuccessful therapists. Using a scale developed (Truax, 1962b) to measure the degree of unconditional positive regard, 358 tape recorded samples of psychotherapy from every fifth interview with 14 schizophrenic patients were rated by trained judges. Therapists of the more improved cases were significantly and consistently rated higher in unconditional positive regard than those of unimproved or failure cases. The criteria for success or failure in this study were not reported.

Without attempting to review further the earlier work that was done in the area, much of which is reviewed elsewhere (Truax & Carkhuff, 1964; Truax & Mitchell, 1971), some of the more recent research is presented as a sample of the extensive evidence which substantiates the effectiveness of nonpossessive warmth in psychotherapy.

More recent research. In attempting to determine if a positive client perception of the therapist related to successful therapy outcome, Bent, Putnam, Kiesler, and Nowicki (1976) administered a questionnaire to 93 clients seen over a 1-year period by therapists made up of psychological interns, psychiatric residents, and social work trainees. Comparing clients who were very satisfied with

therapy with those who were very dissatisfied, significant differences indicated that the former group described their therapists as warmer, more likable, more active, and more involved. They also viewed their therapy as having a more generalized and noticeable effect on their behavior. Validation of these clients' descriptions with external measures of these therapist qualities or behavioral changes was not done in this study.

Studying 20 therapists (eight clinical psychologists, seven social workers, five psychiatrists) with a mean of 10.5 years of experience, Hayden (1975) compared the verbal and therapeutic styles of high- versus low-effective therapists. Therapeutic effectiveness was measured by ratings of each therapist by the 19 other subject therapists (who had worked together professionally for at least three years and purportedly were familiar with each other's therapeutic abilities) on an 11-point bipolar scale ranging from Most Effective to Least Effective. Three of the 10 dependent variables were empathy, positive regard, and genuineness, as measured by the ratings of three trained judges on the scales developed by Truax and Carkhuff (1967). These ratings were based on audiotapes of the subjects' therapeutic interventions which had been recorded while subjects themselves had listened to audiotapes of clients' comments in therapy sessions. Results included significant positive correlations between therapist effectiveness and

therapist positive regard, as well as between therapist experience level and positive regard. The validity of these results seems somewhat limited by the fact that the therapists' interventions were not taken from real therapy sessions. Also, the accuracy of "informed peer" ratings of therapeutic effectiveness is questionable due to an obvious vulnerability to personal bias.

Schauble and Pierce (1974) also investigated therapist (as well as client) characteristics that correlated with successful therapeutic outcome, as measured by changes in Minnesota Multiphasic Personality Inventory (MMPI) profile analysis for 41 clients. Therapist dimensions of empathy, positive regard, genuineness, and concreteness were measured by the Truax and Carkhuff scales completed by blind raters. The levels of positive regard (as well as the other therapeutic conditions) exhibited by successful therapists were significantly higher than those of unsuccessful therapists.

In addition to studies of the above type, which more globally looked at therapist nonpossessive warmth in relation to such factors as therapeutic outcome or the therapeutic relationship (Johnson, 1971; O'Mahoney, 1973), other studies have investigated the relationship of warmth to specific therapeutic factors such as patient self-exploration (Altman, 1977), speech duration (Staples & Sloane, 1976), or receptivity and attraction (Haugen & Edwards, 1976).

Morris and Suckerman (1974a, 1974b) compared the effectiveness of systematic desensitization on snake-phobic women when conducted by warm versus cold therapists. In the use of both live (1974a) and automated (1974b) desensitization procedures, therapist warmth (as measured by judges' ratings of therapists' voice quality) was found to play a significant role in effecting positive behavior changes. Furthermore, significant differences in the two groups' improvement were maintained at the three-week follow-up evaluation.

It should be noted that findings have also been reported which did not support the positive influence of therapist warmth. In a study by Truax, Wargo, Frank, Imber, Battle, Hoehn-Saric, Nash, and Stone (1966), the authors attempted to cross-validate the previous research suggesting that the levels of the therapist's empathy, warmth, and genuineness were causally related to the extent of patient improvement or deterioration. Forty neurotic outpatients were assigned to four resident psychiatrists for four months of at least weekly therapy, and audiotapes of therapy were rated for levels of the three facilitative conditions by four trained undergraduate raters, using the scales developed by Truax (1961, 1962a, 1962b). Results indicated that patients who received the highest levels of the three conditions in combination showed significantly greater overall improvement on two measures (the Phipps Psychiatric Clinic "patient global improvement scale" completed separately

by the therapist and by the patient). No significant differences were found between the high- and low-facilitative conditions groups on three specific measures of improvement (the Phipps Psychiatric Clinic "discomfort scale" filled out by the patient, "social effectiveness ratings" by a research interviewer, and the "target symptom improvement scale" completed by the patient). Of more significance to the present study, when the effects of warmth, genuineness, and empathy were analyzed separately, only warmth tended to have no effect or a negative effect on improvement. Warmth was also negatively related to genuineness and empathy. Citing another study which indicated a negative correlation of warmth and empathy to genuineness (Truax, Carkhuff, & Kodman, 1965), the authors suggested that the three conditions, which are usually highly intercorrelated, can vary independently in different samples of therapists and that patient outcome is best predicted by whichever two conditions are most closely related to each other. Although not emphasized, the authors in this study reported that the inter-rater reliabilities for warmth (.59), empathy (.63), and genuineness (.60) were "unusually low in comparison to other studies" (p. 396). The accuracy of their manipulations therefore seems questionable.

In a more recent study which suggested negative therapeutic effects of warmth, Rosenthal, Hung, and Kelley (1977) were interested (in Experiment 1) in the effects of

clients' perceptions of the therapist as "warm" or "businesslike" on avoidance and fear of snakes in 18 (16 female and two male) snake-phobic clients. For half the clients the interview (conducted prior to the 20-minute therapeutic symbolic modeling film) was conducted in a very warm, friendly, accepting manner; for the other half the interview was conducted in a more cold, stern, businesslike manner. The manipulation was considered effective on the basis of significant differences between the two groups in their ratings of the therapists' warmth. Both following the warmth manipulation and following the therapy film (held constant in the two groups), clients completed Behavioral Avoidance Tests (including a checklist of 20 hierarchically arranged levels of snake avoidance) and a Fear Rating (a 10-point rating scale from "very comfortable" to "very terrified"). While the degree of warmth had no effect on the post-interview and post-therapy measures of snake avoidance, the clients in the cold condition reported significantly less fear than those in the warm condition on either the post-interview or the post-therapy assessment. (The results presented in the text conflict with those indicated in the table). The authors interpreted the findings as suggesting that the warm therapist was perceived as tolerant of complaint, thereby confirming clients' fears. In this study the manipulation of warmth, while perceived by clients, was not measured by the commonly used Truax

(1962b) scale, and it is possible that the negative findings might be attributable to this inconsistency. For example, the "warmth" manipulated in this study might not have been of the same nonpossessive nature as that described by Rogers (1961), and might have influenced clients differently. Furthermore, the generalizability of the results regarding warmth seems quite limited by the use of a very specific type of therapy with primarily female clients.

Thus, although negative effects of therapist warmth have been reported in two studies, it is clear that the positive therapeutic effects of therapist warmth typify the warmth literature. This trend in the research findings seems to justify the further investigation of variables in therapy that are influenced by the therapist's nonpossessive warmth.

Nonpossessive warmth and client trust. It was stated earlier that it would be reasonable for clients to make judgments of the therapist's expertness, reliability, intentions, dynamism, and attraction based on their value similarity and to trust that therapist accordingly as a result. It seems reasonable that elements of the therapist's warmth, like value similarity, might influence the client's perception of the following five elements that constitute trust: (1) expertness relevant to the topic of discussion; (2) reliability as an information source; (3) intentions toward the listener; (4) dynamism; and (5) personal attraction of the speaker for the listener.

Some of the components of warmth described earlier were the person's commitment, his effort to understand, and his spontaneity (Raush & Bordin, 1957); the intensity of the relationship, its intimacy, its lack of distance, and its active, responsive nature (Truax & Mitchell, 1971); and its contribution of a sense of safety to the therapeutic climate, allowing the client to take the risk of accepting his experience without denial or distortion (Meador & Rogers, 1973).

It appears reasonable for a client whose therapist is nonpossessively warm to make a judgment of the therapist's expertness based on the latter's commitment and his effort to understand. A judgment of the therapist's good intentions should similarly result from the therapist characteristics of commitment and effort to understand. The client should perceive dynamism as a result of the therapist's spontaneity and the active, responsive nature of the relationship. Finally, the client's perception of the therapist's personal attraction to him might stem from the intensity, the intimacy, and the lack of distance in the relationship.

As another link of therapist warmth to client trust, the climate of safety created by the therapist's nonpossessive warmth (Meador & Rogers, 1973) seems to relate directly to the experience of trust. If, as a result of the therapist's warmth, the client feels safe enough to take the risk of

allowing threatening experiences into awareness, one could conclude that warmth has elicited the client's trust for the therapist, since trust would seem to be a prerequisite for risk-taking. Furthermore there is evidence that the self-acceptance that the client gains from the therapist's nonpossessive warmth correlates (.43) with an acceptance or regard for others (Fey, 1955; Truax & Mitchell, 1971) which would seem to necessitate a greater trust for others.

Thus on the basis of the dynamics hypothesized above, it is expected that the therapist's nonpossessive warmth would elicit the client's trust in the therapist.

Although no studies have sought to specifically relate therapist warmth to the client's trust for his therapist, there are two studies which indirectly lend some empirical support to the positive relationship which is postulated on the theoretical grounds presented above. The study by Johnson and Noonan (1972), described earlier, revealed that subjects trusted confederates more when the formers' self-disclosures were met with the latters' acceptance rather than rejection. Since the communication of acceptance appears to be an integral part of nonpossessive warmth (Rogers, 1961), it seems probable on the basis of this study that the therapist's nonpossessive warmth would also elicit the client's greater trust in him.

Furthermore, a study by Simonson (1976), which related therapist warmth to client self-disclosure, sheds some light

on the relationship of therapist warmth to client trust since, as mentioned earlier, there seems to be a strong positive relationship between trust and self-disclosure (Pearce & Sharp, 1973; Wheeless & Grotz, 1977).

Studying the effects of both therapist self-disclosure and therapist warmth on client self-disclosure, Simonson (1976) placed 90 female university introductory psychology students in simulated psychotherapy situations after they heard tapes of psychotherapy conducted by therapists described as warm or cold and displaying various levels of self-disclosure. In regard to warmth effects, subjects exposed to the warm therapist condition disclosed significantly more about themselves on the Jourard Self-Disclosure Questionnaire than did those exposed to the cold therapist condition. Based on this study, it appears that a client might also trust to a greater degree a therapist described as more warm, since trust seems to be a prerequisite for self-disclosure (Jourard, 1971b).

Thus, both on theoretical grounds and, indirectly, on the basis of empirical evidence, it is expected that therapist nonpossessive warmth elicits the client's trust in the therapist.

Nonpossessive warmth and client attribution of therapeutic effectiveness. Following upon the theoretical rationale presented above, it appears that a positive relationship would also exist between therapist warmth and

the client's attribution of the effectiveness of therapy. More specifically, if the nonpossessive warmth conveyed leads to the client's increased ability to allow previously unacceptable feelings into his awareness, then the client should perceive these changes in his self-concept as evidence of the effectiveness of his psychotherapy. Accordingly the client receiving nonpossessive warmth from a therapist would be expected to attribute more therapeutic effectiveness to his therapist than would a client not receiving nonpossessive warmth.

This hypothesized relationship of nonpossessive warmth to client attribution of therapeutic effectiveness receives support from several studies, mentioned earlier, which have shown a positive relationship of therapist warmth to client self-reported satisfaction (Bent, Putnam, Kiesler, & Nowicki, 1976), to therapist effectiveness as defined by peer ratings (Hayden, 1975), and to therapeutic success as defined by changes in MMPI profile analysis (Schauble & Pierce, 1974). Conflicting evidence also exists, indicating no relationship or a negative relationship of therapist warmth to therapeutic improvement as measured by the client's and therapist's ratings (Truax, Wargo, Frank, Imber, Battle, Hoehn-Saric, Nash, & Stone, 1966). Yet many of these studies did not measure effectiveness by the client's own rating, but rather by the ratings of judges or by the differences in test scores. In this study it is expected, on the basis of the

theoretical rationale above, as well as on the majority of the research findings, that therapist nonpossessive warmth leads to the client's greater attribution of therapeutic effectiveness.

C. Summary

The concept of therapist nonpossessive warmth and its effectiveness in psychotherapy has been presented theoretically and substantiated experimentally in a wide body of literature. While research has generally demonstrated a positive relationship of nonpossessive warmth to overall therapeutic effectiveness, as well as to a number of specific factors within therapy, no research has dealt specifically with the relationship of therapist warmth to the client's trust for his therapist. Based on a theoretical analysis of nonpossessive warmth and on the results of several studies, it appears likely that therapist warmth, like client-therapist value similarity, would have a positive influence on client trust of the therapist, as well as on the client's attribution of therapeutic effectiveness.

4. Conclusions

Based on the literature reviewed in the areas of interpersonal trust, values in psychotherapy, and therapeutic nonpossessive warmth, the following conclusions can be made.

1. Trust has been studied in the communication context (Giffin, 1967; Hovland et al., 1953) and in the psychotherapy context (Kaul & Schmidt, 1971; Smith, 1974). The client's trust is viewed by several authors as an important factor in successful psychotherapy (Rogers, 1951; Rotter, 1967; Strong, 1968; Strong & Schmidt, 1970), possibly effecting such processes as willingness to self-disclose (Jourard, 1971a) and risk-taking (Deutsch, 1958, 1962). There is experimental evidence that certain factors in therapy, e.g. therapist acceptance and reciprocation of the client's self-disclosure (Johnson & Noonan, 1972), have an influence on the client's trust.

2. Both attitude similarity (Good & Good, 1972; Good, 1975; Panzer, 1975) and value similarity (Shotland, 1968; Tessler, 1975) between the client and the therapist have been shown to influence the client's perception of the therapeutic relationship. No research, however, has studied the effects of client-therapist value similarity on the particular variables of the client's trust for the therapist and the client's attribution of therapeutic effectiveness.

3. Theoretically there are several reasons why client-therapist value similarity should positively influence client trust for the therapist and client attribution of therapeutic effectiveness. In relation to trust, (a) The client should experience less risk in attaining his goals with a therapist whose values he shares and are predictable;

(b) As it has been shown (Smith, 1957) that people choose to associate with people of similar values, one could infer that they have more trust for the same individuals; and (c) Based on a knowledge of their value similarity a client should make judgments of certain qualities in his therapist that have been shown to influence trust (Giffin, 1967). In regard to effectiveness attribution, it appears that value similarity, like attitude similarity (Byrne, 1971), should lead to the client's positive affective association with the therapist and to his positive evaluation of the therapist as therapeutically effective.

4. The therapist's nonpossessive warmth is widely viewed as an important factor in psychotherapy (Meador & Rogers, 1973; Rogers, 1957a), and its effectiveness is well documented (Truax & Mitchell, 1971). The effects of the therapist's nonpossessive warmth on the client's trust for the therapist, however, have not been studied, in spite of indirect evidence that suggests such an influence (Johnson & Noonan, 1972; Simonson, 1976). Furthermore, few of the studies that have investigated the effects of nonpossessive warmth on therapeutic effectiveness have focused on the client's own attribution of effectiveness as a dependent variable.

5. Theoretically there are several reasons why therapist nonpossessive warmth should positively influence client trust for the therapist and client attribution of therapeutic effectiveness. In relation to trust: (a) Based on the

observation of certain qualities, e.g. commitment, in his warm therapist (Raush & Bordin, 1957), a client should make judgments of other therapist qualities, e.g. expertness, that have been shown to influence trust (Giffin, 1967); (b) Since the therapist's nonpossessive warmth creates a climate of safety which allows the client to take risks in therapy (Meador & Rogers, 1973), one could infer that warmth elicits the client's trust for the therapist because trust seems to be a prerequisite for risk-taking; and (c) Since therapist warmth leads to client self-acceptance, and clients who accept themselves tend to accept others (Truax & Mitchell, 1971), one could infer that they also have more trust for others. In relation to effectiveness attribution, as clients receiving nonpossessive warmth allow more feelings into awareness and accept themselves to a greater extent (Meador & Rogers, 1973), they should see these changes as evidence of therapeutic effectiveness.

5. Problem

On the basis of the above conclusions, the present research attempted to examine the effects of client-therapist value similarity and therapist nonpossessive warmth on client trust for the therapist and on client attribution of therapeutic effectiveness.

6. Hypotheses

Two main effects were investigated which are for (a) client-therapist terminal value similarity with two levels, high (66 2/3%) and low (33 1/3%), and for (b) therapist nonpossessive warmth with two levels, high and low. The dependent variables are (a) client trust for the therapist, and (b) client attribution of therapeutic effectiveness. Four hypotheses, stated in null form, are generated. These are:

1. Holding therapist nonpossessive warmth constant, there is no significant difference in the amount of trust that clients will have for therapists having values of high similarity to their own versus that which they will have for therapists having values of low similarity to their own.

2. Holding therapist nonpossessive warmth constant, there is no significant difference in the amount of therapeutic effectiveness that clients will attribute to therapists having values of high similarity to their own versus that which they will attribute to therapists having values of low similarity to their own.

3. Holding client-therapist terminal value similarity constant, there is no significant difference in the amount of trust that clients will have for therapists of high nonpossessive warmth versus that which they will have for therapists of low nonpossessive warmth.

4. Holding client-therapist terminal value similarity constant, there is no significant difference in the amount of therapeutic effectiveness that clients will attribute to therapists of high nonpossessive warmth versus that which they will attribute to therapists of low nonpossessive warmth.

CHAPTER II

METHOD

This section describes the subjects, the instruments used, the procedure that was followed, the simulation design, and the statistical procedures. Subjects are described in terms of numbers and demographic characteristics. The instruments used in the manipulation of the independent variables and those used as dependent measures are described, and the reasons for their choice are given. Following a detailed description of the procedure, the nature of the simulation design is described, including its advantages and limitations. The section ends with a description of the statistical analyses conducted in the study.

1. Subjects

A total of 160 volunteer subjects were used in the present study, all of whom were male undergraduate students at the University of Ottawa enrolled in Introductory Psychology classes.

Manipulation check sample. Of the total 160 subjects, 80 were used only to check the successful manipulation of the two independent variables. This check was conducted five to nine months prior to the main portion of the study

(in the Spring of the previous academic year). Subjects were obtained from five classes.

Main sample. Eighty subjects, obtained from six classes, participated in the main portion of the study. All subjects were required to spend approximately 30 minutes in each of two meetings, two weeks apart (except for two subjects whose two meetings were spaced 18 days apart).

Of the 77 subjects who completed the "Year already completed" item, the majority (78%) were sophomores (37 subjects or 48.1% of the sample) or freshmen (23 subjects or 29.9% of the sample), and the rest were juniors (9.1%), seniors (5.2%), or "other" (7.8%). A majority of the subjects (62.5%) were seeking the B.S. (27 subjects or 33.7%) or B.A. (23 subjects or 28.7%) degrees, while the remainder were seeking the B.Comm. (6.3%), the B.Ed. (6.3%), or "other" (25%) degrees. The mean age of the sample was approximately 20 years (SD=2.32). Other information regarding subjects' ages is provided in Table 1. Information regarding subjects' faculties of study and first languages are presented in Tables 2 and 3, respectively.

In summary, a total of 80 subjects were tested in the main sample. An average subject was a 20 year old, male sophomore who was seeking a B.S. degree in the Faculty of Science and who spoke English as a first language.

Table 1

Ages of Subjects in the Main Sample

Age	Number	Percentage
18	11	13.7
19	27	33.7
20	15	18.8
21	10	12.5
22	4	5.0
23	2	2.5
24	2	2.5
25	3	3.7
Other	6	7.5
Total	80	100.0

Table 2

Faculties of Study

Represented in the Main Sample

Faculty	Number	Percentage
Science	25	31.3
Psychology	3	3.7
Arts	23	28.7
Nursing	2	2.5
Philosophy	0	0.0
Physical Education	10	12.5
Management Science	5	6.3
Social Science	10	12.5
Other	2	2.5
Total	80	100.0

Table 3

First Language of Subjects

in the Main Sample

Language	Number	Percentage
French	7	8.7
English	51	63.7
Other	8	10.0
Fluently bilingual (trilingual)	14	17.5
Total	80	100.0

2. Instruments

The manipulations of the two independent variables (viz., client-therapist value similarity and therapist nonpossessive warmth) and the measures of the two dependent variables (viz., client trust for the therapist and client attribution of therapeutic effectiveness) were all presented to subjects by means of a questionnaire (see Appendix 2). The measures of the variables are described separately in this section.

A. Independent Variables

Client-therapist value similarity. As a measure of values, the terminal value portion of Rokeach's Value Survey (1967) was used. This portion consists of 18 alphabetically arranged terminal values, e.g. AN EXCITING LIFE, each value accompanied by a brief definition in parentheses, e.g. (a stimulating, active life). Each value is printed on a removable, gummed label (Form D), and the subject is requested to arrange them in order of their importance to him, as guiding principles in his life. The terminal value portion of the Rokeach Value Survey, including these instructions, is presented in Appendix 1.

Attrition due to failure to complete the rankings has been reported (Rokeach, 1973) as about one to two per cent among college students, and Form D has obtained the best reliability results. For terminal values, median test-

retest reliabilities were .78 to .80 for students at Michigan State University, the time intervals between test and retest ranging from three to seven weeks. The median test-retest reliability for a two to four month interval (N=216) was .76, and for a 14 to 16 month interval (N=204) was .69 (Rokeach, 1973).

To represent high client-therapist value similarity in the present study, subjects first completed the Value Survey, providing their actual personal value hierarchy. They were then asked to role-play clients and were presented with the first nine values of a psychotherapist, Dr. Ryan (simulated), who had ranked six of the subject's values (nos. 1, 3, 6, 7, 8, 9) identically to the rankings of the subject, and three of the subject's values (nos. 2, 4, 5) differently. The high similarity condition thus constituted 66 2/3% (6/9) similarity. An example of high client-therapist value similarity is presented in Appendix 2.

Low client-therapist value similarity was represented by presenting subjects with the first nine values of a therapist, Dr. Ryan, who had ranked three of the subject's values (nos. 2, 5, 9) identically to the subject's rankings and six of the subject's values (nos. 1, 3, 4, 6, 7, 8) differently. The low similarity condition thus represented 33 1/3% (3/9) similarity. An example of low client-therapist value similarity is presented in Appendix 3. As can be seen, in the low similarity condition the value

ranked no. 1 by the subject was not designated as one of the three values identical to those of the therapist (as in the high similarity condition) so that dissimilarity would be further emphasized.

Two specific formats were derived for the high and low similarity conditions so that when a value was designated to be ranked differently by the therapist it was replaced by a particular value rank consistently for all subjects. Specifically, in the high similarity condition the value ranked no. 2 by the subject was always ranked no. 5 by the therapist; that ranked no. 4 by the subject was ranked no. 2 by the therapist; and that ranked no. 5 by the subject was ranked no. 4 by the therapist. In the low similarity condition, the value ranked no. 1 by the subject was always ranked no. 6 by the therapist; that ranked no. 3 by the subject was ranked no. 7 by the therapist; that ranked no. 4 by the subject was ranked no. 8 by the therapist; that ranked no. 6 by the subject was ranked no. 3 by the therapist; that ranked no. 7 by the subject was ranked no. 1 by the therapist; and that ranked no. 8 by the subject was ranked no. 4 by the therapist.

It should be clear at this point that, while the therapists' values were simulated, the subjects' values were those actually provided by subjects on the Value Survey.

Rokeach's Value Survey was considered preferable to the Allport-Vernon-Lindzey Study of Values (1960) in the

present study in that the former requires the subject to produce his value system by the rank ordering of ideals or values in terms of importance. The latter, in contrast, measures "the relative order of importance of six classes of values: theoretical, social, political, religious, aesthetic, and economic" (Rokeach, 1969, pp. 124-125). It would therefore seem to be a more global measure of values, less sensitive to each individual's unique value system. The fact that its format allows a subject to obtain equal scores on the six classes of values seems to further diminish its capacity to discriminate individuals. Furthermore, several authors (Handy, 1970; Kitwood & Smithers, 1975) have questioned whether the Allport-Vernon-Lindzey scale is more a measure of interests than of values. Finally, the latter scale is derived from Spranger's (1928/1966) model of values, the validity of which is debatable (Handy, 1970).

Morris's Ways to Live Scale (Morris, 1956; Morris & Jones, 1955) might also have been used to measure values in this study. This scale measures subjects' preferences for "thirteen conceptions of the good life containing values supported and advocated in mankind's ethical and religious systems" (Handy, 1970, p. 172), compared to Rokeach's measure of subjects' preferences for 18 "end-states of existence" (Rokeach, 1973). Because the former scale provides rather extended, complicated descriptions

of each "way to live," and because it requires a 1 to 7 preference rating for each of the 13 "ways," this scale would seem to be more time consuming to administer and more complicated to achieve high and low similarity conditions than would the Value Survey. Therefore, Rokeach's scale appeared to be a more practically feasible instrument to measure values (and value similarity) in this study. Furthermore, the choice of Rokeach's Value Survey rendered the present research methodologically consistent with the abundant previous research using the Rokeach scale.

Therapist nonpossessive warmth. Conditions of high and low therapist nonpossessive warmth were represented by presenting subjects (who were asked to role-play clients after providing their actual value hierarchy) with a paragraph describing a psychotherapist, Dr. Ryan (simulated) as either a warm or a cold person. These descriptions are presented in Appendix 2 (high nonpossessive warmth) and Appendix 4 (low nonpossessive warmth).

Each description was constructed by taking 10 statements from the Relationship Questionnaire developed by Truax in 1963 (Truax & Carkhuff, 1967). The Relationship Questionnaire is "an attempt to translate the previous scales used for ratings (sic) objective tape recordings into a questionnaire form that can be answered by the client" (Truax & Carkhuff, 1967, p. 74). It requires the subject to respond "true" or "false" to 141 statements in regard to describing his

therapist. Seventy-two of these statements contribute to the "Nonpossessive Warmth" score and, from these, ten were chosen for the present study which seemed to overlap minimally in describing the therapist high or low in nonpossessive warmth. For the high warmth description, statements 24, 11, 35, 49, 36, 75, 56, 44, 136, and 33 (in order) were chosen; for the low warmth description, statements 78, 102, 137, 126, 49, 23, 67, 7, 52, and 33 (in order) were chosen. As some statements required a "false" response to produce a score counting toward nonpossessive warmth, the verbs of some statements were changed from the positive to the negative (or vice versa) to fit the paragraph descriptions smoothly. Furthermore some statements were combined for stylistic reasons.

It would have been possible to manipulate nonpossessive warmth by means of presenting to subjects audio- or videotapes of therapists previously judged as high and low in warmth by ratings on the Truax (1962b) scale. This method would have been advantageous especially for the therapist's communication of nonverbal factors which are partly responsible for his nonpossessive warmth (Smith-Hanen, 1977). However, the presentation of counselor characteristics to subjects by written or verbal descriptions has been shown to influence subjects' perceptions of their counselors in previous studies (Gelso & Karl, 1974; Savitsky, Zarle, & Keedy, 1976). This method of presenting a relatively short,

written description of the therapist provided a quick, economical manipulation of nonpossessive warmth and rendered the manipulation comparable to the manipulation of value similarity by written information.

B. Dependent Variables

Client trust for the therapist. As a measure of the amount of trust that the subject (in the role of client) had for the therapist, each subject was asked to rate the degree to which he considered his therapist trustworthy on a Likert scale ranging from 1 to 9 (1 = very trustworthy, 3 = moderately trustworthy, 5 = neutral, 7 = moderately untrustworthy, 9 = very untrustworthy) (see Appendix 2). A Likert rating scale has been similarly used as a measure of trust in other studies (Johnson & Noonan, 1972; Kaul & Schmidt, 1971; Roll, Schmidt, & Kaul, 1972; Strong & Schmidt, 1970).

Prior to making this rating, the subjects were provided several statements in the form of questions to aid them in their decision, i.e. Can I depend upon him not to take advantage of my confidences, my exposure of myself, for his selfish use or manipulation of me? Does he know the world as I know it? When I am in trouble, will he be active in the struggle or will he passively sit by and let me be hurt? These statements have been proposed by Giffin and Patton (1974) to represent factors which influence the

trust that one person has for another.

The use of the Rotter Interpersonal Trust Scale was inappropriate in the present study, because, consisting of 25 Likert self ratings, it measures an individual's general expectancy that others' promises regarding future behavior can be trusted or relied upon. It thus measures generalized trust for people rather than trust for specific individuals contacted in a particular situation (Rotter, 1967).

As another instrument that might have been used, Smith (1974) reported the use of the "Jourard Questionnaire for Measuring Trust" in his study of desk and handshake effects on client trust (described earlier). However, the questionnaire to which he seems to refer, "A Questionnaire for Measuring Trust Between Subjects and Experimenters" (Jourard, 1968, pp. 30-33) is described by Jourard (1968) as "a kind of disclosure questionnaire listing 52 personal questions of varying degrees of intimacy" from which "the number of completed items could be regarded as a rough measure of the subject's trust of the experimenter" (p. 29). While split half reliability has been reported as higher than .90 (N = 50 males and 50 females), the validity was not reported by Jourard (1968), and it seems questionable since "trust" in this instrument is indirectly inferred from a measure of willingness to self-disclose. In a more recent questionnaire entitled "Measure of Subject's Trust of Experimenter" (Jourard, 1971b, pp. 212-213), the subject is

required to circle any of 15 descriptive phrases or their polar opposites (e.g. 1. felt at ease; felt tense, anxious) which "best describes your experience with the person you have just met." While this measure seems to have more face validity, reliability or validity coefficients were not presented (Jourard, 1971b). Furthermore, both of the above measures are designed for use with subjects in psychological experiments rather than for clients in psychotherapy.

An individualized measure of trust has been developed recently (Wheeless & Grotz, 1977) which consists of 15 semantic differential items. The "Individualized Trust Scales" (ITS) includes items, e.g. Benevolent-Exploitative, "derived from Berlo, Lemert, & Mertz's (1969) safety-trustworthiness factor and from McCroskey's (1971, 1973) character factor of perceived interpersonal credibility . . . plus additional items generated by the researchers . . . on the basis on their face validity for measuring perceived trustworthiness" (p. 253). Factor analysis revealed that the ITS measures a single factor of trust in another person which accounts for 59% of the total variance. Split half reliability was reported as .92 (df=247). The instrument was assessed as having predictive validity based on the finding that self-disclosure levels on several dimensions were related to trust scores. The relationship between ITS scores and scores on Rotter's Interpersonal Trust Scale, however, was insignificant (r=.02, df=247). In assessing

the instrument's face validity, the 15 items represent Berlo, Lemert and Mertz's (1969) safety factor strongly, but none of the items seem to tap the latter authors' qualification (cf. Giffin's, 1967, 1968, expertness) or dynamism (cf. Giffin's, 1967, 1968, dynamism) factors, or Giffin's (1967) attraction factor. Thus while the ITS has been shown to have acceptable split half reliability and some degree of predictive validity, its content validity is questionable and its use in the present study did not seem appropriate without further validating evidence.

A somewhat similar semantic differential instrument was used by Widgery and Stackpole (1972) to measure subject's perception of interviewer credibility. In this scale 18 7-point semantic differentials were included to measure the safety, qualification, and dynamism factors of Berlo, Lemert, and Mertz (1969). However, reliability or validity of the measure was not assessed in this study.

In the absence of an established, valid, and reliable measure of client trust of a therapist, the use of the described Likert scale seemed appropriate and efficient. Requesting simply the subject's perception of the therapist's trustworthiness allowed the client the freedom to make his assessment according to whatever criteria seemed important to him. Providing Giffin & Patton's (1974) descriptive statements imposed some structure on the subject. The in-

tent was to gain consistency across all subjects' conceptions of trust, without diminishing their reliance on personal criteria for assessing the therapist's trustworthiness. The presentation of defining statements prior to subjects' Likert ratings has been used in other studies of perceived counselor trustworthiness (Kaul & Schmidt, 1971).

After the present study was run using the above measure of trust, the present writer became aware of an instrument which might have provided a more reliable and valid measure and which is obtainable as a Research Monograph from the Communication Research Center at the University of Kansas. Developed (Form E) by Giffin (1968) and recently revised (Form F) by Giffin and McClearey (1978), the Giffin Trust Differential (GTD) "can be used to derive a weighted measure of an individual's introspectively reported potential for trusting another person or group" (Giffin & McClearey, 1978, p. 43). The GTD includes 26 factor analytically chosen semantic differential items which represent the three characteristics (reliability, activeness, expertness) that influence one's trust for another. As evidence of the instrument's validity, significant ($p < .001$) correlations were reported (Giffin & McClearey, 1978) between scores on the three factors and responses to a Likert measure of trust (N=2492 ratings by 184 subjects). The authors did not present a coefficient of the GTD's reliability but reported, "To discover that no new significant factors emerged . . .

[from three factor analyses]. . . is a very strong argument for the reliability of the factor structure of the GTD" (pp. 25-26). The authors also suggested "for preliminary exploration in research" (p. 38) the use of a short form of the GTD called the Dimensions of Trust Potential (DTP). This instrument consists of three bipolar adjectival scales to measure the three factors of trust, and it correlates significantly ($p < .001$) with the GTD and with a validity measure.

Client attribution of therapeutic effectiveness. As a measure of the amount of therapeutic effectiveness that the subject (in his role-play of a client) attributed to the therapist, each subject was asked to rate the degree to which he expected his involvement with the therapist to be effective. The degree of attributed effectiveness was rated on a Likert scale ranging from 1 to 9 (1 = very effective, 3 = moderately effective, 5 = neutral, 7 = moderately ineffective, 9 = very ineffective) (see Appendix 2).

Subjects were provided several statements in the form of questions to aid them in their decision prior to making this rating, i.e. Will my ability to cope with my difficulties be improved after our sessions? Will my understanding of myself be increased? Will I feel better after my meetings with him? These statements were chosen by the author to represent basic areas of therapeutic improvement. As in the presentation of Giffin and Patton's (1974) statements

on the trust measure above, providing these statements was viewed as a method of producing some consistency across all subjects' conceptions of therapeutic effectiveness, while still leaving substantial freedom for subjects to use personal meanings of therapeutic effectiveness in making these ratings.

While other measures of client assessment of therapeutic or therapist effectiveness have been used, e.g. the Counselor Global Rating (Smith, 1974), the Therapist Judgment Scale (Good, 1975), the use of the Likert measure preceded by descriptive statements provided a less cumbersome, time-consuming task for the subject. Furthermore, it rendered this dependent measure consistent with the Likert measure of trust, allowing for more meaningful comparisons of the effects on the two dependent variables.

3. Procedure

<u>Manipulation check</u>. Five to nine months prior to the main study, 80 subjects were tested to determine whether the experimental manipulations of value similarity and non-possessive warmth were successful, i.e. meaningful and effective enough for subjects to perceive significant differences between the high and low conditions in each of the two independent variables.

To accomplish this check on the value similarity manipulation, 40 subjects completed the terminal value portion

of the Value Survey, providing their own personal value hierarchy. Two weeks later they were presented with their own value hierarchy for the first nine of the 18 values they had ranked. In addition to these they received the rankings of the same nine values done by another person, Mr. X, who had either ranked these values 66 2/3% similar to these rankings (21 subjects) or 33 1/3% similar to their rankings (19 subjects). The two value profiles (the subject's and Mr. X's) were presented on one sheet, and subjects were asked if they perceived Mr. X's value hierarchy as similar or dissimilar to their own. They were required to judge the extent of similarity on a Likert scale ranging from 1 to 5 (1 = virtually no similarity, 3 = moderate similarity, 5 = very high degree of similarity). The forms used for this value similarity manipulation check are presented in Appendix 10.

Confidentiality was maintained by assigning each subject a four digit identification number at the first meeting, copies of which were held by the subject and the experimenter. At the second meeting subjects were identified and presented with the appropriate 33 1/3% similar or 66 2/3% similar condition on the basis of their numbers.

For the nonpossessive warmth check, 40 subjects were presented a paragraph describing a psychotherapist as either high (20 subjects) or low (20 subjects) in nonpossessive warmth (after the concept was defined). They were then

required to rate on a 5-point Likert scale the degree to which they perceived him as having nonpossessive warmth (1 = virtually no warmth, 3 = moderate degree of warmth, 5 = extremely high degree of warmth). The forms used for this manipulation check of nonpossessive warmth are presented in Appendix 11.

Main study. The experimenter first introduced himself to the six classes involved as a student in the PhD psychology program, and presented minimal information about the study (viz., "I am doing research on human values."). Subject anonymity and credit points were briefly discussed, and volunteers were requested to participate as subjects.

All 80 subjects were administered the terminal portion of the Rokeach Value Survey at [illegible] first meeting. Attached to each form was a small piece of paper with a four digit identification number which the subject was requested to keep and which coincided with a number written on the Value Survey. After collecting the completed forms, Value Survey forms were then filled out by the experimenter to simulate therapists' value systems which were 66 2/3% similar to those of 40 randomly chosen subjects and 33 1/3% similar to those of another 40 randomly chosen subjects. Two weeks after the first meeting, subjects were presented a questionnaire (see Appendix 2) which asked them to place themselves in the position of having "some personal problems that have been developing for a long time" and of seeking a psycho-

therapist, Dr. Ryan to "discuss these issues." Subjects were informed at this point that they would be requested to judge their trust in Dr. Ryan as well as their expectation of Dr. Ryan's effectiveness on the basis of information which they would be given. They were then presented the first nine of the 18 values they themselves had ranked previously as well as Dr. Ryan's rankings of the same nine values. Forty subjects received a value profile of Dr. Ryan 66 2/3% similar to their own, and 40 subjects received a value profile of Dr. Ryan 33 1/3% similar to their own. As a second source of information about their therapist, subjects were presented a paragraph description of Dr. Ryan supposedly written by one of his clients. Forty subjects received a description of the therapist as high in nonpossessive warmth, and 40 received a description of him as low in nonpossessive warmth. The order of presentation of the conditions of value similarity and nonpossessive warmth was counterbalanced, so that 40 subjects received the value similarity information first (Order 1) and 40 subjects received the warmth information first (Order 2). Thus the 80 subjects may be partitioned into eight groups of 10 subjects who received the eight possible combinations of high or low value similarity, high or low nonpossessive warmth, and Order 1 or Order 2 (see Appendices 2 through 9).

Based on the two sources of information provided, subjects were then asked to write a "short paragraph describing

your impression of Dr. Ryan." The unexpressed purpose of this task was to promote the subjects' integration of the information and to enhance their involvement in the scenario.

The subjects were then asked (a) to consider three questions related to trusting a therapist and to rate "the amount of trust, as defined above, that you feel you would have for Dr. Ryan" on a Likert scale ranging from 1 (very trustworthy) to 9 (very untrustworthy); and (b) to consider three questions related to therapeutic effectiveness and to rate "the degree to which you expect your involvement with Dr. Ryan to be effective in helping you" on a Likert scale ranging from 1 (very effective) to 9 (very ineffective).

Following these two questions, 12 posttest questions requiring similar 1 to 9 ratings were presented, related to the subjects' use of the value and warmth information (questions 3 through 6, 9 through 12), their difficulty in making these ratings (questions 7 and 8), and their confidence in these judgments (questions 13 and 14). Five demographic questions (15 through 19) completed the questionnaire. The total time required for the completion of the questionnaire was approximately 30 minutes.

After subjects turned in the completed questionnaire, debriefing consisted of the experimenter's brief discussion of the study as well as a written explanation which was given to each subject (see Appendix 12).

4. Simulated Design

Because real clients and real psychotherapists were not used in this study, it may be considered a simulation or analogue study. According to Jones and Gerard (1967), "A simulation experiment attempts to create a replica of conditions existing in the real world" (p. 73) and operates successfully if the model "contains the essential variables underlying complex natural phenomena" (p. 73). In the research area of psychotherapy, the use of an analogue study is particularly applicable because of the many and complex factors that influence therapeutic process and outcome variables. In presenting the advantages of analogue designs in regard to their ability to reduce this complexity, Heller (1971) stated,

> The clinical interview, while an excellent source of research hypotheses, is a poor testing ground for isolating factors responsible for behavior change. The varied complexity of the therapeutic interaction and the inability to specify and control therapeutic operations make it difficult to obtain reliable information concerning exact agents of change. The purpose of clinical laboratory research is to determine what factors produce change, under what conditions they operate best, and how they should be combined to produce an effective therapeutic package (p. 127).

As a means of assessing the success of research using role playing simulation, Geller (1978) suggested two criteria: "(a) outcome or replication of results obtained by other methods and (b) process or an indication that the

experience was phenomenologically real for the participants, such that they felt it to be an emotionally involving *as if* situation" (p. 222). The necessity for subjects' involvement in a role play simulation has also been stressed by other authors (Greenberg, 1967). Thus in the present study, subjects were asked to write the short paragraph describing their impressions of Dr. Ryan in order to increase their level of emotional involvement in the scenario.

Although there is inherent in the simulated design some loss of external validity, or generalizability to the real life situation, there is an accompanying increase in internal validity, or control over the extraneous variables that may effect clients in a psychotherapy setting (Campbell

& Stanley, 1963; Jones & Gerard, 1967; Kiesler, 1971).

Beyond offering greater control of these factors and reducing the ethical concerns of conducting research on clients involved in psychotherapy, the use of the simulated design in the present study offered significant practical advantages. It made available the matching of the unique values of a large number of "clients" with the values of the same number of "therapists" at a level of similarity consistent across subjects. It would have been a difficult and extremely time-consuming task to have obtained 80 real psychotherapists who were willing to participate in experimental research and who had values similar or dissimilar to the same number of real clients, also willing to volunteer for the study. Obtaining consistent levels of high (e.g. 66 2/3%) and low (e.g. 33 1/3%) value similarity would have been virtually impossible. Finding real therapists whose high or low levels of warmth were appropriately combined with high or low levels of value similarity to their clients would have presented still further difficulties, and clearly demonstrates the efficacy of a simulated design in the present study.

5. Statistical Procedures

Questionnaires were constructed and numbered (by identification code) to represent the eight treatment conditions, and an equivalent number of questionnaires of each condition

was taken to each class for distribution. For example, in a class of 24 subjects, three questionnaires of each treatment condition were included in the 24 questionnaires. Within each class, however, questionnaires were distributed to subjects in a random manner.

As indicated earlier, the present study utilized a simulated design in that the values and nonpossessive warmth of the psychotherapist were contrived by the experimenter, and in that subjects were asked to complete the questionnaire "as if" they were clients in psychotherapy. The design may also be described as a factorial experiment (with non-repeated measures) in which all factors are fixed (Winer, 1971).

Before the statistical analyses of the main study, 2 median tests (for two, uncorrelated groups) (Downie & Heath, 1974) were run on the manipulation check data to assess the effectiveness of the manipulations of the independent variables. In addition, six chi square statistics were run to check the random distribution of three demographic characteristics in the high and low conditions of each independent variable of the main study.

The investigation primarily sought the effects of two independent variables, viz. client-therapist value similarity (with two levels, high and low) and therapist nonpossessive warmth (with two levels, high and low), on two dependent variables, viz. client trust for the therapist and client attribution of therapeutic effectiveness. To rule out the

potentially confounding effects of order of presentation (with two levels), two 2 X 2 X 2 analyses of variance were run wherein order was treated as the third independent variable. Since order effects were insignificant, two 2 X 2 analyses of variance were conducted to assess the effects of the two independent variables. In addition, 12 2 X 2 analyses of variance and several *t* tests were conducted for posttest questions 3 through 14.

In all cases, the alpha level was set at .05.

CHAPTER III

RESULTS

This section presents the results of the statistical analyses conducted on the manipulation check data and on the data from the main study. The section begins with the manipulation check results, considers the effects of order, and proceeds to the main statistical analyses. The distribution of demographic variables in the treatment groups is presented, and the section ends with the results of the posttest analysis.

1. Manipulation Check

For the manipulation check on value similarity, the median test was run to determine if the high value similarity group (21 subjects) and the low value similarity group (19 subjects) came from populations with the same median. To test the hypothesis of no difference between the two sets of scores (1 to 5 ratings) (see Appendix 13), the median of the entire set of scores was calculated (3.5) and a contingency table was set up (see Appendix 14). A chi square statistic was then computed and indicated a statistically significant difference between the high value similarity group and the low value similarity group

(X^2=25.66, df=1, $p < .001$). Therefore the null hypothesis was rejected.

Similarly for the nonpossessive warmth manipulation check, the median test was run to determine if the high nonpossessive warmth group (20 subjects) and the low nonpossessive warmth group (20 subjects) came from populations with the same median. To test the hypothesis that there was no difference between the two sets of scores (1 to 5 ratings) (see Appendix 13), the median of the 40 scores was calculated (3.5) and a contingency table was constructed (see Appendix 14). A chi square statistic was then computed and indicated a statistically significant difference between the high nonpossessive warmth group and the low nonpossessive warmth group (X^2=32.48, df=1, $p < .001$). The null hypothesis was therefore rejected.

Thus subjects presented with the condition of high value similarity actually did perceive the degree of value similarity as significantly higher than did subjects who received the condition of low value similarity. Also, subjects who were presented the condition of high therapist nonpossessive warmth actually did perceive the extent of that warmth as significantly higher than did subjects given the low therapist nonpossessive warmth condition. On the basis of these results of the manipulation check, it was possible to assume that subjects in the main study were able to distinguish between the high and low conditions of

each independent variable.

2. Order Effects

To investigate the possibly confounding effects of the order of presentation of the two independent variables, subjects were presented either the value similarity information first and the nonpossessive warmth information second (Order 1), or the nonpossessive warmth information first and the value similarity information second (Order 2). For this particular investigation, order was thus considered a third independent variable with two levels. The dependent variables were client trust of the therapist and client attribution of therapeutic effectiveness. The null hypotheses were the following: (a) there is no significant difference in client trust of the therapist between the group exposed to Order 1 and the group exposed to Order 2; (b) there is no significant difference in client attribution of therapeutic effectiveness between the group exposed to Order 1 and the group exposed to Order 2.

The means, standard deviations, variances, and number of subjects in each order condition are presented for client trust of the therapist and for client attribution of therapeutic effectiveness in Appendix 15. Since the effects of order are to be investigated by means of a three way analysis of variance (to assess interaction as well as main effects), the means, standard deviations, variances,

and number of subjects are broken down by value similarity and nonpossessive warmth, as well as by order.

The analysis of variance for client trust resulted in no significant F ratios for the main effects of order, for the two-way interaction effects of order with value similarity or nonpossessive warmth, nor for the three-way interaction effects of order with value similarity and nonpossessive warmth (see Table 4). The analysis of variance for client attribution of therapeutic effectiveness also revealed no significant F ratios for main effects due to order or for interaction effects involving order (see Table 5). Thus the null hypotheses were not rejected. The order of presentation of the two independent variables, i.e. client-therapist value similarity and therapist nonpossessive warmth, did not have significant effects on clients' trust of the therapist or on clients' attribution of therapeutic effectiveness.

Because no effects due to order were revealed, the subjects previously divided into two order conditions (Order 1 and Order 2) were combined into one cell. This change resulted in four cells of 20 subjects each for the main statistical analyses.

3. Main Statistical Analyses

The present study is primarily concerned with the effects of two independent variables on two dependent variables.

Table 4

Summary of Analysis of Variance: Effects of Warmth, Value Similarity, and Order on Client Trust of the Therapist

Source of Variation	SS	df	MS	F
Warmth (W)	88.200	1	88.200	31.039***
Value Similarity (V)	68.450	1	68.450	24.088***
Order (O)	0.200	1	0.200	0.070
W X V	26.450	1	26.450	9.308**
W X O	0.000	1	0.000	0.000
V X O	1.250	1	1.250	0.440
W X V X O	0.050	1	0.050	0.018
Residual	204.596	72	2.842	
Total	389.196	79	4.927	

**$p < .01$
***$p < .001$

Table 5

Summary of Analysis of Variance: Effects of Warmth, Value Similarity, and Order on Client Attribution of Therapeutic Effectiveness

Source of Variation	SS	df	MS	F
Warmth (W)	88.200	1	88.200	34.179***
Value Similarity (V)	48.050	1	48.050	18.620***
Order (O)	1.250	1	1.250	0.484
W X V	7.200	1	7.200	2.790
W X O	1.800	1	1.800	0.698
V X O	1.250	1	1.250	0.484
W X V X O	0.000	1	0.000	0.000
Residual	185.797	72	2.581	
Total	333.547	79	4.222	

***$p < .001$

The two independent variables are (a) client-therapist value similarity with two levels, high and low, and (b) therapist nonpossessive warmth with two levels, high and low. The two dependent variables are (a) client trust of the therapist, and (b) client attribution of therapeutic effectiveness.

The means, standard deviations, variances, and number of subjects in each value similarity by nonpossessive warmth condition are presented for client trust of the therapist and for client attribution of therapeutic effectiveness in Appendix 16.

Hartley's F max test for homogeneity of variance (Winer, 1971) resulted in no significant F ratios for client trust of the therapist (F max=2.21, df=19, k=4, $p > .05$) or for client attribution of therapeutic effectiveness (F max=2.48, df=19, k=4, $p > .05$). Thus the analysis of variance assumption of homogeneity of variance among the treatment groups was fulfilled.

The analysis of variance for client trust of the therapist indicated significant main effects of both client-therapist value similarity ($p < .001$) and therapist nonpossessive warmth ($p < .001$), as well as a significant interaction effect of value similarity X warmth ($p < .01$) (see Table 6).

The significant main effect for value similarity indicates that high value similarity in general elicits greater

Table 6

Summary of Analysis of Variance:
Effects of Warmth and Value Similarity
on Client Trust of the Therapist

Source of Variation	SS	df	MS	F
Warmth (W)	88.200	1	88.200	32.525***
Value Similarity (V)	68.450	1	68.450	25.242***
W X V	26.450	1	26.450	9.754**
Residual	206.096	76	2.712	
Total	389.196	79	4.927	

**$p < .01$
***$p < .001$

client trust ($\bar{X}$=2.98) than does low value similarity ($\bar{X}$=4.83) (see Figure 1). However, this finding is qualified by the significant interaction effect of value similarity X warmth, which indicates that the effects of value similarity are not uniform across the two levels of warmth (see Figure 2). Within the high warmth condition, the calculation of simple main effects (Kirk, 1968) indicated no statistically significant difference ($p > .05$) between the amount of client trust elicited by high value similarity ($\bar{X}$=2.50) and that elicited by low value similarity ($\bar{X}$=3.20). Within the low warmth condition, however, high value similarity led to significantly ($p < .001$) greater client trust ($\bar{X}$=3.45) than low value similarity ($\bar{X}$=6.45) (see Table 7).

The significant main effect for warmth indicates that high warmth in general elicits greater client trust ($\bar{X}$=2.85) than does low warmth ($\bar{X}$=4.95) (see Figure 3). However, this main effect also is qualified by the significant interaction effect of value similarity X warmth. Thus the effects of warmth are not consistent across the two levels of value similarity (see Figure 2). Within the high value similarity condition, no statistically significant difference ($p > .05$) was indicated between the amount of client trust elicited by high warmth ($\bar{X}$=2.50) and that elicited by low warmth ($\bar{X}$=3.45). Within the low value similarity condition, high warmth elicited significantly ($p < .001$) greater client trust ($\bar{X}$=3.20) than low warmth ($\bar{X}$=6.45) (see Table 7).

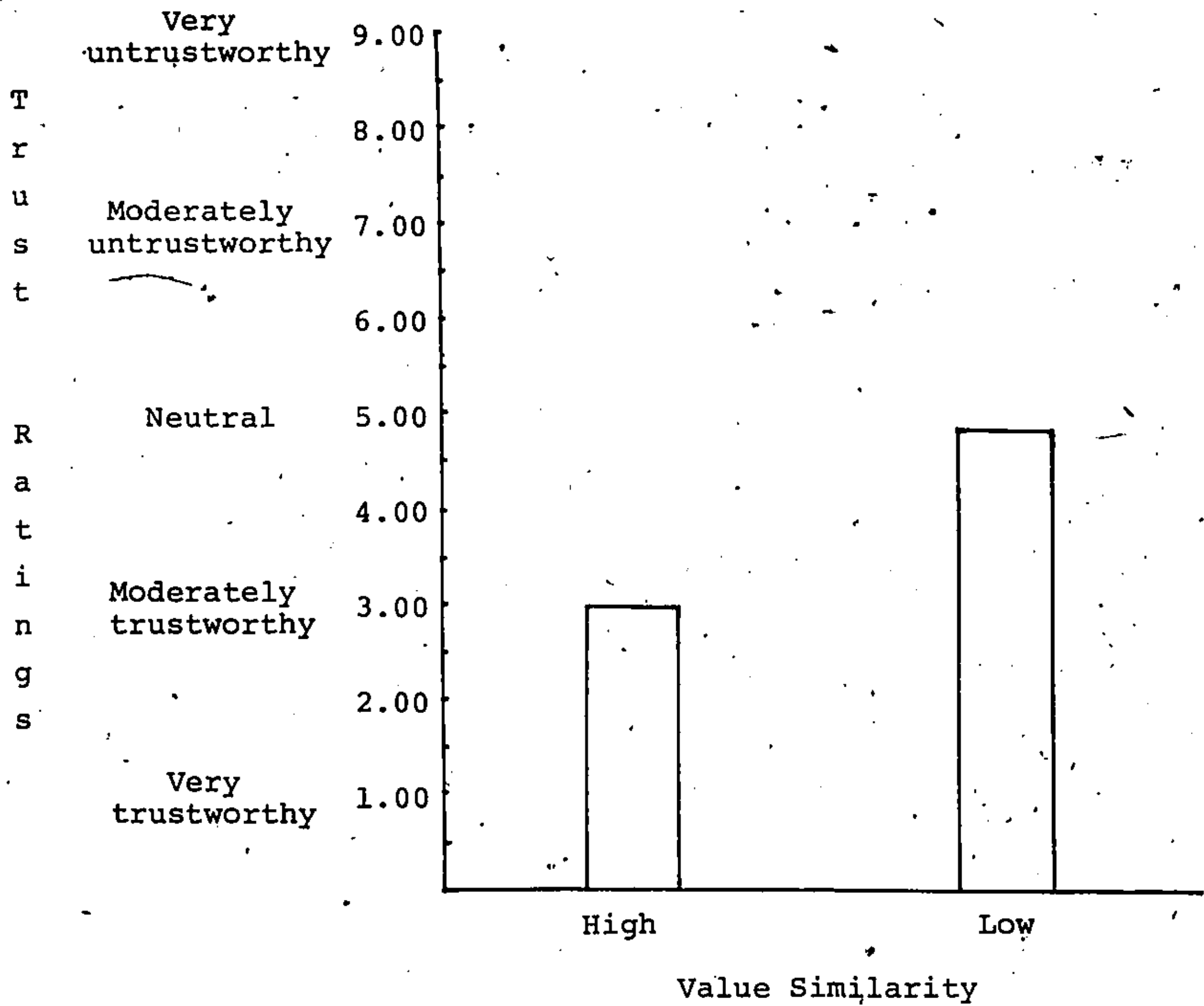

Figure 1. Main Effect of Client-Therapist Value Similarity on Client Trust of the Therapist.

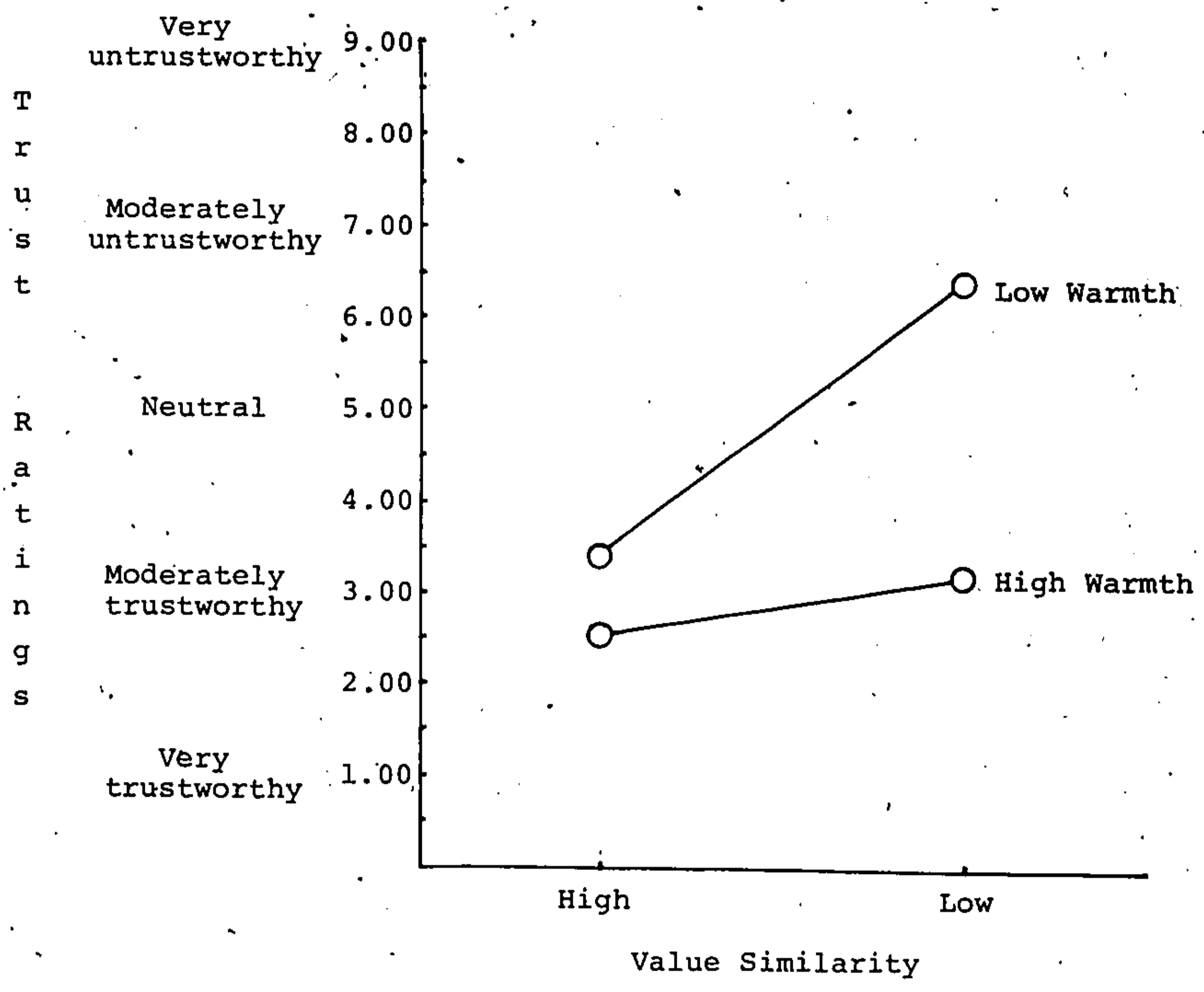

Figure 2. Interaction Effects of Client-Therapist Value Similarity and Therapist Nonpossessive Warmth on Client Trust of the Therapist.

Table 7

Simple Main Effects: Effects of Warmth and Value Similarity Interaction on Client Trust of the Therapist

Source of Variation	SS	df	MS	F
Warmth (W)	88.200	1	88.200	32.525***
W at high V	9.020	1	9.020	3.328
W at low V	105.630	1	105.630	38.978***
Value Similarity (V)	68.450	1	68.450	25.242***
V at high W	4.900	1	4.900	1.808
V at low W	90.000	1	90.000	33.210***
W X V	26.450	1	26.450	9.754**
Residual[a]	206.096	76	2.712	
Total	389.196	79	4.927	

**$p < .01$
***$p < .001$

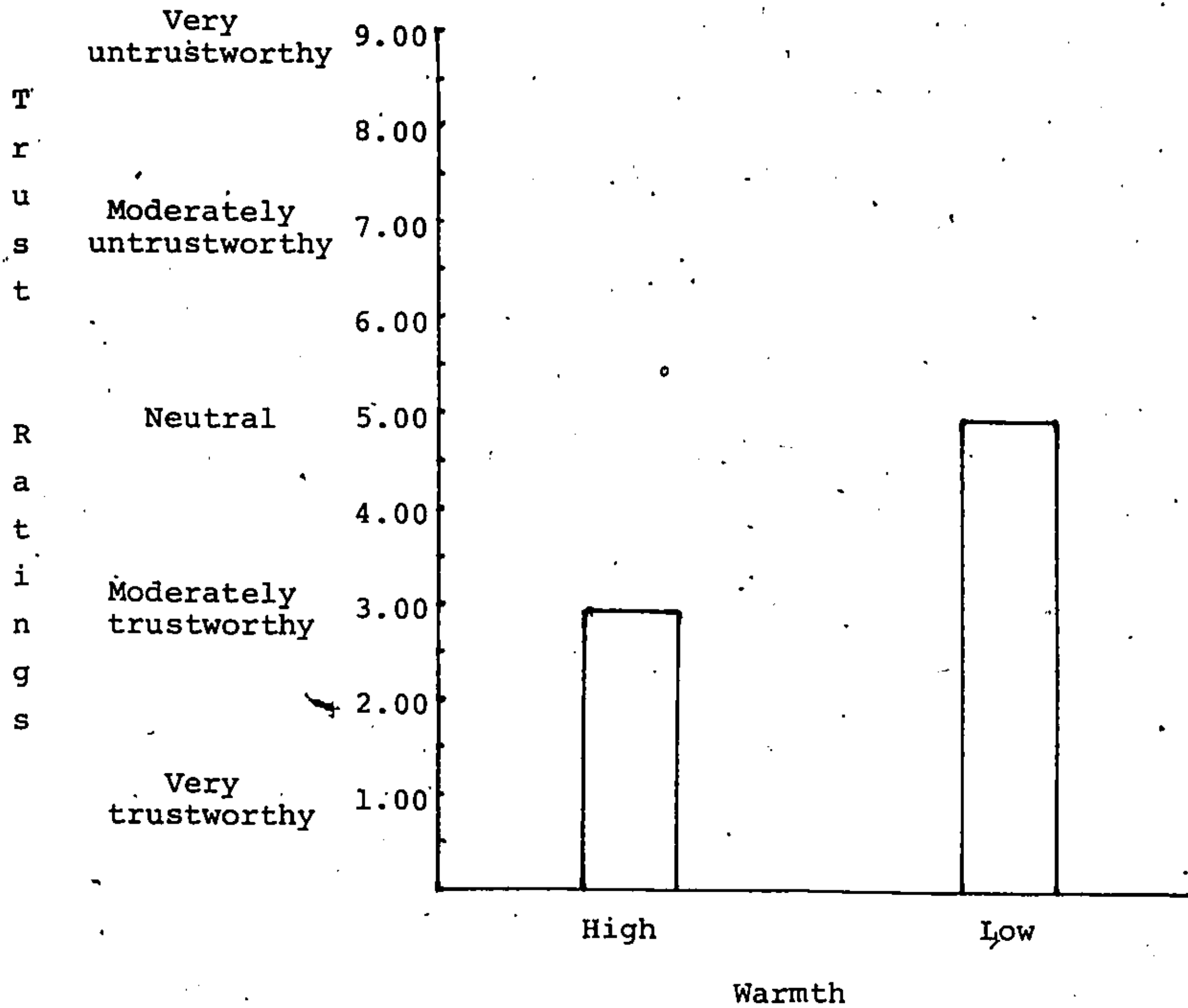

Figure 3. Main Effect of Therapist Nonpossessive Warmth on Client Trust of the Therapist.

Thus it appears that a therapist who is judged as having either high nonpossessive warmth or high value similarity to the client, or both, elicits the client's greater trust in him. It is especially notable that, if either one of these conditions exists, the addition of the other does not appear to contribute further to the client's trust to a significant degree.

The analysis of variance for client attribution of therapeutic effectiveness revealed significant main effects of both client-therapist value similarity ($p < .001$) and therapist nonpossessive warmth ($p < .001$) (see Table 8). In this analysis no significant interaction effects were found.

The significant main effect for value similarity indicates that high value similarity elicits greater client ratings of effectiveness ($\bar{X}=3.30$) than does low value similarity ($\bar{X}=4.85$) (see Figure 4). The significant main effect for warmth indicates that high warmth elicits greater client ratings of effectiveness ($\bar{X}=3.03$) than does low warmth ($\bar{X}=5.13$) (see Figure 5).

Thus it appears that a therapist judged as having high nonpossessive warmth or high value similarity to the client, or both, elicits the client's greater attribution of therapeutic effectiveness. Unlike the situation regarding client trust of the therapist, the therapist who is judged as exhibiting both of these conditions will be seen as substantially more effective than one who shows either one

Table 8

Summary of Analysis of Variance:

Effects of Warmth and Value Similarity

on Client Attribution of Therapeutic Effectiveness

Source of Variation	SS	df	MS	F
Warmth (W)	88.200	1	88.200	35.262***
Value Similarity (V)	48.050	1	48.050	19.210***
W X V	7.200	1	7.200	2.879
Residual	190.097	76	2.501	
Total	333.547	79	4.222	

***$p < .001$

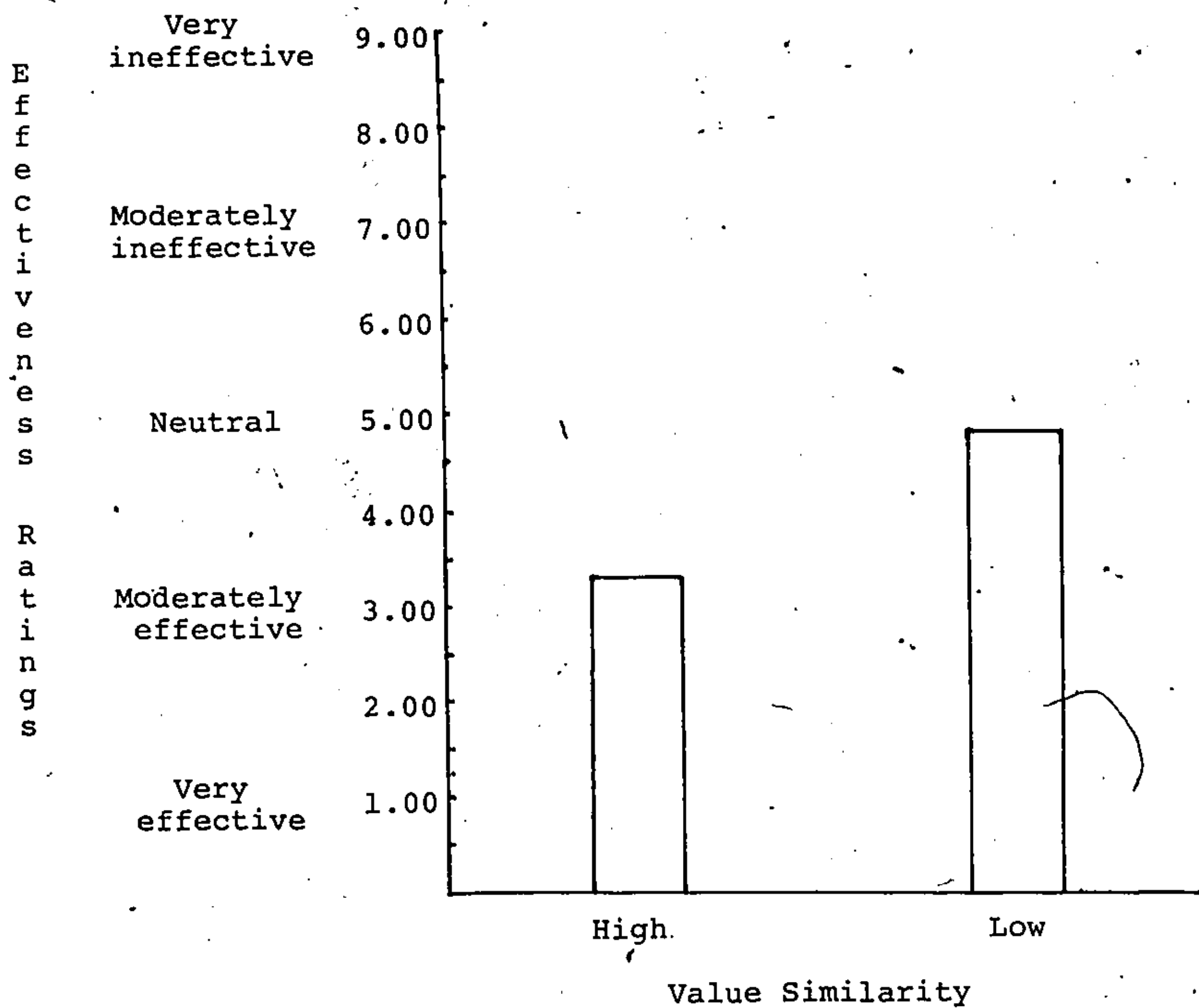

Figure 4. Main Effect of Client-Therapist Value Similarity on Client Attribution of Therapeutic Effectiveness.

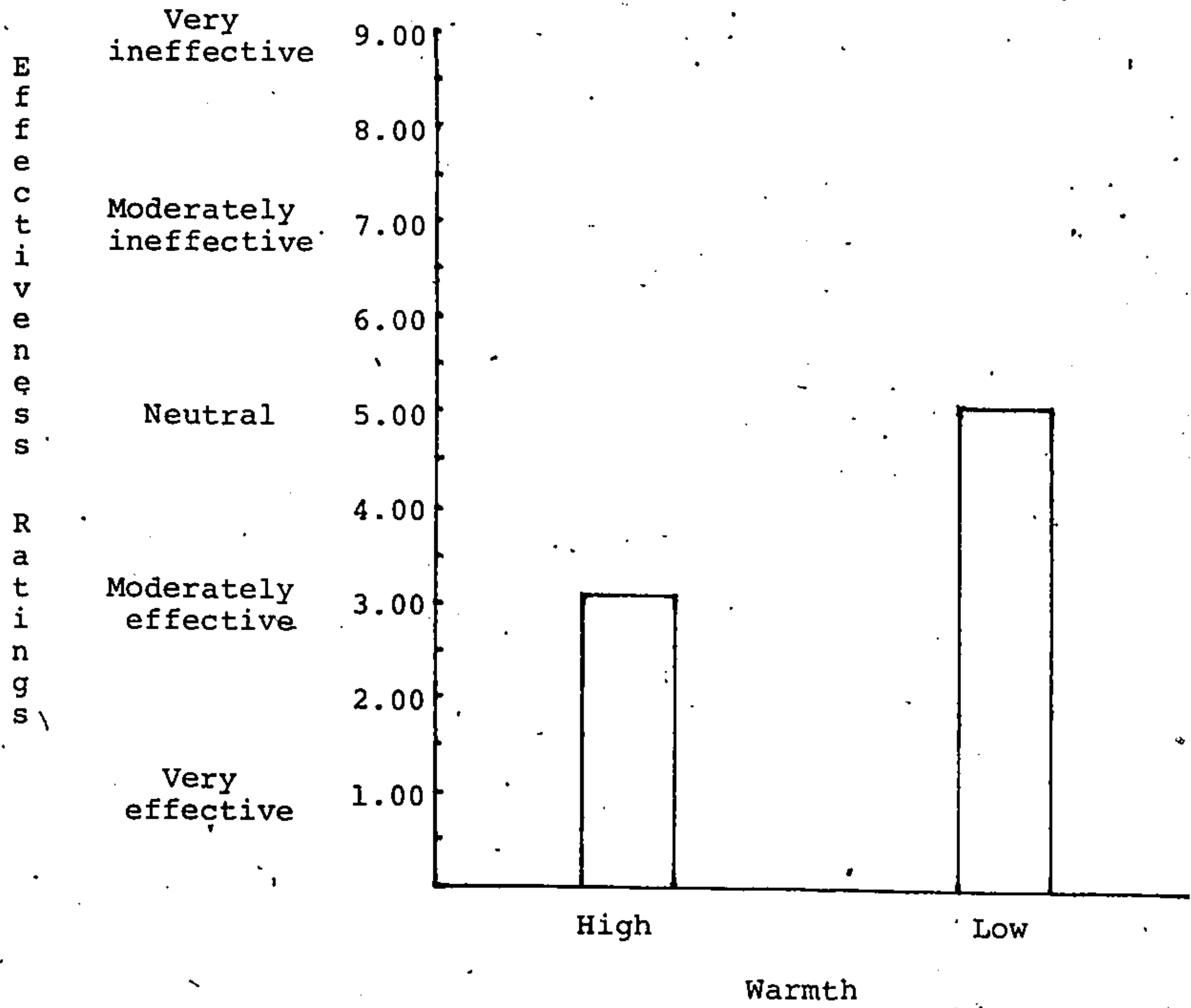

Figure 5. Main Effect of Therapist Nonpossessive Warmth on Client Attribution of Therapeutic Effectiveness.

condition alone.

Correlation ratios (Downie & Heath, 1974) were computed to demonstrate the relationship of the two independent variables to each dependent variable. The resulting eta coefficients, as well as multiple correlations, are presented in Table 9 for client trust of the therapist and in Table 10 for client attribution of therapeutic effectiveness.

For client trust of the therapist, an eta coefficient of .48 indicates that the main effect of nonpossessive warmth accounts for 23.04% of the variance. An eta coefficient of .42 shows that the main effect of value similarity explains 17.64% of the variance. The multiple correlation (R) of value similarity and nonpossessive warmth with client trust of the therapist is .634. Thus 40.2% (taken from R^2) of the variance of client trust is accounted for by the combined effects of value similarity and nonpossessive warmth.

For client attribution of therapeutic effectiveness, eta coefficients of .51 and .38 indicate respectively that 26.01% of the variance is explained by the main effects of nonpossessive warmth, and 14.44% of the variance is explained by the main effects of value similarity. Value similarity and nonpossessive warmth correlate .639 (R) with client attribution of therapeutic effectiveness, thus explaining 40.8% of the variance.

Table 9

Eta Coefficients and Multiple Correlation

of Warmth and Value Similarity

with Client Trust of the Therapist

Variable	Eta	Eta^2	% of Accounted Variance
Warmth	.48	.2304	23.04
Value Similarity	.42	.1764	17.64
Multiple $\underline{R}^2$	.402		
Multiple $\overline{\underline{R}}$	.634		

Table 10

Eta Coefficients and Multiple Correlation

of Warmth and Value Similarity

with Client Attribution of Therapeutic Effectiveness

Variable	Eta	Eta^2	% of Accounted Variance
Warmth	.51	.2601	26.01
Value Similarity	.38	.1444	14.44
Multiple R^2	.408		
Multiple $\bar{R}$	.639		

4. Distribution of Demographic Variables

Although subjects were randomly assigned to the different treatment conditions and F max tests indicated homogeneity of variance for these conditions, it seemed possible that certain subject characteristics might not be randomly distributed across the various treatment groups. Such an occurrence could contribute to the highly significant differences found between treatment conditions and could warrant the use of analysis of covariance to adjust for the bias effects of the covariate.

To investigate this possibility, age, faculty of study, and first language were chosen as subject characteristics that potentially could exert such an effect on the dependent variables. (The other two recorded demographic characteristics, "degree sought" and "year already completed," seemed somewhat redundant of "faculty" and "age" information respectively.)

Chi square statistics were calculated between the age distributions in the high versus low warmth treatment groups, and between the age distributions in the high versus low value similarity treatment groups. As can be seen in Appendix 17, no statistically significant differences ($p > .05$) were revealed. Similarly, the chi squares conducted for faculty differences between the high and low warmth groups and between the high and low value similarity groups in-

dicated no statistically significant differences ($p > .05$) (see Appendix 18). Finally, Appendix 19 shows that the chi squares computed for differences in first language between the high and low warmth groups and between the high and low value similarity groups were not statistically significant ($p > .05$).

Thus subjects' ages, faculties of study, and first languages were randomly distributed across high and low conditions of value similarity and of nonpossessive warmth. These findings reduce the likelihood of confounding by constant errors due to systematically covarying demographic variables.

5. Posttest Analyses

For the posttest analysis, the means, standard deviations, variances, and number of subjects in each value similarity by nonpossessive warmth condition were computed for questions 3 through 14 (see Appendix 20).

The analysis of variance for question 3 (i.e. In making the above rating of your trust for Dr. Ryan, to what degree did you base your decision on the value system information?) yielded no significant main effects or interaction, although the main effect of warmth approached significance ($p = .060$) (see Table 11).

The analysis of variance for question 4 (i.e. In making the above rating of your trust for Dr. Ryan, to what degree

did you base your decision on the description of Dr. Ryan given by his client?) indicated no significant main effects, but a significant interaction ($p < .05$) was demonstrated (see Table 12). Thus the effects of warmth are not consistent across the two levels of value similarity (see Figure 6). Within the high warmth condition, the calculation of simple main effects revealed that the mean for high value similarity (4.35) was not significantly different ($p > .05$) from the mean for low value similarity (5.55). Also within the low warmth condition, the mean for high value similarity (6.40) was not significantly different ($p > .05$) from that for low value similarity (4.95). Within the high value similarity condition, however, the mean for high warmth (4.35) was significantly ($p < .01$) lower than the mean for low warmth (6.40). Within the low value similarity condition, the mean for high warmth (5.55) was not significantly different ($p > .05$) from that for low warmth (4.95) (see Table 13).

On question 5 (i.e. In making the above rating of how effective you expect psychotherapy to be, to what degree did you base your decision on the value system information?), no significant main effects or interaction were revealed (see Table 14).

On question 6 (i.e. In making the above rating of how effective you expect psychotherapy to be, to what degree did you base your decision on the description of Dr. Ryan given by his client?), the analysis of variance yielded no sig-

nificant main effects or interaction, but the main effect of value similarity approached significance ($p=.063$) (see Table 15).

No significant main effects or interactions were indicated by analyses of variance for question 7 (i.e. Based on the information you were given regarding Dr. Ryan, how difficult was it for you to rate your trust for Dr. Ryan?), question 8 (i.e. Based on the information you were given regarding Dr. Ryan, how difficult was it for you to rate how effective you expect psychotherapy to be?), and question 9 (i.e. In your opinion how important is the therapist's value system (as compared with your own) for your trust for the therapist?). These results are presented in Tables 16, 17, and 18 respectively.

On question 10 (i.e. In your opinion how important is another client's description of the therapist for your trust for the therapist?), only the main effect of value similarity was significant ($p < .05$), with the mean for high value similarity (6.00) higher than the mean for low value similarity (4.97) (see Table 19). The eta coefficient of value similarity with question 10 was .23, indicating that 5.29% of the variance on question 10 was explained by value similarity.

The analysis of variance for question 11 (i.e. In your opinion how important is the therapist's value system (as compared with your own) for your estimation of his therapeutic effectiveness?) yielded a significant main effect ($p < .05$)

for value similarity (see Table 20). The mean for high value similarity (4.32) was lower than that for low value similarity (5.46). With an eta coefficient of .27, 7.29% of the variance on question 11 was accounted for by the value similarity manipulation.

On question 12 (i.e. In your opinion how important is another client's description of the therapist for your estimation of his therapeutic effectiveness?), the analysis of variance showed no main effects or interaction that reached significance (see Table 21).

The analysis of variance for question 13 (i.e. How confident are you about your rating of Dr. Ryan's trustworthiness based on the information you were given?) indicated a significant main effect for nonpossessive warmth ($p < .05$) (see Table 22). The high warmth mean (3.79) was lower than the low warmth mean (4.95). The eta coefficient between nonpossessive warmth and question 13 was .28, which indicated that 7.84% of the variance was explained by nonpossessive warmth.

Finally, on question 14 (i.e. How confident are you about your rating of the expected effectiveness of therapy based on the information you were given?), no main effects or interaction were significant (see Table 23). The main effect of nonpossessive warmth, however, approached significance ($p = .066$).

6. Summary

The results of the statistical analyses may be summarized as follows:

1. Client-therapist value similarity and therapist nonpossessive warmth both had significant main effects on client trust of the therapist. High value similarity and high warmth elicited higher trust ratings than did low value similarity and low warmth, respectively.

2. An interaction effect of client-therapist value similarity and therapist nonpossessive warmth on trust was demonstrated. Within the low warmth condition, high value similarity elicited greater trust than low value similarity. Within the low value similarity condition, high warmth elicited greater trust than low warmth.

3. Client-therapist value similarity and therapist nonpossessive warmth both had significant main effects on client attribution of therapeutic effectiveness. High value similarity and high warmth elicited higher effectiveness ratings than did low value similarity and low warmth, respectively.

4. The experimental manipulation of client-therapist value similarity and therapist nonpossessive warmth was perceived by subjects.

5. The order of presentation of the two independent variables did not significantly effect subjects' responses.

6. There was no evidence that relevant demographic variables (subjects' ages, faculties of study, and first languages) were not randomly distributed across high and low conditions of client-therapist value similarity and of therapist nonpossessive warmth.

7. On the posttest questions, client-therapist value similarity had a significant main effect on questions 10 and 11, therapist nonpossessive warmth had a significant main effect on question 13, and their interaction effect was significant on question 4.

Table 11

Summary of Analysis of Variance:

Effects of Warmth and Value Similarity

on Question 3

Source of Variation	*SS*	*df*	*MS*	*F*
Warmth (W)	13.612	1	13.612	3.646
Value Similarity (V)	1.012	1	1.012	0.271
W X V	2.112	1	2.112	0.566
Residual	283.748	76	3.734	
Total	300.485	79	3.804	

Table 12

Summary of Analysis of Variance:

Effects of Warmth and Value Similarity

on Question 4

Source of Variation	SS	df	MS	F
Warmth (W)	10.512	1	10.512	1.972
Value Similarity (V)	0.312	1	0.312	0.059
W X V	35.112	1	35.112	6.585*
Residual	405.245	76	5.332	
Total	451.183	79	5.711	

*$p < .05$

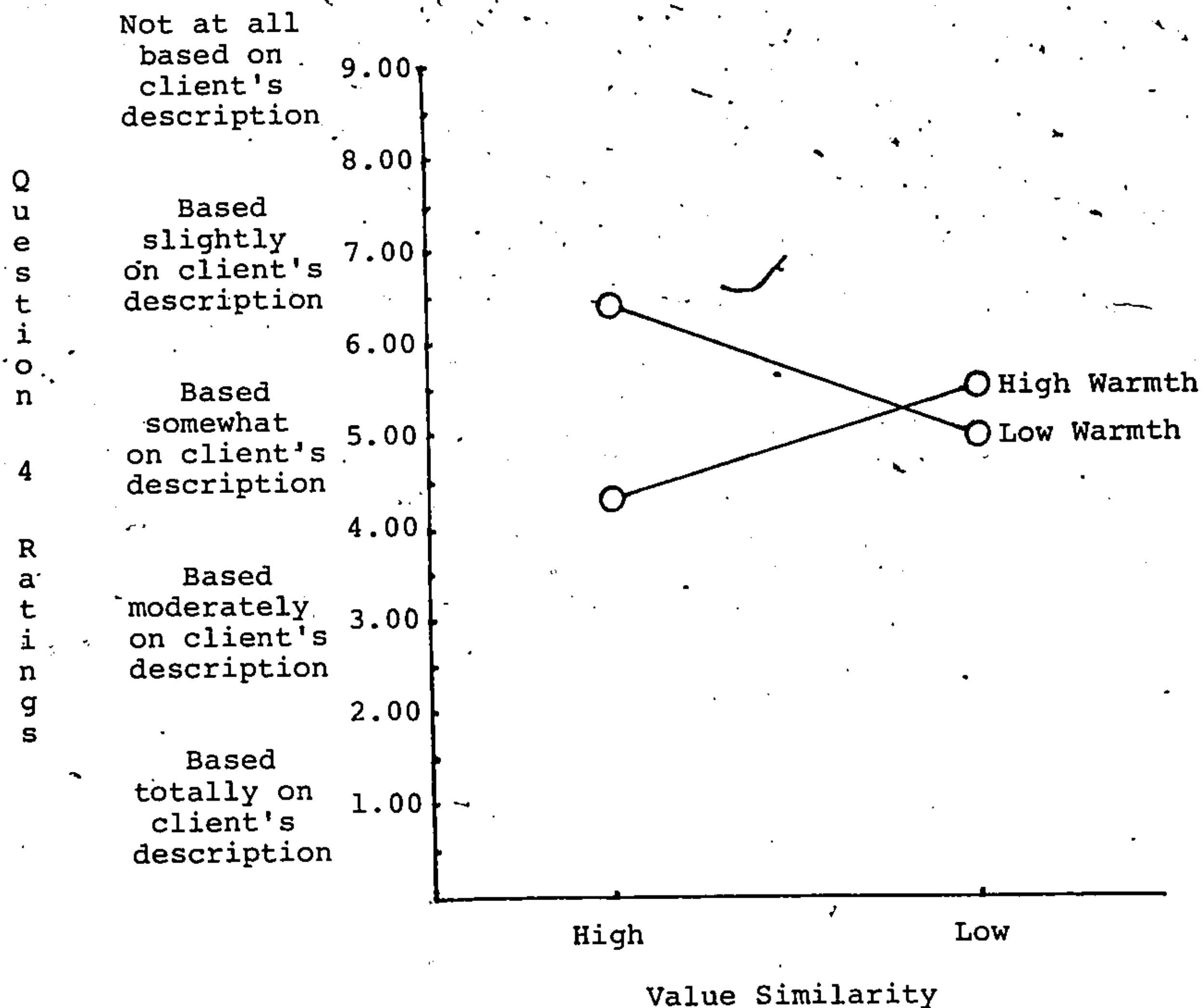

Figure 6. Interaction Effects of Client-Therapist Value Similarity and Therapist Nonpossessive Warmth on Question 4.

Table 13

Simple Main Effects: Effects of

Warmth and Value Similarity Interaction

on Question 4

Source of Variation	SS	df	MS	F
Warmth (W)	10.512	1	10.512	1.972
W at high V	42.025	1	42.025	7.882**
W at low V	3.600	1	3.600	0.675
Value Similarity (V)	0.312	1	0.312	0.059
V at high W	14.400	1	14.400	2.701
V at low W	21.025	1	21.025	3.943
W X V	35.112	1	35.112	6.585*
Residual	405.245	76	5.332	
Total	451.183	79	5.711	

*$p < .05$
**$p < .01$

Table 14

Summary of Analysis of Variance:

Effects of Warmth and Value Similarity

on Question 5

Source of Variation	SS	df	MS	F
Warmth (W)	4.512	1	4.512	1.069
Value Similarity (V)	0.612	1	0.612	0.145
W X V	0.612	1	0.612	0.145
Residual	320.747	76	4.220	
Total	326.485	79	4.133	

Table 15

Summary of Analysis of Variance:

Effects of Warmth and Value Similarity

on Question 6

Source of Variation	SS	df	MS	F
Warmth (W)	10.512	1	10.512	1.783
Value Similarity (V)	21.012	1	21.012	3.564
W X V	2.812	1	2.812	0.477
Residual	448.045	76	5.895	
Total	482.383	79	6.106	

Table 16

Summary of Analysis of Variance:

Effects of Warmth and Value Similarity

on Question 7

Source of Variation	SS	df	MS	F
Warmth (W)	8.450	I	8.450	1.645
Value Similarity (V)	0.200	1	0.200	0.039
W X V	6.050	1	6.050	1.178
Residual	390.296	76	5.135	
Total	404.996	79	5.127	

Table 17

Summary of Analysis of Variance:

Effects of Warmth and Value Similarity

on Question 8

Source of Variation	SS	df	MS	F
Warmth (W)	1.250	1	1.250	0.241
Value Similarity (V)	0.200	1	0.200	0.039
W x V	6.050	1	6.050	1.166
Residual	394.296	76	5.188	
Total	401.796	79	5.086	

Table 18

Summary of Analysis of Variance:

Effects of Warmth and Value Similarity

on Question 9

Source of Variation	SS	df	MS	F
Warmth (W)	5.512	1	5.512	1.328
Value Similarity (V)	2.112	1	2.112	0.509
W X V	0.313	1	0.313	0.075
Residual	315.548	76	4.152	
Total	323.486	79	4.095	

Table 19

Summary of Analysis of Variance:

Effects of Warmth and Value Similarity

on Question 10

Source of Variation	SS	df	MS	F
Warmth (W)	3.612	1	3.612	0.748
Value Similarity (V)	21.012	1	21.012	4.353*
W X V	4.512	1	4.512	0.935
Residual	366.846	76	4.827	
Total	395.984	79	5.012	

*$p < .05$

Table 20

Summary of Analysis of Variance:

Effects of Warmth and Value Similarity

on Question 11

Source of Variation	SS	df	MS	F
Warmth (W)	5.341	1	5.341	1.211
Value Similarity (V)	25.205	1	25.205	5.715*
W X V	0.342	1	0.342	0.077
Residual	330.781	75	4.410	
Total	361.971	78	4.641	

$*p < .05$

Table 21

Summary of Analysis of Variance:

Effects of Warmth and Value Similarity

on Question 12

Source of Variation	SS	df	MS	F
Warmth (W)	0.149	1	0.149	0.032
Value Similarity (V)	6.803	1	6.803	1.464
W X V	1.985	1	1.985	0.427
Residual	348.552	75	4.647	
Total	357.465	78	4.583	

Table 22

Summary of Analysis of Variance:

Effects of Warmth and Value Similarity

on Question 13

Source of Variation	SS	df	MS	F
Warmth (W)	26.199	1	26.199	6.625*
Value Similarity (V)	1.215	1	1.215	0.307
W X V	0.444	1	0.444	0.112
Residual	296.597	75	3.955	
Total	324.605	78	4.162	

*$p < .05$

Table 23

Summary of Analysis of Variance:

Effects of Warmth and Value Similarity

on Question 14

Source of Variation	SS	df	MS	F
Warmth (W)	12.432	1	12.432	3.492
Value Similarity (V)	1.299	1	1.299	0.365
W X V	0.864	1	0.864	0.243
Residual	266.969	75	3.560	
Total	281.669	78	3.611	

CHAPTER IV

DISCUSSION

This section presents an analysis and discussion of the results, including a discussion of the main findings and consideration of the posttest analysis findings. The discussion ends with the conclusions that may be drawn and some of the directions that may be taken by future research.

1. Main Findings

The finding that client-psychotherapist value similarity had positive effects on client trust of the therapist may be interpreted according to several lines of theoretical reasoning. For example, the client's perception of the therapist's values as similar to his own might have led to his perception of the therapist as more predictable or familiar, thereby decreasing his sense of risk or vulnerability in the therapeutic situation. This reduction of risk may have been responsible for the increase in trust for the therapist of similar values, since it appears easier to trust another when less risk is involved (Giffin, 1967).

It is also possible that the client's awareness of his therapist's similar values led to his judgment that the

therapist possessed those qualities (Giffin, 1967) that characterize a trustworthy person: expertness, reliability, good intentions, dynamism, and attraction. For example, the client might perceive the value-similar therapist as more dynamic, or active in communication, because they share a common value system and should have many areas of interest to share verbally. Judgments of the other trustworthiness qualities (Giffin, 1967) could be similarly drawn and could increase the client's trust for the therapist.

It is also possible to conceive of the positive effects of the therapist's nonpossessive warmth on trust in these terms. On the basis of the therapist's warmth, the client might have judged that the therapist possessed the characteristics of a trustworthy person (Giffin, 1967), i.e. expertness, reliability, good intentions, dynamism, and attraction. For example, the therapist's commitment and effort to understand, seemingly represented in the high warmth description of Dr. Ryan, is possibly one element of nonpossessive warmth (Raush & Bordin, 1957) that could convey the therapist's expertness and his good intentions, and therefore his trustworthiness (Giffin, 1967). Similar links between the other components of warmth, e.g. its active, responsive nature (Truax & Mitchell, 1971), and the other elements of trustworthiness, e.g. dynamism (Giffin, 1967), would further contribute to the client's judgments of the therapist's

trustworthiness.

Panzer (1975) previously found that interpersonal attitude similarity had positive effects on the credibility of a source in a non-clinical setting. The present study supports and extends these findings in demonstrating similar effects of another kind of interpersonal similarity, i.e. value similarity, on interpersonal trust, a variable comparable to source credibility. It also suggests that these similarity effects apply in the psychotherapy context as they do in other interpersonal settings.

The findings that clients attributed greater trustworthiness as well as greater therapeutic effectiveness to therapists with similar values to their own may be interpreted according to Byrne's (1971) reinforcement-affect model of interpersonal attraction. This theory holds that a person who is attitudinally similar to another person is rewarding to the latter due to his capacity to provide consensual validation. As a result the individual associates positive

affect with the attitudinally similar person and evaluates him positively.

Previous research (Good & Good, 1972; Good, 1975) has demonstrated such positive effects of attitude similarity on clients' (simulated) perceptions of therapeutic effectiveness. The present findings suggest that interpersonal value similarity seems to operate in a similar manner to attitude similarity in eliciting one individual's positive evaluation of another (Byrne, 1971), i.e. regarding his therapeutic effectiveness. This is not surprising in light of the similarity of the concepts of value and attitude (Rokeach, 1973) described earlier.

Beyond extending the findings of Good and Good (1972) and Good (1975) to value similarity effects, the present research also found client-therapist value similarity to have positive effects (under specified conditions of low therapist nonpossessive warmth) on a different dependent variable: client trust of the therapist. This response also should result from the client's positive affective association with the therapist, provided we view the client's rating of the therapist's trustworthiness as another evaluative response (Byrne, 1971). Based on the comparable effects of value similarity and attitude similarity on clients' attribution of therapeutic effectiveness, the present results suggest that client-therapist attitude similarity, as studied by Good and Good (1972) and Good (1975),

might also effect the client's trust for the therapist.

Shotland (1968) has indicated that clients with terminal values (measured by the Value Survey) similar to those of their therapists remained in therapy longer than did those with dissimilar values to those of their therapists. Tessler (1975) has shown a positive relationship of client-therapist value similarity (values measured by the Ways to Live Scale) to the client's satisfaction with the therapeutic relationship.

The present study corroborates these findings by showing additional promise of positive therapeutic effects of client-therapist value similarity. The investigation of both value similarity and therapist nonpossessive warmth in the same study allowed an examination of the possible interaction effects of these variables. Thus the present study also extends the above studies by qualifying the effects of client-therapist value similarity in regard to its interaction with therapist nonpossessive warmth. More specifically, high value similarity increases client trust of the therapist only when therapist nonpossessive warmth is low, while high value similarity increases the client's attribution of therapeutic effectiveness regardless of the level of the therapist's warmth.

By demonstrating how client trust and effectiveness attribution are influenced by client-therapist value sim-

ilarity, the present findings also offer a clarification for the findings of Shotland (1968) and Tessler (1975). Clients with similar values may have stayed in therapy longer and may have been more satisfied with the therapeutic relationship because they perceived therapy to be more effective; or, if the therapist's nonpossessive warmth was low, because they had more trust for the therapist. This interpretation is highly speculative, however, since such cause-effect relationships can not be ascertained. For example, it is possible that clients first became satisfied with the relationship characterized by high value similarity and consequently trusted the therapist more, thereby remaining in therapy longer.

Two previous studies have found no significant effects of client-therapist value similarity on duration in therapy (Pettit, 1973) or on clients' self-concept change (Bleyle, 1973). The incompatibility of these results with the findings of the present study are perhaps related to the use in these studies of a different measure of values, the Allport-Vernon-Lindzey Study of Values. As mentioned earlier, the latter test seems to tap a set of value preferences more global in nature than that measured by the Rokeach Value Survey. Although the Allport-Vernon-Lindzey measure was apparently insensitive to the kind of value similarity that would effect changes in self-concept or duration in therapy,

it would be interesting to investigate the possible effects on client trust and perceived therapeutic effectiveness using this different measure of value similarity.

Returning to a theoretical interpretation of the present findings, the effects of client-therapist value similarity on client trust of the therapist and client attribution of therapeutic effectiveness are explainable in terms of theories of interpersonal attraction other than Byrne's (1971). For example, Thibault and Kelley (1959) have proposed an exchange theory which holds that an individual's behavior which satisfies another individual's needs is rewarding to the latter; behavior which has unpleasant consequences for the latter is viewed as a cost. The outcome of an interaction yields a "profit" or a "loss" for the person dependent upon whether the reward is greater or less than the cost (Murstein, 1971). Using this model of attraction, it is possible that clients are more attracted to value-similar therapists because they have learned that people with similar backgrounds or values are rewarding. More specifically, people with similar value systems "provide consensual validation that the individual is right

in adhering to these values, since respected others also do so" (Murstein, 1971, p. 18). Secondly, communication with value-similar others is less difficult "since their values flow along similar lines" (Murstein, 1971, p. 18). Thus client-therapist value similarity would result in a higher level of attraction, and subjects (in the role of clients) would see their value-similar therapist in a positive light, which might generalize so that they rate him higher in trustworthiness and therapeutic effectiveness.

Whereas Byrne (1971) and Thibault and Kelley (1959) essentially conceive of attraction in terms of learning theory (Murstein, 1971), a number of other theories propose models of cognitive consistency that may be of use in explaining attraction and, of more relevance to the present study, in explaining the effect of attitude or value similarity (Abelson & Rosenberg, 1958; Festinger, 1957; Newcomb, 1953; Osgood & Tannenbaum, 1955). These theories share the basic assumption that man strives toward consistency in his attitudes, behavior, and/or perceptions. When personal consistency is absent, tension or discomfort results, and the individual is driven to modify his psychological world to regain consistency (Kiesler, Collins, & Miller, 1969).

Balance theory (Heider, 1946, 1958) is one cognitive theory of attraction which deals with the attitudes and perceptions of a person (P) toward another person (O) and/or

toward an object (X). The person may have positive or negative feelings or "sentiments" toward O and/or toward X. He may also perceive a "unit" relationship with O, e.g. via similarity, or between either person and X, e.g. via ownership of X. A state of balance or harmony, which the person attempts to maintain, is achieved when all three relationships are positive or when two are negative and one is positive. When imbalance occurs the individual attempts to change the relationship(s) so as to reduce stress and restore balance. (Newcomb (1953) has modified and expanded Heider's work to include, among other things, consideration of O's perceptions in determining the state of balance.)

In the present study the value system of the subject (in the role of the client) (P) can be viewed as the object (X) with which P would perceive a positive unit relationship. If the therapist (O) has a value system of high similarity to that of P, a second positive relationship would exist. P's positive feelings toward O would thus provide the third positive relationship, resulting in a state of balance. However, if the therapist (O) has a value system of low similarity to that of P, P's negative feelings toward O would be needed to provide a total of two negative relationships and one positive relationship, which would together yield a state of balance. Thus, assuming that the client's attraction to the therapist leads to his attributions of the therapist's trustworthiness and effectiveness,

balance theory seems to provide a useful model to account for the results obtained regarding client-therapist value similarity.

A variety of theoretical models, only a few of which were discussed, can be used to interpret the observed positive effects of client-therapist value similarity on client trust and effectiveness attribution. Byrne's (1971) reinforcement-affect model appears especially valuable in the present study, however, because it also seems to accomodate the findings regarding the effects of therapeutic nonpossessive warmth. As discussed earlier, "the core of the model is the idea that attraction toward a person depends on the affect associated with him, and reinforcement is simply one source of that affect" (Clore & Byrne, 1974, p. 148). The authors thus seem to place considerable weight on the role of emotion in determining attraction and other "evaluative responses." Attitude similarity, or value similarity in the present study, represents just one of a number of circumstances that are potentially reinforcing to the individual and therefore capable of eliciting a positive affective response.

It appears that the positive effects of therapist nonpossessive warmth observed in the present study can also be interpreted according to Byrne's model if the subject's experience of the therapist's warmth is viewed as an internal mediational state which is reinforcing to the client,

and which therefore is an internal stimulus to positive evaluative responses. In contributing a sense of safety and increased self-acceptance to the therapeutic relationship (Meador & Rogers, 1973), the therapist's nonpossessive warmth would seem to reduce the client's anxiety. Similarly the intimacy and lack of domination in the warm relationship (Truax & Mitchell, 1971), as well as the therapist's commitment to understand and accept the client (Raush & Bordin, 1957; Rogers, 1961), would seem to provide an anxiety-reducing, supportive atmosphere which could induce the client's positive feelings. These feelings, or "implicit affective response" (Clore & Byrne, 1974) would then be associated with the therapist, and the latter would be evaluated positively in terms of his trustworthiness and therapeutic effectiveness, among other possible factors.

The interaction effect observed in the case of the client's trust of the therapist also seems explainable using Byrne's (1971) reinforcement-affect model. Viewing client-therapist value similarity and the therapist's nonpossessive warmth as two sources of the client's positive affect, it could be hypothesized that there is a point of diminishing returns in positive affect with the presence of a second source. Thus a ceiling effect is proposed wherein the provision of increased positive affect is not accompanied by an increase in the subject's trust.

Interestingly, this interaction effect does not occur in the case of the client's attribution of therapeutic effectiveness. The presence of both sources of information (and perhaps positive affect) elicits even higher ratings of effectiveness than the presence of either source alone. Apparently when it comes to a seemingly broader judgment of the therapist's effectiveness, the subject feels that "the more evidence, the better."

The finding that nonpossessive warmth had significant effects on the client's attribution of therapeutic effectiveness complements the previous research which has shown the positive influence of warmth on other measures of therapeutic success, e.g. MMPI changes (Schauble & Pierce, 1974), or client satisfaction (Bent, Putnam, Kiesler, & Nowicki, 1976). The use of clients' own ratings of therapeutic effectiveness in the present study renders the significant effects more valuable since many previous studies used only measures of success external to the clients' perceptions, e.g. peer ratings (Hayden, 1975). While these objective measures are equally important in assessing therapeutic gain, findings based on clients' own ratings provide the necessary balance for a complete picture of therapeutic effects.

The observed effect of therapist warmth on client trust of the therapist adds a new factor to those process

variables empirically shown to be influenced by the therapist's warmth, e.g. self-exploration (Altman, 1977). It also provides empirical support (with qualifications) for the relationship of therapist warmth and client trust indirectly suggested by Rogers (1951, 1961) in the warmth literature and theoretically proposed by Giffin in the trust literature (Giffin, 1967; Patton & Giffin, 1974). For example, Patton and Giffin (1974) wrote:

> irrational distrust of others is significantly reduced by interaction with others and by counselors who show empathy, warmth, and genuineness; thus the inference - an environment that can measurably increase interpersonal trust is one in which a person is shown high degrees of these elements of rapport (p. 447).

Within the limitations of a simulated design, the present findings qualified the relationship of therapist warmth and client trust expected by Patton and Giffin (1974) by demonstrating an interaction effect of warmth and value similarity on client trust of the therapist. More specifically, high therapist nonpossessive warmth significantly increased client trust of the therapist only when client-therapist value similarity was low. Furthermore, the fact that approximately 60% of the variance of client trust of the therapist is still unexplained after the effects of warmth and value similarity are withdrawn (see Table 9) indicates that there are factors other than value similarity and warmth that significantly contribute to a client's trust for his therapist.

The finding that a client's trust for his therapist is significantly influenced by his perception of (1) client-therapist value similarity and (2) therapist nonpossessive warmth, albeit under specified conditions, represents a potentially significant contribution to the literature which has investigated the role of trust in psychotherapy. Much of the previous work in this area has been theoretical (Deutsch, 1962; Rogers, 1951; Tyler, 1965) or correlational (Vondracek & Marshall, 1971; Wheeless & Grotz, 1977) in nature. Research which has focused on client trust of the therapist as a dependent variable has been somewhat limited to the effects of specific therapist characteristics, e.g. age (Ryan, 1976), or therapist behavior, e.g. handshake and desk conditions (Smith, 1974) on trust. The present study expands this literature by demonstrating a significant relationship of two important therapeutic factors to client trust of the therapist, although the generalizability of these findings is certainly limited by the simulated design that was used.

2. Posttest Analysis

To shed further light on subjects' ratings of trust and therapeutic effectiveness, subjects' responses to the posttest questions were examined. These responses revealed subjects' own perceptions of the relative importance of value similarity and nonpossessive warmth, as well as other

perceptions and feelings related to their rating task.

The means of responses to questions 3 through 6 suggest that subjects felt that they tended to use each source of information less than "moderately" but more than "slightly" in rating both their trust in the therapist and therapeutic effectiveness. More specifically, in rating their trust for

the therapist, subjects felt that they based their ratings on value similarity information ($\overline{X}$=3.76, SD=1.95 on question 3) significantly more (t=4.11, df=79, $p < .001$) than on nonpossessive warmth information ($\overline{X}$=5.31, SD=2.39 on question 4). In rating therapeutic effectiveness, subjects did not feel that they relied on value similarity information ($\overline{X}$=4.64, SD=2.03 on question 5) significantly more (t=1.78, df=79, $p > .05$) than on nonpossessive warmth information ($\overline{X}$=5.29, SD=2.47 on question 6).

These findings seem consistent with subjects' responses to questions 9 through 12. In general, both value similarity information and nonpossessive warmth information were perceived as less than "moderately important" but more than "slightly important" for subjects' trust for the therapist and for their estimation of therapeutic effectiveness. More specifically, subjects viewed value similarity ($\overline{X}$=3.86, SD=2.02 on question 9) as significantly (t=4.57, df=79, $p < .001$) more important than another client's description of the therapist ($\overline{X}$=5.49, SD=2.24 on question 10) for their trust of the therapist. For their estimation of therapeutic effectiveness also, subjects rated value similarity ($\overline{X}$=4.89, SD=2.15 on question 11) as significantly (t=2.80, df=78, $p < .01$) more important than another client's description ($\overline{X}$=5.83, SD=2.15 on question 12).

The analysis of the posttest questions discussed to this point, then, seems to imply that subjects used both

the value similarity and the warmth information to a moderate degree in performing their rating tasks. They also tended to view both sources of information as fairly important factors in determining their trust for the therapist and the latter's effectiveness. More specifically, however, responses to these questions indicated subjects' greater use of the value similarity information in making their trust ratings, and a greater perceived importance of value similarity than warmth information for their estimations of both trust and therapeutic effectiveness.

In attempting to understand subjects' apparent preference for value similarity, differences in the manner of presenting the two sources of information seem noteworthy. In regard to the value similarity information, subjects had to invest more energy in (a) producing their own values, and (b) estimating the degree of value similarity to the therapist, than in the case of the warmth information. In the latter case subjects were given an already complete description of the therapist which possibly required less personal involvement on the subjects' part before it could be used as a basis for the rating task. Subjects also had no assurance that they would experience the therapist's warmth as did the "client" who wrote the description. Thus the value similarity information was perhaps more intimately connected to subjects' own direct experience, whereas the warmth information was more related to the experience of a

remote other. It was possibly as a result of this greater personal investment in, or relevance of, the value similarity information that subjects tended to use this information more in their trust ratings, and to view it as more important in regard to trust and therapeutic effectiveness.

In light of this apparent preference for value similarity, an examination of subjects' responses to questions 13 and 14 is of special interest. The significant main effect for nonpossessive warmth on question 13 indicated that subjects presented with the high warmth therapist had more confidence in their rating of trust than did subjects presented with the low warmth therapist. While not statistically significant, the difference between the means for question 14 demonstrates the same trend (p=.066): that subjects with the high warmth therapist had more confidence in ratings of therapeutic effectiveness than did subjects given the low warmth therapist. In contrast, high client-therapist value similarity led to no more confidence in trust and effectiveness ratings than did low value similarity.

Thus, while subjects seemed to display a greater reliance on (questions 3 through 6) and perceived importance of (questions 9 through 12) client-therapist value similarity than for therapist nonpossessive warmth, nonpossessive warmth seemed to exert a greater influence on confidence ratings (questions 13 and 14).

The differential effects of warmth and value similarity

on these posttest questions are interesting in light of an early social psychological study by Asch (1946). Briefly, subjects were presented a list of traits describing a person and were then asked to write their own brief description of the person. Certain traits that were presented tended to be used predominantly in subjects' impressions, these "central traits" influencing the meaning given by subjects to other more peripheral traits. The traits "warm" or "cold" were among those presented, and they tended to become more notable and central traits in subjects' impressions of the stimulus person.

By analogy, perhaps in the present study therapist warmth exerted a greater impact than value similarity on subjects' confidence because they perceived Dr. Ryan's warmth as a central or more pervasive trait in his personality. For example, subjects may have related the traits of warmth and trustworthiness so strongly that, when given the high warmth description, they felt confident in rating Dr. Ryan high in trustworthiness. If this process of evaluation on the basis of warmth takes place without the subject's full awareness, i.e. on the basis of an internal mediating affective state, then subjects might have gained confidence from the high warmth description, even when they rationally believed value similarity to be more important.

Thus subjects may have reported greater use of value similarity as a basis for their trust ratings and may have

rated it as a more important determinant of trust and therapeutic effectiveness because of its immediacy to their own cognitive processing and because they tended to rationally decide on their ratings using this information primarily. Warmth may have influenced confidence more strongly because it perhaps effected subjects on a more affective level or in a more subtle, diffuse manner.

In light of the differential effects of value similarity and warmth on some of the posttest questions, it is somewhat assuring that subjects on the whole found the tasks of rating their trust for Dr. Ryan ($\overline{X}$=5.75, SD=2.26 on question 7) and rating his therapeutic effectiveness ($\overline{X}$=5.45, SD=2.26 on question 8) less than fairly difficult (although more than slightly difficult). In keeping with these results, subjects generally felt more than fair confidence (although less than moderate confidence) in both their ratings of trust ($\overline{X}$=4.40, SD=2.04 on question 13) and their ratings of therapeutic effectiveness ($\overline{X}$=4.56, SD=1.91 on question 14). These findings seem to indicate that client-therapist value similarity and therapist nonpossessive warmth were perceived as meaningful, yet challenging information for subjects, and that the required ratings were consequentially reasonable requests.

3. Conclusions and Directions for Future Research

Within the limitations of a simulated design, the following conclusions can be derived from the results of the present investigation:

First, client-therapist value similarity in general influenced client trust of the therapist, with high similarity (66 2/3%) leading to greater trust than low similarity (33 1/3%). More specifically, when therapist nonpossessive warmth was low, high value similarity elicited greater trust than low value similarity. This finding elaborates the results of earlier studies of client-therapist value similarity (Shotland, 1968; Tessler, 1975) and extends the findings of attitude similarity studies (Good, 1975; Panzer, 1975). It also has potential impact for the clinical literature on trust.

Second, therapist nonpossessive warmth in general influenced client trust of the therapist, with high warmth leading to greater trust than low warmth. More specifically, when client-therapist terminal value similarity was low, high warmth elicited greater trust than low warmth. This finding further contributes to the trust literature, as well as to the previous process studies of nonpossessive warmth. It furthermore provides empirical support, with qualifications, for a relationship between therapist warmth and client trust previously suggested by both Giffin (Giffin, 1967; Patton & Giffin, 1974) and Rogers (1951, 1961).

Third, when either therapist nonpossessive warmth or

client-therapist value similarity was high, the addition of the other condition did not significantly contribute further to the client's trust for the therapist. This fact, together with the fact that both conditions together accounted for 40% of the variance of client trust, suggests that client trust is determined by several factors, even in a simulated psychotherapy setting.

Fourth, client-therapist terminal value similarity effected client attribution of therapeutic effectiveness, with high similarity eliciting greater attributed effectiveness than low similarity. This finding also confirms and elaborates the previous attitudinal and value similarity literature.

Fifth, therapist nonpossessive warmth influenced client attribution of therapeutic effectiveness, with high warmth leading to greater attributed effectiveness than low warmth. This result confirms earlier findings related to the effects of warmth on therapeutic success and adds to the limited number of studies using the clients' own attribution as a measure of effectiveness.

Before the implications of the above conclusions for the practice of psychotherapy can be discussed, attention must be given to several limitations of the present study.

The use of subjective Likert measures of the dependent variables, i.e. subjects' own ratings of trust and therapeutic effectiveness, has limited reliability and validity (Bergin,

1971). While such a method of assessment complements more objective measures, the use of only subjective measures in the present study contains inherent weaknesses. In terms of validity, "even if the individual is capable of reporting his beliefs or feelings objectively, his conception of what constitutes a moderate or extreme position may be quite different from that of others making comparable self-ratings" (Selltiz, Jahoda, Deutsch, & Cook, 1959, p. 351). Hence the use of external criteria for subjects' trust would have increased the validity of the measure.

In terms of reliability, subjects might not have consistently trusted the therapist as they did, for example, if trust had been measured by different techniques or at different times. Thus the use of more and varied measures of trust, such as the Giffin Trust Differential or the Dimensions of Trust Potential (Giffin & McClearey, 1978), in the present study would have increased the reliability of the measure.

Beyond the weaknesses related to problems of measurement, the limited generalizability of the simulated design must be acknowledged, and the recommendations of Heller (1971) and others (Underwood, 1957) must be followed:

> Once therapeutic agents and the conditions under which they operate best have been identified in clinical laboratory research, they should then be studied in clinical field research to obtain information about the interaction of therapeutic ingredients with personality and setting characteristics that are part of actual treatment (Heller, 1971, p. 128).

Thus, since many factors operate during the real psychotherapy interview that were not present in this study's analogue situation, it is possible that some of these other factors interact with client-therapist value similarity and/or therapist nonpossessive warmth in actual therapy to exert an unpredictable influence on client trust for the therapist and the client's attribution of therapeutic effectiveness. Therefore the impact of the present findings will be moderated by the findings of future research which investigates these other factors which operate in the real psychotherapy setting.

To assess the effects of client-therapist value similarity and therapist nonpossessive warmth on client trust for the therapist in a real psychotherapy setting would therefore be one direction clearly worth following on the basis of the highly significant results of the present analogue study. Prior to such an undertaking, it would be informative to investigate whether, or under what conditions, clients actually do perceive their therapists' values. The clear and definitive presentation to the client of the therapist's and client's values in this study artificially provided knowledge for the client that might not closely approximate his real awareness in therapy. Although several authors (Greben & Lesser, 1976; Rogers, 1957b) have ascertained that therapists do disclose their value systems during psychotherapy, it is possible that clients become aware of these values only under certain conditions, e.g. only with

an especially directive or self-disclosing therapist; only after many sessions; only when clients are most interpersonally sensitive or psychologically sophisticated. An investigation of these possibilities might be executed by correlating therapists' Value Surveys with Value Surveys completed by clients who were asked to fill out the forms as they would expect their therapists to fill them out. These correlations could be compared after the study is run with different kinds of therapists, different kinds of clients, etc.

If clients are indeed able to perceive their therapists' values, then the effects of client-therapist value similarity and therapist nonpossessive warmth on client trust of the therapist could be investigated in the applied setting. Beyond providing a clinical verification of the present findings regarding the terminal value similarity-therapist nonpossessive warmth interaction, such a study might also investigate the comparative effects of instrumental value similarity on client trust of the therapist. Previous research using the Rokeach scale indicated that terminal, but not instrumental, value similarity was associated with college roommate compatibility (Sikula, 1970) and with continuation in counseling (Shotland, 1968). It would be interesting to see if instrumental value similarity also has an interactive effect with therapist warmth on client trust, and if the two kinds of value similarity in the psychotherapeutic setting differentially effect the client's

trust for the therapist. As mentioned earlier, the use of a more reliable and valid measure of client trust, e.g. the Giffin Trust Differential (Giffin & McClearey, 1978), would further add to the value of such a study.

It would also be valuable to investigate the effects of both kinds of client-therapist value similarity on the client's attribution of therapeutic effectiveness in the applied setting. Such a study could provide further clinical support for the present findings, as well as reveal possible differential effects of instrumental and terminal value similarity. Such a study would be of further value if therapeutic effectiveness or outcome was also measured by other, more objective techniques, e.g. changes in test scores, ratings by trained judges, behavioral assessments (Bergin, 1971; Paul, 1967). If either kind of value similarity in the applied setting was found to influence therapeutic effectiveness as measured by a variety of both subjective and objective means, a major contribution to the psychotherapy literature would be made, leading to practical applications. Perhaps, for example, low-warmth psychotherapists and their clients would benefit from a pre-therapy assessment of their value similarity as a screening procedure to optimize their suitability for working together.

Returning to the effects of therapist nonpossessive warmth and client-therapist value similarity on client trust

of the therapist, a clinical verification would strengthen the implications of the present analogue investigation in relation to the warmth-trust relationship suggested by Rogers (1951, 1961) and Giffin (Giffin, 1967; Patton & Giffin, 1974). Specifically, such an applied study could demonstrate that therapist nonpossessive warmth does increase the client's trust in him, but that this effect is only significant when client-therapist value similarity is low.

It is further recommended that follow-up study examine the effects of more levels of therapist warmth than the two extremes considered in the present investigation. Such a study could provide a more accurate appraisal of the optimal warmth-trust relationship, as well as a better understanding of the warmth-value similarity interaction.

In addition, it would be revealing to investigate the effects of all three facilitative conditions (possibly in combination with client-therapist value similarity) on client trust in the clinical setting, especially in light of the differential effects of therapist warmth, genuineness, and empathy on client improvement reported in two previous studies (Truax, Carkhuff, & Kodman, 1965; Truax, Wargo, Frank, Imber, Battle, Hoehn-Saric, Nash, & Stone, 1966).

In regard to the trust literature such a clinical study could strengthen (or disconfirm) the contribution of the present findings regarding therapist nonpossessive warmth,

as well as extend these findings by possibly detecting an influence of therapist empathy and/or genuineness on client trust for the therapist. A demonstration of the differential effects of warmth, empathy, and genuineness on client trust for the therapist would also contribute to a more refined understanding of the efficacy of the three facilitative conditions.

As a final suggestion for future research, it should be noted that the present study gave a general description of the therapeutic situation to the "client," referring nonspecifically to the client's "personal problems that have been developing for a long time." Although seemingly appropriate for the present study's simulated design, such an approach did not investigate the possibility that the observed effects of value similarity and warmth on attributed effectiveness and trust would differ under various conditions of client problems and other relevant variables. Thus, while a replication of the present study in the applied clinical setting would be valuable, future research might profit further from studying the effects of these factors under more specified conditions, e.g. with different types of clients, various types of client problems, different kinds of therapy. This recommendation is in keeping with the plea of several authors (Bergin, 1971; Kiesler, 1971; Paul, 1967; Strupp & Bergin, 1969) for therapeutic research to direct its efforts toward answering the question, "<u>what</u>

treatment, by _whom_, is most effective for _this_ individual with _that_ specific problem, and under _which_ set of circumstances?" (Paul, 1967, p. 111).

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IN APPENDICES 1 to 12, LEAVES

163 to 196, NOT MICROFILMED

163 - 166 - Terminal Value Portion of Rokeach Value Survey by Milton Rokeach

MAY BE OBTAINED FROM

Halgren Tests
873 Persimmon Avenue
Sunnyvale, California 94087

The following are based on the Rokeach Value Survey

167 - 173 - Appendix 2. Sample questionnaire demonstrating high client therapist value similarity and high therapist nonpossessive warmth (Order 1)

174 - 175 - Appendix 3. Portion of Questionnaire demonstrating low client-therapist value similarity and high therapist nonpossessive warmth (Order 1)

176 - 177 - Appendix 4. Portion of questionnaire demonstrating high client-therapist value similarity and low therapist nonpossessive warmth (Order 1)

178 - 179 - Appendix 5. Portion of questionnaire demonstrating low client-therapist value similarity and low therapist nonpossessive warmth (Order 1)

180 - 181 - Appendix 6. Portion of questionnaire demonstrating high client-therapist value similarity and high therapist nonpossessive warmth (Order 2)

182 - 183 - Appendix 7. Portion of questionnaire demonstrating low client-therapist value similarity and high therapist nonpossessive warmth (Order 2)

184 - 185 - Appendix 8. Portion of questionnaire demonstrating high client-therapist value similarity and low therapist nonpossessive warmth (Order 2)

186 - 187 - Appendix 9. Portion of questionnaire demonstrating low client-therapist value similarity and low therapist nonpossessive warmth (Order 2)

188 - 190 - Appendix 10. Manipulation check forms for high and low value similarity

191 - 193 Appendix 11. Manipulation check forms for high and low nonpossessive warmth

194 - 196 - Appendix 12. Explanation of study given to subjects as debriefing

APPENDIX 13

SCORES ON MANIPULATION CHECK FOR VALUE SIMILARITY AND NONPOSSESSIVE WARMTH

Scores on Value Similarity

Manipulation Check

High Value Similarity	Low Value Similarity
4	3
4	2
5	2
5	2
4	2
4	2
4	3
2	3
4	2
4	3
4	2
4	2
4	2
5	2
4	4
4	2
4	1
4	2
4	2
3	
4	

Scores on Nonpossessive Warmth

Manipulation Check

High Nonpossessive Warmth	Low Nonpossessive Warmth
4	3
4	1
4	3
4	1
4	2
4	2
3	3
4	3
5	1
5	2
4	2
4	2
4	3
4	3
4	1
4	2
4	3
4	2
5	2
4	1

APPENDIX 14

MEDIAN TEST CONTINGENCY TABLES FOR VALUE SIMILARITY AND NONPOSSESSIVE WARMTH

Median Test Contingency Table

for Value Similarity

	High Value Similarity	Low Value Similarity	Total
Above Median	19	1	20
Not Above Median	2	18	20
Total	21	19	40

Median Test Contingency Table

for Nonpossessive Warmth

	High Nonpossessive Warmth	Low Nonpossessive Warmth	Total
Above Median	19	0	19
Not Above Median	1	20	21
Total	20	20	40

APPENDIX 15

MEANS, STANDARD DEVIATIONS, VARIANCES, AND NUMBER OF SUBJECTS FOR EACH CONDITION ON CLIENT TRUST OF THE THERAPIST AND ON CLIENT ATTRIBUTION OF THERAPEUTIC EFFECTIVENESS

Means, Standard Deviations, Variances, and Number of Subjects for Each Condition on Client Trust of the Therapist

Condition	Mean	SD	Variance	N
Order 1	3.95	2.30	5.28	40
High Warmth-High Val. Sim.	2.70	1.42	2.01	10
High Warmth-Low Val. Sim.	3.10	1.79	3.21	10
Low Warmth-High Val. Sim.	3.60	1.96	3.82	10
Low Warmth-Low Val. Sim.	6.40	2.12	4.49	10
Order 2	3.85	2.17	4.69	40
High Warmth-High Val. Sim.	2.30	1.25	1.57	10
High Warmth-Low Val. Sim.	3.30	1.25	1.57	10
Low Warmth-High Val. Sim.	3.30	1.57	2.46	10
Low Warmth-Low Val. Sim.	6.50	1.90	3.61	10
Total	3.90	2.22	4.93	80

Means, Standard Deviations, Variances, and Number of Subjects

for Each Condition

on Client Attribution of Therapeutic Effectiveness

Condition	Mean	SD	Variance	N
Order 1	4.20	2.14	4.57	40
High Warmth-High Val. Sim.	2.40	0.97	0.93	10
High Warmth-Low Val. Sim.	3.60	1.84	3.38	10
Low Warmth-High Val. Sim.	4.20	1.69	2.84	10
Low Warmth-Low Val. Sim.	6.60	1.51	2.27	10
Order 2	3.95	1.99	3.95	40
High Warmth-High Val. Sim.	2.70	1.25	1.57	10
High Warmth-Low Val. Sim.	3.40	1.71	2.93	10
Low Warmth-High Val. Sim.	3.90	1.79	3.21	10
Low Warmth-Low Val. Sim.	5.80	1.87	3.51	10
Total	4.08	2.06	4.22	80

APPENDIX 16

MEANS, STANDARD DEVIATIONS, VARIANCES, AND NUMBER OF SUBJECTS FOR VALUE SIMILARITY X NONPOSSESSIVE WARMTH ON CLIENT TRUST OF THE THERAPIST AND ON CLIENT ATTRIBUTION OF THERAPEUTIC EFFECTIVENESS

Means, Standard Deviations, Variances, and Number of Subjects

for Value Similarity X Nonpossessive Warmth

on Client Trust of the Therapist

Condition	Mean	SD	Variance	N
High Warmth	2.85	1.44	2.08	40
High Val. Sim.	2.50	1.32	1.74	20
Low Val. Sim.	3.20	1.51	2.27	20
Low Warmth	4.95	2.38	5.64	40
High Val. Sim.	3.45	1.73	3.00	20
Low Val. Sim.	6.45	1.96	3.84	20
Total	3.90	2.22	4.93	80

Means, Standard Deviations, Variances, and Number of Subjects
for Value Similarity X Nonpossessive Warmth
on Client Attribution of Therapeutic Effectiveness

Condition	Mean	SD	Variance	N
High Warmth	3.03	1.51	2.28	40
High Val. Sim.	2.55	1.10	1.21	20
Low Val. Sim.	3.50	1.73	3.00	20
Low Warmth	5.13	2.00	4.01	40
High Val. Sim.	4.05	1.70	2.89	20
Low Val. Sim.	6.20	1.71	2.91	20
Total	4.08	2.06	4.22	80

APPENDIX 17

CHI SQUARES FOR AGE BETWEEN HIGH AND LOW NONPOSSESSIVE WARMTH GROUPS AND BETWEEN HIGH AND LOW VALUE SIMILARITY GROUPS

Chi Square for Age
Between High and Low Nonpossessive Warmth Groups

Age		High Warmth		Low Warmth	ROW TOTAL
18		8	COUNT	3	11
		72.7	ROW %	27.3	13.8
		20.0	COLUMN %	7.5	
		10.0	TOTAL %	3.7	
19		8		19	27
		29.6		70.4	33.8
		20.0		47.5	
		10.0		23.7	
20		9		6	15
		60.0		40.0	18.8
		22.5		15.0	
		11.2		7.5	
21		6		4	10
		60.0		40.0	12.5
		15.0		10.0	
		7.5		5.0	
22		2		2	4
		50.0		50.0	5.0
		5.0		5.0	
		2.5		2.5	
23		0		2	2
		0.0		100.0	2.5
		0.0		5.0	
		0.0		2.5	
24		2		0	2
		100.0		0.0	2.5
		5.0		0.0	
		2.5		0.0	
25		1		2	3
		33.3		66.7	3.8
		2.5		5.0	
		1.2		2.5	
Other		4		2	6
		66.7		33.3	7.5
		10.0		5.0	
		5.0		2.5	
	COLUMN TOTAL	40		40	80
		50.0		50.0	100.0

X^2=12.754 df=8 p=.1206

Chi Square for Age
Between High and Low Value Similarity Groups

Age		High Val. Sim.	Low Val. Sim.	ROW TOTAL
18	COUNT	8	3	11
	ROW %	72.7	27.3	13.8
	COLUMN %	20.0	7.5	
	TOTAL %	10.0	3.7	
19		10	17	27
		37.0	63.0	33.8
		25.0	42.5	
		12.5	21.2	
20		8	7	15
		53.3	46.7	18.8
		20.0	17.5	
		10.0	8.7	
21		4	6	10
		40.0	60.0	12.5
		10.0	15.0	
		5.0	7.5	
22		3	1	4
		75.0	25.0	5.0
		7.5	2.5	
		3.7	1.2	
23		1	1	2
		50.0	50.0	2.5
		2.5	2.5	
		1.2	1.2	
24		1	1	2
		50.0	50.0	2.5
		2.5	2.5	
		1.2	1.2	
25		2	1	3
		66.7	33.3	3.8
		5.0	2.5	
		2.5	1.2	
Other		3	3	6
		50.0	50.0	7.5
		7.5	7.5	
		3.7	3.7	
	COLUMN TOTAL	40	40	80
		50.0	50.0	100.0

$X^2=5.888$ df=8 p=.6598

APPENDIX 18

CHI SQUARES FOR FACULTY BETWEEN HIGH AND LOW NONPOSSESSIVE WARMTH GROUPS AND BETWEEN HIGH AND LOW VALUE SIMILARITY GROUPS

Chi Square for Faculty
Between High and Low Nonpossessive Warmth Groups

Faculty		High Warmth		Low Warmth	ROW TOTAL
Science		10	COUNT	15	25
		40.0	ROW %	60.0	31.3
		25.0	COLUMN %	37.5	
		12.5	TOTAL %	18.8	
Psychology		3		0	3
		100.0		0.0	3.8
		7.5		0.0	
		3.7		0.0	
Arts		12		11	23
		52.2		47.8	28.8
		30.0		27.5	
		15.0		13.7	
Nursing		0		2	2
		0.0		100.0	2.5
		0.0		5.0	
		0.0		2.5	
Philosophy		0		0	0
		0.0		0.0	0.0
		0.0		0.0	
		0.0		0.0	
Phys. Ed.		7		3	10
		70.0		30.0	12.5
		17.5		7.5	
		8.7		3.7	
Manag. Sc.		3		2	5
		60.0		40.0	6.3
		7.5		5.0	
		3.7		2.5	
Social Sc.		4		6	10
		40.0		60.0	12.5
		10.0		15.0	
		5.0		7.5	
Other		1		1	2
		50.0		50.0	2.5
		2.5		2.5	
		1.2		1.2	
	COLUMN TOTAL	40		40	80
		50.0		50.0	100.0

$X^2=8.244$ df=7 p=.3116

Chi Square for Faculty
Between High and Low Value Similarity Groups

Faculty		High Val. Sim.		Low Val. Sim.	ROW TOTAL
Science		15	COUNT	10	25
		60.0	ROW %	40.0	31.3
		37.5	COLUMN %	25.0	
		18.8	TOTAL %	12.5	
Psychology		2		1	3
		66.7		33.3	3.8
		5.0		2.5	
		2.5		1.2	
Arts		8		15	23
		34.8		65.2	28.8
		20.0		37.5	
		10.0		18.8	
Nursing		1		1	2
		50.0		50.0	2.5
		2.5		2.5	
		1.2		1.2	
Philosophy		0		0	0
		0.0		0.0	0.0
		0.0		0.0	
		0.0		0.0	
Phys. Ed.		4		6	10
		40.0		60.0	12.5
		10.0		15.0	
		5.0		7.5	
Manag. Sc.		3		2	5
		60.0		40.0	6.3
		7.5		5.0	
		3.7		2.5	
Social Sc.		6		4	10
		60.0		40.0	12.5
		15.0		10.0	
		7.5		5.0	
Other		1		1	2
		50.0		50.0	2.5
		2.5		2.5	
		1.2		1.2	
	COLUMN	40		40	80
	TOTAL	50.0		50.0	100.0

$X^2=4.464$ df=7 p=.7251

APPENDIX 19

CHI SQUARES FOR FIRST LANGUAGE BETWEEN HIGH AND LOW NONPOSSESSIVE WARMTH GROUPS AND BETWEEN HIGH AND LOW VALUE SIMILARITY GROUPS

Chi Square for First Language
Between High and Low Nonpossessive Warmth Groups

First language		High Warmth		Low Warmth	ROW TOTAL
French		5	COUNT	2	7
		71.4	ROW %	28.6	8.8
		12.5	COLUMN %	5.0	
		6.3	TOTAL %	2.5	
English		24		27	51
		47.1		52.9	63.8
		60.0		67.5	
		30.0		33.7	
Other		4		4	8
		50.0		50.0	10.0
		10.0		10.0	
		5.0		5.0	
Fluently bilingual (trilingual)		7		7	14
		50.0		50.0	17.5
		17.5		17.5	
		8.7		8.7	
	COLUMN TOTAL	40		40	80
		50.0		50.0	100.0

X^2=1.462 df=3 p=.6910

Chi Square for First Language
Between High and Low Value Similarity Groups

First language

	High Val. Sim.		Low Val. Sim.	ROW TOTAL
French	4	COUNT	3	7
	57.1	ROW %	42.9	8.8
	10.0	COLUMN %	7.5	
	5.0	TOTAL %	3.7	
English	27		24	51
	52.9		47.1	63.8
	67.5		60.0	
	33.7		30.0	
Other	3		5	8
	37.5		62.5	10.0
	7.5		12.5	
	3.7		6.3	
Fluently bilingual (trilingual)	6		8	14
	42.9		57.1	17.5
	15.0		20.0	
	7.5		10.0	
COLUMN TOTAL	40		40	80
	50.0		50.0	100.0

$X^2=1.105$ df=3 p=.7759

APPENDIX 20

MEANS, STANDARD DEVIATIONS, VARIANCES, AND NUMBER OF SUBJECTS FOR VALUE SIMILARITY X NONPOSSESSIVE WARMTH ON POSTTEST QUESTIONS 3 TO 14

Means, Standard Deviations, Variances, and Number of Subjects for Value Similarity X Nonpossessive Warmth on Question 3

Condition	Mean	SD	Variance	N
High Warmth	3.35	1.64	2.70	40
High Val. Sim.	3.40	1.73	2.99	20
Low Val. Sim.	3.30	1.59	2.54	20
Low Warmth	4.18	2.16	4.66	40
High Val. Sim.	3.90	2.00	3.99	20
Low Val. Sim.	4.45	2.33	5.42	20
Total	3.76	1.95	3.80	80

Means, Standard Deviations, Variances, and Number of Subjects for Value Similarity X Nonpossessive Warmth on Question 4

Condition	Mean	SD	Variance	N
High Warmth	4.95	2.14	4.56	40
High Val. Sim.	4.35	1.95	3.82	20
Low Val. Sim.	5.55	2.19	4.79	20
Low Warmth	5.68	2.60	6.74	40
High Val. Sim.	6.40	2.35	5.52	20
Low Val. Sim.	4.95	2.69	7.21	20
Total	5.31	2.39	5.71	80

Means, Standard Deviations, Variances, and Number of Subjects for Value Similarity X Nonpossessive Warmth on Question 5

Condition	Mean	SD	Variance	N
High Warmth	4.40	1.77	3.12	40
High Val. Sim.	4.40	1.54	2.36	20
Low Val. Sim.	4.40	2.01	4.04	20
Low Warmth	4.88	2.27	5.14	40
High Val. Sim.	4.70	2.06	4.22	20
Low Val. Sim.	5.05	2.50	6.26	20
Total	4.64	2.03	4.13	80

Means, Standard Deviations, Variances, and Number of Subjects for Value Similarity X Nonpossessive Warmth on Question 6

Condition	Mean	SD	Variance	N
High Warmth	4.93	2.19	4.79	40
High Val. Sim.	5.25	2.22	4.93	20
Low Val. Sim.	4.60	2.16	4.67	20
Low Warmth	5.65	2.70	7.31	40
High Val. Sim.	6.35	2.50	6.24	20
Low Val. Sim.	4.95	2.78	7.73	20
Total	5.29	2.47	6.11	80

Means, Standard Deviations, Variances, and Number of Subjects for Value Similarity X Nonpossessive Warmth on Question 7

Condition	Mean	SD	Variance	N
High Warmth	6.08	1.86	3.46	40
High Val. Sim.	6.40	2.06	4.25	20
Low Val. Sim.	5.75	1.62	2.62	20
Low Warmth	5.43	2.59	6.71	40
High Val. Sim.	5.20	2.24	5.01	20
Low Val. Sim.	5.65	2.94	8.66	20
Total	5.75	2.26	5.13	80

Means, Standard Deviations, Variances, and Number of Subjects for Value Similarity X Nonpossessive Warmth on Question 8

Condition	Mean	SD	Variance	N
High Warmth	5.58	2.01	4.05	40
High Val. Sim.	5.80	2.12	4.48	20
Low Val. Sim.	5.35	1.93	3.71	20
Low Warmth	5.33	2.50	6.23	40
High Val. Sim.	5.00	2.29	5.26	20
Low Val. Sim.	5.65	2.70	7.29	20
Total	5.45	2.26	5.09	80

Means, Standard Deviations, Variances, and Number of Subjects for Value Similarity X Nonpossessive Warmth on Question 9

Condition	Mean	SD	Variance	N
High Warmth	3.60	1.97	3.89	40
High Val. Sim.	3.50	2.12	4.47	20
Low Val. Sim.	3.70	1.87	3.48	20
Low Warmth	4.13	2.07	4.27	40
High Val. Sim.	3.90	1.92	3.67	20
Low Val. Sim.	4.35	2.23	4.98	20
Total	3.86	2.02	4.10	80

Means, Standard Deviations, Variances, and Number of Subjects for Value Similarity X Nonpossessive Warmth on Question 10

Condition	Mean	SD	Variance	N
High Warmth	5.28	2.10	4.41	40
High Val. Sim.	5.55	1.91	3.63	20
Low Val. Sim.	5.00	2.29	5.26	20
Low Warmth	5.70	2.38	5.65	40
High Val. Sim.	6.45	1.88	3.52	20
Low Val. Sim.	4.95	2.63	6.89	20
Total	5.49	2.24	5.01	80

Means, Standard Deviations, Variances, and Number of Subjects for Value Similarity X Nonpossessive Warmth on Question 11

Condition	Mean	SD	Variance	N
High Warmth	4.62	2.16	4.66	40
High Val. Sim.	4.00	2.25	5.05	20
Low Val. Sim.	5.26	1.91	3.65	20
Low Warmth	5.15	2.14	4.59	40
High Val. Sim.	4.65	1.84	3.40	20
Low Val. Sim.	5.65	2.35	5.50	20
Total	4.89	2.15	4.64	80

Means, Standard Deviations, Variances, and Number of Subjects for Value Similarity X Nonpossessive Warmth on Question 12

Condition	Mean	SD	Variance	N
High Warmth	5.75	2.11	4.45	40
High Val. Sim.	5.95	2.06	4.26	20
Low Val. Sim.	5.55	2.19	4.79	20
Low Warmth	5.90	2.22	4.91	40
High Val. Sim.	6.35	1.69	2.87	20
Low Val. Sim.	5.45	2.61	6.79	20
Total	5.83	2.15	4.63	80

Means, Standard Deviations, Variances, and Number of Subjects for Value Similarity X Nonpossessive Warmth on Question 13

Condition	Mean	SD	Variance	N
High Warmth	3.85	1.59	2.54	40
High Val. Sim.	3.60	1.70	2.88	20
Low Val. Sim.	4.10	1.48	2.20	20
Low Warmth	4.95	2.29	5.23	40
High Val. Sim.	4.90	2.40	5.78	20
Low Val. Sim.	5.00	2.22	4.95	20
Total	4.40	2.04	4.14	80

Means, Standard Deviations, Variances, and Number of Subjects for Value Similarity X Nonpossessive Warmth on Question 14

Condition	Mean	SD	Variance	N
High Warmth	4.20	1.64	2.68	40
High Val. Sim.	3.90	1.45	2.10	20
Low Val. Sim.	4.50	1.79	3.21	20
Low Warmth	4.93	2.11	4.43	40
High Val. Sim.	4.90	2.02	4.10	20
Low Val. Sim.	4.95	2.24	5.00	20
Total	4.56	1.91	3.64	80