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THE EFFECTS OF VALUE SIMILARITY AND CLIENT LOCUS OF CONTROL ON CONVERGENCE AND IMPROVEMENT

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Ph.D. 1983
THE EFFECTS OF VALUE SIMILARITY AND CLIENT LOCUS OF CONTROL ON CONVERGENCE AND IMPROVEMENT

by

Thomas George Arizmendi

A Dissertation Submitted to the Faculty of the
DEPARTMENT OF PSYCHOLOGY
In Partial Fulfillment of the Requirements For the Degree of
DOCTOR OF PHILOSOPHY
In the Graduate College
THE UNIVERSITY OF ARIZONA

1983
As members of the Final Examination Committee, we certify that we have read the dissertation prepared by Thomas George Arizmendi entitled The Effects of Value Similarity and Client Locus of Control on Convergence and Improvement and recommend that it be accepted as fulfilling the dissertation requirement for the Degree of Doctor of Philosophy.

[Signatures]

Final approval and acceptance of this dissertation is contingent upon the candidate's submission of the final copy of the dissertation to the Graduate College.

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SIGNED: Thomas J. Cugnuni
ACKNOWLEDGMENTS

I would like to express my appreciation to all those who have helped me in the development of this dissertation. My committee members, Dr. Marvin Kahn, Dr. Ronald Pool, Dr. Oscar Christensen, and Dr. Betty Newlon, were very helpful in providing specific feedback concerning the methodology of the project as well as the writing of the report. My committee chairman, Dr. Larry Beutler, deserves special thanks. He has consistently been available to lend me his expertise when needed while simultaneously allowing me to formulate and develop my own ideas. Most of all, though, his encouragement and sincerity, both on a professional and personal level, have been invaluable to my growth as a scientist/practitioner.

Marjorie Crago and Roberta Hagaman were also helpful in the preparation of the data and the statistical analyses. Rita Mikula was responsible for the typing of this manuscript. I found her to be quite patient and prompt throughout all phases of its preparation.

I would also like to thank my parents who have always been supportive and caring. They have served as wonderful models in helping me to keep life events in proper perspective.

Finally, I want to recognize my sister, Carol. Her supreme confidence in me has never gone unnoticed and has been
instrumental in assisting me through several difficult periods in my personal and professional life. I only hope that the career upon which I am about to embark will prove to be as exciting and challenging for me as her career is for her.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF TABLES</td>
<td>vii</td>
</tr>
<tr>
<td>LIST OF ILLUSTRATIONS</td>
<td>viii</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>ix</td>
</tr>
<tr>
<td>1. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Purposes of the Study</td>
<td>1</td>
</tr>
<tr>
<td>Review of the Literature</td>
<td>2</td>
</tr>
<tr>
<td>Similarity and Convergence</td>
<td>3</td>
</tr>
<tr>
<td>Convergence and Improvement</td>
<td>6</td>
</tr>
<tr>
<td>Similarity and Improvement</td>
<td>8</td>
</tr>
<tr>
<td>Relationship of Control Expectancy and</td>
<td>14</td>
</tr>
<tr>
<td>Attitude Change</td>
<td></td>
</tr>
<tr>
<td>Improvement and Changes in Locus of Control</td>
<td>15</td>
</tr>
<tr>
<td>Relationship between Client Control Expectancy and the Degree of Therapy Structure</td>
<td>17</td>
</tr>
<tr>
<td>Hypotheses</td>
<td>20</td>
</tr>
<tr>
<td>2. METHOD</td>
<td>22</td>
</tr>
<tr>
<td>Subjects</td>
<td>22</td>
</tr>
<tr>
<td>Measures</td>
<td>24</td>
</tr>
<tr>
<td>SCL-90-R</td>
<td>24</td>
</tr>
<tr>
<td>Eysenck Personality Inventory (EPI)</td>
<td>25</td>
</tr>
<tr>
<td>Rokeach Value Survey</td>
<td>25</td>
</tr>
<tr>
<td>Internal-External Locus of Control Scale (I-E)</td>
<td>26</td>
</tr>
<tr>
<td>Personal Evaluation</td>
<td>26</td>
</tr>
<tr>
<td>Discharge Summary</td>
<td>27</td>
</tr>
<tr>
<td>Procedure</td>
<td>27</td>
</tr>
<tr>
<td>Internal vs. External Control</td>
<td>28</td>
</tr>
<tr>
<td>Similarity</td>
<td>29</td>
</tr>
<tr>
<td>Convergence</td>
<td>29</td>
</tr>
<tr>
<td>Improvement</td>
<td>29</td>
</tr>
</tbody>
</table>
### TABLE OF CONTENTS--Continued

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. RESULTS</td>
<td>32</td>
</tr>
<tr>
<td>Preliminary and Validational Analyses</td>
<td>32</td>
</tr>
<tr>
<td>Similarity-Convergence Relationship</td>
<td>34</td>
</tr>
<tr>
<td>Convergence-Improvement Relationship</td>
<td>36</td>
</tr>
<tr>
<td>Similarity-Locus of Control Relationship</td>
<td>42</td>
</tr>
<tr>
<td>Locus of Control Change and Improvement</td>
<td>44</td>
</tr>
<tr>
<td>Additional Findings</td>
<td>45</td>
</tr>
<tr>
<td>4. DISCUSSION</td>
<td>49</td>
</tr>
<tr>
<td>Similarity-Convergence Relationship</td>
<td>49</td>
</tr>
<tr>
<td>Convergence-Improvement Relationship</td>
<td>51</td>
</tr>
<tr>
<td>Similarity-Locus of Control Relationship</td>
<td>56</td>
</tr>
<tr>
<td>Locus of Control Change and Improvement</td>
<td>59</td>
</tr>
<tr>
<td>Additional Findings</td>
<td>60</td>
</tr>
<tr>
<td>Implications of This Study and Directions for Future Research</td>
<td>63</td>
</tr>
<tr>
<td>APPENDIX A: RESIDUAL GAIN</td>
<td>67</td>
</tr>
<tr>
<td>APPENDIX B: PERCENT GAIN (GSI)</td>
<td>68</td>
</tr>
<tr>
<td>APPENDIX C: CONVERGENCE</td>
<td>69</td>
</tr>
<tr>
<td>APPENDIX D: IMPROVEMENT (CLIENT-RATED)</td>
<td>70</td>
</tr>
<tr>
<td>APPENDIX E: PERSONAL EVALUATION</td>
<td>71</td>
</tr>
<tr>
<td>LIST OF REFERENCES</td>
<td>73</td>
</tr>
</tbody>
</table>
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The Effects of Similarity and Locus of Control on Convergence (N = 43)</td>
<td>35</td>
</tr>
<tr>
<td>2.</td>
<td>Distribution of Subjects into Similarity-Convergence Groups</td>
<td>35</td>
</tr>
<tr>
<td>3.</td>
<td>The Effects of Similarity and Convergence on Improvement (Paranoia) (N = 44)</td>
<td>37</td>
</tr>
<tr>
<td>4.</td>
<td>The Interactional Effects of Convergence and Locus of Control on Improvement (Somatization) (N = 42)</td>
<td>40</td>
</tr>
<tr>
<td>5.</td>
<td>The Effects of Convergence and Locus of Control on Therapist-Rated Improvement (N = 40)</td>
<td>40</td>
</tr>
<tr>
<td>6.</td>
<td>The Effects of Value Similarity and Locus of Control on Improvement (Interpersonal Sensitivity) (N = 42)</td>
<td>43</td>
</tr>
<tr>
<td>7.</td>
<td>The Effects of Similarity and Locus of Control on Improvement (Hostility) (N = 42)</td>
<td>44</td>
</tr>
<tr>
<td>8.</td>
<td>Comparative Measures of Improvement</td>
<td>47</td>
</tr>
</tbody>
</table>
# LIST OF ILLUSTRATIONS

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The Interactional Effects of Similarity and Convergence on Improvement (Paranoia) ($N = 44$)</td>
<td>38</td>
</tr>
<tr>
<td>2. The Interaction Effects of Convergence and Locus of Control on Improvement (Somatization) ($N = 42$)</td>
<td>41</td>
</tr>
</tbody>
</table>
ABSTRACT

According to previous research results, the relationship between initial (pretherapy) patient-therapist value similarity and psychotherapy outcome is not clear. In this study, 45 adult outpatients were examined with the intention of clarifying the relationship between patient-therapist value similarity, convergence, patient locus of control, and improvement. As hypothesized, initial value similarity was negatively correlated with convergence and convergence was correlated with therapist-rated improvement. Also, when improvement was measured within the realm of specific symptoms, especially symptoms of paranoia and interpersonal sensitivity, additional significant findings were discovered involving the correlation of initial similarity as well as locus of control with improvement. In general, this study suggested the need for evaluating improvement within specific areas of functioning and through the use of several rating sources such as the patient, therapist, and an independent rater(s).
CHAPTER 1
INTRODUCTION

Despite numerous research efforts, the relationship between initial patient-therapist value similarity, convergence (i.e., the movement of the client's values toward those of the therapist over the course of treatment), and therapy outcome is still unclear. In a separate context, the client's pretherapy locus of control has been investigated and has been found to influence therapy outcome. However, the possible interactional effects of patient-therapist value similarity and locus of control on improvement has not been studied in a systematic fashion. In attempting to match patient and therapist for the purpose of maximizing improvement, both value similarity and client locus of control appear to be worthy of consideration judging from the results of previous studies.

**Purposes of the Study**

The purpose of this study was basically twofold. First, an attempt was made to clarify the effects of initial patient-therapist value similarity and convergence on therapy outcome (improvement). As an intermediate step, the relationship between similarity and convergence was also investigated. Second, the
relationship between a change in client locus of control (over the course of treatment) and outcome was scrutinized in an attempt to help clarify the importance of control expectancy as a possible correlate of psychological adjustment.

Review of the Literature

Psychotherapy has been defined in numerous ways by mental health professionals. The manner in which this process is approached may depend on several factors including theoretical orientation, the particular setting or situation, a particular mental health discipline, and other variables. Since it involves communication between at least two persons, it is legitimate to say that psychotherapy is a social influence process. That is, it can be conceived of as a process of interpersonal persuasion in which the therapist(s) is attempting to influence (persuade) the client in a way that will lead to increased personal adjustment or movement toward self-actualization.

According to Beutler (1978), the therapist's persuasiveness is related to effectiveness in therapy. However, in addition to the therapist's attributes, client characteristics as well as communication variables play a pertinent role in the outcome of psychotherapy. The current study dealt primarily with client and therapist characteristics. As such, it did not provide an indepth exploration of the interactional effects of these variables on the communication process.
The extent of the therapist's persuasiveness depends on many factors, one of which is attractiveness to the client. Although attractiveness does not necessarily result in persuasiveness, it does have a potential influence on it (Beutler, 1978). The former contributes to the establishment of a positive therapeutic relationship which is a crucial prerequisite for the persuasion process. On what, then, does attractiveness depend?

Social psychologists (Byrne, Griffitt, and Golightly, 1966; Simons, Berkowitz, and Moyer, 1970) suggested that it is, at least in part, a function of the persuader's values and the similarity of this value system to that of the listener. They also stated that attractiveness, persuader credibility, and value similarity are closely intertwined in a complex manner.

If psychotherapy is viewed as a social influence process, as Strong (1968) and others have done, it is reasonable to speculate that patient-therapist value similarity affects the persuasion process and, ultimately, should have some bearing on client improvement.

Similarity and Convergence

One strategy used to assess the relationship of value similarity and therapist influence (persuasion potential) has been to measure influence in terms of convergence over the course of therapy. In this context, convergence refers to a change in clients' values toward those of the therapist. There is some support for the notion that, in individual psychotherapy,
initial dissimilarity of values correlates significantly with convergence in a linear manner (Beutler, 1971b; Beutler et al., 1975). Although a similar relationship exists in marital therapy, it seems to be more complex (Beutler, 1971a). For couples, convergence of patient-spouse values seems to be the critical factor for predicting success. Patient-therapist convergence does occur to a significant degree but is only weakly related to the therapist's rating of improvement.

In group psychotherapy, the extent to which the attitude has perceived relevance for the client (centrality) is a crucial issue. Beutler, Jobe, and Elkins (1974) discovered that for attitudes of medium centrality, there was a significant correlation between initial dissimilarity of attitudes and convergence. Specifically, clients who initially reject their therapists' attitudes tend to move toward them significantly more than do those who initially accept them. In the case of low and high centrality attitudes, there was a nonsignificant relationship between initial acceptability of therapist attitudes and convergence. In fact, for low centrality attitudes, the trend was diametrically opposed to that for medium centrality attitudes. The point is that, in group psychotherapy, it appears that the effect of initial attitude similarity on convergence and outcome varies with the importance or relevance that that attitude has for the client. The variation seems to progress in a nonlinear fashion moving from attitudes of low to high centrality. Edwards and Edgerly (1970) arrived at similar findings when they explored
the similarity-convergence relationship in brief individual counseling (five sessions or less). The counselor-client dyads that were initially least similar (as measured by the evaluative dimension of the Semantic Differential) showed significantly greater convergence over the counseling period than did medium or high congruency dyads. Consistent with the Beutler et al. (1974) findings, the authors discovered that only concepts relevant to the client were affected. Moreover, they concluded that counselor experience is a significant factor in affecting change on these relevant concepts.

Only one systematic study has reported findings that were inconsistent with those above (Beutler, Pollack, and Jobe, 1978). In this instance, there was a nonsignificant relationship between initial acceptance or rejection of the therapist's values by the client and convergence. Once again, though, there was the suggestion that certain values seem to be more critical than others in predicting both convergence and outcome from initial similarity.

In summary, although there has been little work done in this specific area, the majority of findings point to the fact that initial dissimilarity of client-therapist values leads to the greatest degree of convergence. At least two factors may be important in this regard and deserve further attention: (1) the relevance of the value/attitude to the client, and (2) the experience level of the therapist.
Convergence and Improvement

Another strategy used to investigate psychotherapy as a persuasion process has been to explore the nature of the relationship between convergence and client improvement. The majority of research in this domain has focused primarily on individual outpatient therapy. Most researchers have reported a significant positive correlation between convergence and improvement (Wolff, 1954; Rosenthal, 1955; Welkowitz, Cohen, and Ortmeyer, 1967; Hill, 1969; Schonfield et al., 1969; Melnick, 1972). On the other hand, there is some evidence indicating that a positive correlation is contingent upon such factors as:

1. similarity of life situations between client and therapist (Holzman, 1962), and
2. at least a minimal degree of commonality between patient-therapist perspectives in viewing significant others (Landfield and Nawas, 1964). Furthermore, according to Melnick (1972), the therapist's strength (as perceived by the client) is a crucial predictor of convergence while the Rogerian factors of warmth, genuineness, and empathy have little predictive value.

Only Beutler (1971b) and Nawas and Landfield (1963) reported no significant relationship between convergence and improvement. In the latter study, the authors found a trend toward a negative relationship. That is, those clients whose values moved away from their therapists' tended to improve more than those who showed convergence.
Among inpatient populations, the literature suggests that the convergence-improvement relationship is not as straightforward. While some results point to a significant positive relationship (Rosenthal, 1955; Parloff, Iflund, and Goldstein, 1960), others demonstrate either a nonsignificant relationship (Beutler et al., 1975) or a trend toward divergence of patient-therapist values with no significant effect on outcome (Holzman, 1962). Thus, there seems to be certain factors that differentiate inpatients from outpatients in this particular area.

The mode of therapy ostensibly has some impact on the convergence-improvement relationship also. First, when the population is composed of group psychotherapy outpatients, there are inconsistent findings. Earlier efforts signaled a nonsignificant correlation between attitude/value convergence and enhanced marital adjustment (Beutler, 1971b; Beutler et al., 1974). More recently, however, both Beutler (1979) and Ukeritis (1977) have reported therapists' ratings of improvement increased when the clients' values moved toward those of the therapist. Second, the results from family therapy research are comparable to those from group research. It has been found that early research efforts with families claimed a nonsignificant relationship between convergence and improvement (Beutler, 1971b). In one report involving marital therapy, Beutler (1971a) demonstrated that, while patient-therapist convergence was significant, it was not a reliable predictor of improvement. However, the data from this report indicated that in those cases of successful marital
treatment (therapist-rated improvement), the patient and spouse had exhibited a value change toward each other. In contrast, Gurman (1974) suggested that when both husbands and wives rate themselves after marital therapy, there is an apparent link between convergence and improvement for the husband as rated by himself but not by his spouse or therapist. Regardless of the rater, though, the wife's posttherapy status in this latter study was independent of value or attitude convergence.

In sum, with regard to the findings on value convergence as it relates to patient progress, it is reasonable to state that there is considerable covariance between these two factors for outpatients undergoing individual therapy (independent of the therapist's orientation). However, the findings are more ambiguous for inpatients and for other therapy modes. It is worthwhile to note that, given the disparity of results when comparing inpatient with outpatient populations, the client's initial level of pathology may considerably affect the convergence-improvement relationship.

Similarity and Improvement

The most popular framework for scrutinizing the effects of value similarity on psychotherapy outcome has been a direct exploration of the correlation between initial similarity and client improvement. The majority of reports involving individual treatment (all of these have been with outpatients) has indicated a significant positive relationship between initial
patient-therapist value similarity and improvement (Holzman, 1962; Landfield and Nawas, 1964; Weli(owitz et al., 1967; Landfield, 1971; Good and Good, 1972; Good, 1975; Tessler, 1975; Martini, 1978; Townsend, 1978; Beutler, 1979; Hlasny and McCarrey, 1980; Lewis and Walsh, 1980; Claiborn, Ward, and Strong, 1981). However, it should be emphasized that many of these are analogue studies and involved student volunteers rather than actual clients suffering from psychological problems.

Several researchers have discovered either a negative relationship (Petit, Petit, and Welkowitz, 1974) or a positive but nonsignificant trend (Persons, 1965) between similarity and client improvement. Furthermore, three authors have reported data suggesting that there is no simple relationship between the two factors. In one instance, a positive and significant correlation was discovered for particular values while a negative correlation was found for others (Beutler et al., 1978). Along these same lines, there is global evidence to support the notion that client-counselor congruence does predict increased cognitive adjustment but is not a predictor of affective or behavioral adjustment (Edwards and Edgerly, 1980). Still another effort by Kalafat, Boroto, and France (1979) espouses the idea that value similarity and the counselor's experience level interact in affecting client ratings of the counselor and improvement. Moreover, there is some suggestion, based on empirical evidence (Cook, 1966), that a curvilinear function best describes the relationship between value similarity and certain specific target
changes. Specifically, medium similarity is a more consistent predictor of improvement than either low or high similarity.

Much less attention has been focused on group and family therapy. Most of the group studies indicate a direct, significant covariance between therapist-client similarity and improvement (Beutler et al., 1974; Beutler, 1979). However, Martini (1976) explored terminal values, as identified by Rokeach (1973), which resulted in a nonsignificant relationship. Ukeritis (1977) reported that a mixture of similar and dissimilar beliefs is the optimal predictive situation for successful outcome (note that this is corroborated by Beutler et al., 1978, using individual therapy). Studies involving family therapy manifest a parallel trend to group studies. The majority of these have found a positive correlation between value congruence and outcome (Martini, 1978; Beutler, 1979). In fact, only in one case is a nonsignificant relationship indicated (Martini, 1976).

Despite the fact that there is moderate evidence for a dissimilarity-convergence relationship and strong evidence of a link between convergence and improvement, it is not well established that value similarity between patient and therapist is a reliable forecaster of successful psychotherapy. Disregarding analogue studies (since analogue situations may differ on several crucial variables from an actual therapy situation), there is more data to support a negative or nonsignificant similarity-improvement relationship than there is to support a positive one. Meltzoff and Kornreich (1970, p. 325), after reviewing numerous
studies on this subject, concluded by saying "we can find no solid evidence that patient-therapist similarity or dissimilarity either aids, abets, or hampers effectiveness." How can these contradictory results be explained? Perhaps it is necessary to look beyond the domain of value similarity. Indeed, there is concrete evidence that even current attitude theories are not adequate as frameworks for predicting the factors that will account for variance in psychotherapy outcome, at least in terms of value similarity. For example, Beutler (1971b) suggested that dissonance theory (Festinger, 1957) is more valuable for predicting certain attitudinal aspects of psychotherapy outcome than is social judgement theory (Sherif and Hovland, 1961). However, Beutler (1971b, p. 415) maintained that "neither attitude theory was particularly successful in predicting certain outcomes, such as improvement and dropout . . . ." More recently, Snyder and Fromkin (1980, p. 37) have proposed that "people behaviorally strive to maintain some sense of difference relative to others." In its simplest form, this model, known as uniqueness theory, predicts that very high or low similarity will lead to movement on the part of the perceiver (i.e., the client) toward the establishment of a moderate degree of difference. In terms of the therapy relationship, it would predict convergence in the case of low similarity, divergence for high similarity, and little or no change for moderate similarity. Although this theory has not been evaluated in a therapeutic setting, the review of research results presented earlier would suggest that it does not provide
an adequate explanation for either the convergence-similarity relationship or the similarity-improvement relationship (Lesser, 1961; Holzman, 1962; Landfield and Nawas, 1964; Persons, 1965; Kalafat et al., 1979).

One reason for the lack of predictive power attributable to these social attitude theories has been assessed by Argyris (1969). He asserted that social behavior in a "normal" situation does not transfer to a therapy setting. There are numerous differences not only in the environment itself but in the characteristics of the people involved. Obviously, one characteristic that tends to differentiate therapy patients from normals is the degree of psychological maladjustment. Furthermore, researchers have shown that locus of control is at least one characteristic which varies with the degree or intensity of maladjustment (Harrow and Ferrante, 1969; Warehime and Foulds, 1971; Brannigan, Rosenberg, and Loprete, 1977; Abramson, Seligman, and Teasdale, 1978; Archer, 1980). Locus of control was first conceptualized by Rotter (1966) as a unidimensional personality trait. As it applies to therapy, the concept can be explained in the following manner. Those individuals who experience psychological problems are likely to believe that their reinforcement contingencies are regulated by other people, by chance or fate, etc. These people would be said to have an external locus of control since they perceive the control in their lives as emanating from an external source(s). Brannigan et al. (1977, p. 72) stated that "the external (patient) . . . would tend to be more anxious because of
his inability to appraise his situation as one in which he could complete organized response sequences." On the other hand, more well-adjusted individuals are likely to experience the regulation of reinforcement as being within their own control (internal locus of control). In addition to the hypothesis that locus of control and mental health are related, several researchers have advocated the idea of a moderate linear correlation between the degree of disturbance and the degree of externality (Shybut, 1968; Palmer, 1971; Smith, Pryor, and Distefano, 1971). Of course, it should be understood that a perceived external locus of control is by no means a necessary or sufficient condition for psychological disturbance just as an internal posture does not guarantee positive mental health.

Beyond the relation between control expectancy and psychopathology, research has focused primarily on three areas: (1) the effects of control expectancy on susceptibility to attitude change, (2) the effects of therapy on the modification of control expectancy, and (3) a comparison of internals and externals who are exposed to various styles of therapy. Before investigating these issues, though, it is necessary to bridge the gap between locus of control and persuasion. One can reasonably assume that whether or not clients perceive the control in their lives as coming from an external source is a critical factor in attempting to determine, on an a priori basis, the degree to which they will be susceptible to influence or persuasion on the part of the therapist. For example, if clients see themselves as
the primary controllers of reinforcement, they are less likely to be swayed toward the therapist's characteristics than those who are more externally oriented. Consequently, since the therapist's persuasiveness is related to effectiveness, it can be hypothesized that the patient's locus of control will affect not only convergence of values but overall improvement as well.

In relation to this study, the importance of considering control expectancy can be seen most clearly by reconsidering the inconsistent results involving the similarity-improvement relationship. None of these studies accounted for the patient's locus of control. As mentioned above, it is certainly conceivable that a significant portion of the variance in the similarity-improvement relationship can be accounted for by considering the client's locus of control. Consequently, if this factor is allowed to vary, there may be a stronger or weaker relationship between similarity and improvement depending on clients' perceptions of the control source in their lives. Hence, a major part of this study will be devoted to examining the role which control expectancy plays in the realm of value similarity (as well as convergence) and its effects on improvement.

Relationship of Control Expectancy and Attitude Change

Since psychotherapy has been considered from the standpoint of attitude change, it might be appropriate to begin with an exploration of how perceived locus of control relates to
susceptibility to this kind of change. As one might guess, the literature strongly suggests that externals tend to be more easily influenced by either covert or overt persuasion attempts than internal clients (Ritchie and Phares, 1969; Stein and Clouser, 1970; Biondo and McDonald, 1971; Doctor, 1971). Internal subjects have a tendency to resist influence attempts as a function of the way in which the attempt is made. There are findings which indicate that covert influence attempts are more efficacious than overt attempts with internals (Biondo and McDonald, 1971), while others suggest the opposite view (Ritchie and Phares, 1969). Nonetheless, it can be said that externals exhibit a greater potential for convergence or movement toward a source of influence than internals. A logical area of exploration, therefore, is the interaction between locus of control and convergence in psychotherapy and the effects of this interaction on improvement.

Improvement and Changes in Locus of Control

A concomitant of improvement for both individual and group psychotherapy is an apparent increased sense of personal control on the part of the client (Coven, 1970; Dua, 1970; Foulds, 1971; Reed, 1975; Ziegler, 1975; Reinfeld, 1976; Brannigan et al., 1977; Simmermon, 1977; Camargo, 1978; Widmann, 1978). The most carefully designed studies have shown that successful psychotherapy (where improvement is demonstrated by therapist evaluation and client self-report) involves an
increase in internality whereas, in unsuccessful treatment, the client's locus of control is relatively unchanged (Gillis and Jessor, 1970; Smith, 1970). This seems to be the case whether it be short-term therapy, crisis-oriented therapy or long-term therapy.

In some instances, though, the data indicate no significant movement toward internality even in the cases where there was substantial improvement (Dubnicki, 1977; Feinberg, 1977; Koffman, 1977; Rosenthal, 1977). However, all but one of these studies are either analogue reports or involve a very constricted population in terms of psychotherapy. Probably the most prohibitive weakness they have in common is an improper matching of initial pathology level and length of treatment. As Harrow and Ferrante (1969) pointed out, it is difficult to achieve significant gains toward internality in a population of schizophrenics, for example, in just a few sessions. Thus, in light of the aforementioned methodological weaknesses, the evidence proposing a nonsignificant relationship between internality and improvement cannot be given much credence at this point.

Overall, there is substantial data to support the notion that client's who improve in therapy tend to gain an enhanced view of themselves as being primarily in control of the reinforcement in their lives. Apparently, this pattern is stronger for group therapy than it is for individual treatment. However, the results give no insights as to the therapists' personality variables which might directly influence this relationship.
Instead, the primary focus is on the interaction of the therapeutic process and the client's locus of control as it affects outcome. In view of the current trend toward matching therapists and clients to optimize the effectiveness of therapy, it would be beneficial to specify those critical therapist and client characteristics which influence this change in the client's locus of control.

Relationship between Client Control Expectancy and the Degree of Therapy Structure

Exploration of the relationship between the structure of therapy (both individual and group therapy) and the subject's initial control expectancy has led to highly consistent findings. Internal subjects favor less structure and more client control in the session whereas external subjects look to the therapist to provide structure and tend to become anxious in the absence of a "director" (Fry, 1975; Kilmann, Albert, and Sotile, 1975; Strickland, 1978; Albrecht, 1979). People who have a high degree of personal control tend to feel less comfortable in therapy vis-à-vis external clients. They often express the view that therapy is a threat to their sense of control. As such, they inevitably prefer therapists who are passive rather than active, and nondirective rather than directive. In the same vein, they are most comfortable with insight-oriented and humanistic approaches as opposed to more behavioral approaches (Dua, 1970; Nowicki, Bonner,
and Feather, 1972; Abramowitz et al., 1974; Friedman and Dies, 1974; Morley and Watkins, 1974; Schwartz and Higgins, 1979).

The lone contradiction to the above observation was reported by Kinder (1976) who found that both internals and externals in group therapy desired initial structure. It should be emphasized that the subjects in this study were college volunteers. Also, the author reported a deterioration effect as a result of therapy. As mentioned earlier, analogue studies, while valuable from a heuristic standpoint, often do not represent a good approximation to actual therapeutic conditions. In terms of this particular study, it can be reasonably assumed that these volunteers were not significantly different from each other in locus of control scores (typically "normals" tend to cluster toward the internal end of the locus of control spectrum). This would tend to ensure that there were no significant differences in the amount of preferred structure. Thus, the results are probably artifactual and, at best, tentative.

In summary, the research on locus of control as it pertains to psychotherapy suggests several important patterns: (1) clients tend to move in the direction of greater internality over the course of successful psychotherapy; (2) externals tend to be more easily influenced by outside sources than do internal subjects and are quite vulnerable to directive, behaviorally-oriented therapists; and (3) internal clients prefer more freedom (less structure) in therapy and are therefore more comfortable with nondirective, passive therapists who employ insight-oriented
rather than behavioral approaches. Obviously, these results have
great implications for matching patients and therapists. Further
research is needed to more precisely define which client-
therapist matchings, in terms of personality traits, will facili-
tate the client's movement toward greater internality.

Summarizing the literature on both value similarity and
locus of control provides data which seem to indicate strong re-
lationships in some areas and conflicting, inconsistent trends in
others. As far as value similarity is concerned, speaking in
terms of the percentage of all studies which show supportive re-
results, the convergence-improvement relationship is apparently the
most consistent one. The second strongest relationship is that
between initial dissimilarity and convergence where there is a
positive correlation. However, the similarity-improvement rela-
tionship is very inconsistent and not totally clear at this point.
Disregarding analogue reports, there is slightly more evidence for
a negative relationship between similarity and improvement than
for a positive one. With regard to control expectancy, clearly
the most conclusive result is that external clients prefer more
structure in therapy than do internal clients. Also, one can say
with slightly less confidence that external patients are more
susceptible to attitude change than their internal counterparts
and that successful individual psychotherapy generally leads to
increased internality in the client.
Hypotheses

In view of the results cited above regarding value similarity, convergence, and control expectancy, the following hypotheses were formulated.

1. There will be a negative relationship between client-therapist value similarity and convergence over the course of therapy. Furthermore, there will be an interaction effect of clients' locus of control and similarity on convergence in that internal clients will manifest significantly less convergence than external clients regardless of initial similarity level.

2. There will be a significant main effect of convergence on improvement. More specifically, there will be a linear relationship between these variables so that the greater the convergence level the greater will be the extent of improvement.

3. For the similarity-improvement relationship, there will be a significant interaction effect of initial locus of control and value similarity on improvement. In the case of external clients, there will be a negative relationship between initial value similarity and improvement. For internal clients, the data should reflect the opposite trend. That is, internal clients will show a positive correlation between initial value similarity and improvement. Although there is little empirical support from the literature, the latter portion of this
hypothesis stems from the idea that internal clients should be less resistant to attitude change as patient-therapist value similarity increases. In this situation, they should be more "open" to influence attempts from an external source.

4. A change in clients' locus of control toward greater internality (over the course of therapy) will be accompanied by improvement. The relationship between control expectancy change and improvement will be described as a positive linear correlation in that the greater the movement toward internality the greater the degree of improvement.
CHAPTER 2

METHOD

This chapter will describe the methodology employed in this study including a description of the subjects, the measures used, and the procedure.

Subjects

A total of 45 outpatients (9 males and 36 females) from the psychiatry clinic of the Arizona Health Sciences Center in Tucson, Arizona, constituted the sample for this study (for certain statistical comparisons the total was somewhat less than this but in these instances the actual N is given with the appropriate data analysis). Clients ranged in age from 19 to 54 years with a mean age of 29.2 years and a standard deviation of 8.44 years. Almost the entire sample was composed of Caucasians (98%) with just one Mexican American. There was little variance in the way of social class with the preponderance of clients being middle class. The total number of sessions per client ranged from three to 35 with a mean of 16.5, a standard deviation of 8.26, and a mode of 20. In terms of frequency, the vast majority of clients were seen on a once-a-week basis (89%). Dropouts were determined via a subjective rating by the therapist. In this
study, nine of the 45 subjects were rated as dropouts (dropouts were defined as those clients who failed to attend the scheduled appointment and who subsequently refused to continue in therapy against the advice of the therapist). However, all of these clients had completed at least three sessions which was the criterion for inclusion in the study. In terms of GSI T-scores (see the description of the SCL-90-R given below), the initial pathology level ranged from 34 to 66 with a mean of 49.5 and a standard deviation of 7.22 (using the outpatient norms for the SCL-90-R). In other words, most of the disorders treated could be characterized as adjustment problems or neurotic disorders. In this respect, the population in this study represented a typical outpatient population. The primary mode of treatment was individual psychotherapy although five clients were seen in marital therapy and four were seen for both individual and marital therapy.

There were 22 therapists who participated in the study. They were all trainees including seven psychiatric residents, eight clinical psychology graduate students, six social work trainees, and one psychiatric nursing trainee. The majority of the clients were seen by either the psychiatric residents or the psychology trainees. There was no evidence of a nonrandom distribution of clients among these disciplines. Therapists ranged in experience levels from one to three years. Preferred theoretical orientations included psychoanalytic (50%), eclectic (37.5%), client-centered (7.1%), Gestalt (4.8%), and behavioral (2.4%).
No attempt was made to control for this variance since one's professed orientation has not been clearly shown to be related to therapeutic effectiveness (Sundland, 1977). In terms of the therapists' locus of control (pretherapy), there was essentially a normal distribution of I-E scores with a mean of 9.24 and a standard deviation of 4.88. Finally, there was no explicit attempt to match therapists and clients on any pretreatment variables.

**Measures**

The following constitutes a brief description of those instruments that were used in this study.

**SCL-90-R**

This is a 90-item self-report symptom inventory (Derogatis, 1977). The subject is asked to rate the degree of distress each symptom causes. This is done using a five-point scale ranging from "not at all" to "extremely." The SCL-90-R is scored and interpreted along nine primary symptom dimensions: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. The scale also yields three global indices of distress, each of which is designed to measure some aspect of general pathology. The Global Severity Index (GSI) represents the single best indicator of the level of pathology. For those symptoms that the subject does experience, the Positive Symptom Distress Index (PSDI) reveals the average intensity of
distress caused by these symptoms. Finally, the Positive Symptom Total (PST) simply indicates the number of symptoms the client is experiencing.

Eysenck Personality Inventory (EPI)

The EPI (Eysenck and Eysenck, 1968) is a 57-item self-report questionnaire which measures personality from the dimensions of extroversion-introversion and neuroticism-stability. In addition to these two scales, the EPI includes a Lie scale for detecting attempts at falsifying responses. Therefore, a subject's final score consists of three components, one for each of these scales.

Rokeach Value Survey

This instrument contains two sets of values: (1) instrumental values (beliefs regarding desirable modes of conduct), and (2) terminal values (beliefs regarding desired end states of one's life) (Rokeach, 1973). Each set consists of 18 items which are listed alphabetically and include a brief definition. The individual is instructed to "arrange them in order of importance to YOU, as guiding principles in YOUR life." Form D, which was used in this study, differs from earlier forms in that it contains 18 instead of 12 items. Terminal values were used in calculating both value similarity and convergence in the present study.
each item, subjects are asked to choose from two statements the one that they believe to be more true. Scoring is arranged so that the higher the score the greater the degree of perceived/expected externality of control.

Personal Evaluation

This is a self-report measure which requires subjects to rate their overall level of psychological functioning as well as their level of adjustment in five specific areas. The final item concerns clients' like/dislike of the therapist. Each item is rated by means of a 100mm horizontal line along which subjects are instructed to put two vertical lines representing their functional level before and after therapy. An arrow is drawn between the two lines to indicate the direction of change. A client's score on each item can be derived by simply measuring the length between the two vertical marks with the arrow indicating either improvement or deterioration. If there has been no perceived change, the client is instructed to make only one vertical mark (Beutler and Crago, in press).

Discharge Summary

This is identical to the Personal Evaluation measure described above except that it is completed by the therapist as an evaluation of the improvement made by the client over the course of therapy.
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This is identical to the Personal Evaluation measure described above except that it is completed by the therapist as an evaluation of the improvement made by the client over the course of therapy.

Procedure

This study was conducted as part of a larger outpatient research project (Beutler and Mitchell, 1981). During a routine pretherapy screening procedure, outpatients were asked to complete the SCL-90-R and the I-E scale. After the first therapy session, they were given the EPI and the Rokeach Value Survey. Immediately following termination of therapy (whether it was planned or premature termination), clients again were asked to complete a battery of six tests. Those which were used in this particular study included the SCL-90-R, Rokeach Value Survey, Personal Evaluation, and the I-E scale.

Therapist data were collected at two different periods. First, the therapists completed a set of self-report measures at the start of their one-year training period in the outpatient clinic. The EPI, I-E scale, and the Rokeach Value Survey were included in this initial set. Second, whenever a client terminated, the therapist was asked to complete a discharge summary.

The data were analyzed using two different statistical methods. First, several analyses of variance were performed with the independent variables being locus of control and
patient-therapist value similarity (low, medium, high). The dependent variables were convergence and improvement. These two variables, as well as the client's locus of control change (explained below), represented the degree of change on the part of the client from pre- to posttherapy.

Second, a step-wise multiple regression analysis was used to establish a prediction equation for improvement as a function of the following factors: (1) change in the client's locus of control over the course of therapy, (2) initial value similarity, and (3) convergence of the patient's values with those of the therapist.

Each variable above was quantified in the following manner.

Internal vs. External Control

This variable was dichotomized by a median split of initial I-E scores for all clients. Internal subjects were designated as those who scored below the median while external subjects were those scoring above the median (an independent frequency distribution done on all patients attending the clinic suggested that there was no clustering of scores toward either the internal or external end of the spectrum). Locus of control change was simply measured by computing the percent gain between pre- and posttherapy I-E scores.
Similarity

Using the terminal values of the Rokeach Value Survey, the therapist's and client's pretreatment scores were compared via a rank order correlation coefficient. High, medium, and low similarity were established on the basis of a one-third split. The various client-therapist pairs were ranked on the basis of their respective correlation coefficients. Those in the positive top third (highest correlations) were designated "high similarity," and those in the bottom third constituted the "low similarity" group.

Convergence

Utilizing the same procedure described above, rank order correlation coefficients were used to obtain the degree of similarity between the clients' posttreatment value systems and their therapists' pretreatment value systems. The coefficient was then compared (see Appendix C) to the similarity coefficients derived from client-therapist pretreatment scores. Differences between these values resulted in a factor representative of the extent to which clients' values changed in the direction of their therapists' over the treatment period.

Improvement

The measurement of improvement was accomplished in several steps. First, the percent gain was computed comparing pre- and posttreatment scores on the following measures: individual SCL-90-R scale scores (T-scores); Personal Evaluation scores:
and the Discharge Summary scores. Initially, gain was measured by residual change score transformation as opposed to raw difference scores (Strupp and Hadley, 1979; see Appendix A) as a means of correcting for statistical regression effects. However, the data revealed that 20.5% of the clients either made no improvement or actually got worse as a result of psychotherapy (as measured by GSI scores from the SCL-90-R). As per Beutler and Crago (in press), the residual change formula assumes not only that the relationship between pre- and posttreatment scores is linear but that there is a consistent regression of scores toward the mean. The authors (in press, p. 35) stated that "even a single deviation from a general pattern of regression can potentially produce a distortion in the linear relationship sufficient to lower or raise the correlation inordinately, thus compromising the residual gain score." For this reason, percent gain (see Appendix B) was substituted for the residual gain transformation in order to estimate change. Using the latter method, change can be calculated in a way that is reasonably independent of the initial level of the variable involved. Hence, initial levels of pathology, value similarity, and locus of control are not expected to bias the change scores for improvement, convergence, and locus of control change respectively.

Second, a principal components analysis was performed on these comparison scores. A principal components analysis is a dimension-reducing process which essentially combines scores on several measures of outcome into common factors with the
individual scores receiving assigned values which describe their relative contribution in explaining outcome. This allows the experimenter to choose those factors which best describe the target variable and to disregard those whose contribution is relatively insignificant. In this study, the principal components analysis was designed to clarify the various estimates of therapeutic gains.

Improvement was also measured via the percent gain on both the Personal Evaluation and the Discharge Summary. A subject's score on both of these measures was arrived at by averaging the first six items (see Appendix E). The percent gain was then computed in such a way as to account for regression of scores toward the mean (see Appendix D), thereby controlling for the amount of change possible on a finite scale.

Finally, improvement was calculated by comparing pre- and posttherapy GSI scores (percent gain). Also, the percent gain for each individual SCL-90-R scale score was computed to obtain a symptom-specific measurement of outcome.
CHAPTER 3

RESULTS

This chapter includes preliminary analyses of the data concerning the subjects, analyses of the data concerning each of the four hypothesized relationships, and some additional findings.

Preliminary and Validational Analyses

Several preliminary tests were performed to ensure that a sampling bias did not exist among the variables involved. In terms of the independent variables, there was a highly significant difference between the I-E scores of internal and external subjects, \( t(41) = 10.12, p < .01 \). There were also significant similarity score differences among the three groups (i.e., high, medium, and low similarity): (1) low versus medium similarity, \( t(28) = -9.03, p < .01 \); (2) medium versus high similarity, \( t(28) = 7.41, p < .01 \); and low versus high similarity, \( t(28) = -13.35, p < .01 \). Furthermore, a comparison of patient-therapist similarities within internal and external groups revealed no significant differences, \( F(1,41) = .001, p < .90 \). Similarly, there was no evidence of systematic assignment of clients to therapists of different disciplines on the basis of the client's locus of control (Kolb, 1981).
A total of seven subjects received some type of psychopharmacological agent(s) during psychotherapy. However, preliminary evaluation failed to reveal significant improvement differences between those subjects receiving medication and those subjects who did not. This finding held up across all three measures of improvement: GSI, F(1,42) = 1.63, p<.21; Personal Evaluation, F(1,41) = .80, p<.38; and Discharge Summary, F(1,40) = .312, p<.58. In fact, for all three improvement measures, those who used medications made slightly smaller gains than those who did not.

A principal components analysis was performed on the percent gain made by subjects on each of the SCL-90-R scales as well as the Personal Evaluation and the Discharge Summary. The following three factors emerged as a result of this analysis: (1) a general symptom factor which included all SCL-90-R symptoms except somatization and also included the Personal Evaluation score; (2) a somatization (single score) factor; and (3) an overall psychological functioning factor which was composed of the Discharge Summary score only. Overall, the outcome factors included a combination of symptomatology and overall psychological functioning, a factor characterized by the subject's tendency to defend against conflicts via overt physical symptoms, and a therapist-rated factor of the clients' ability to adjust to their social environment. In a broader sense, the first two factors can be conceptualized as patient factors (i.e., patient-rated) and the third as a therapist factor.
Similarity-Convergence Relationship

The data revealed a significant negative correlation between initial patient-therapist similarity and convergence ($r = -0.59, p < .01$). An analysis of variance was also performed (Table 1) and a significant main effect for similarity was found but, contrary to the stated hypothesis, there were no interactive effects of similarity and locus of control on convergence. Thus, the lower the initial patient-therapist value similarity, the greater the change in the client's values toward those of the therapist, irrespective either of patient expectancy of control or artifactual differences. Upon closer examination, it was found that all three similarity groups were characterized by significantly different mean convergence levels (i.e., comparisons of means and confidence intervals for low versus medium similarity, medium versus high similarity, and low versus high similarity showed that there were significant mean differences in convergence for all three cases). This similarity-convergence relationship was also suggested by the distribution of subjects into nine possible similarity-convergence groups formed by categorizing convergence and similarity scores into low, medium, and high (in categorizing convergence, the same procedure was followed as was used for similarity). From Table 2, one can see that the low-high, medium-medium, and high-low similarity-convergence groups were most heavily populated. The relatively high distribution for the medium-medium group suggested that many clients' value systems were moderately similar to their
Table 1. The Effects of Similarity and Locus of Control on Convergence (N = 43)

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Similarity (A)</td>
<td>2</td>
<td>7315.960</td>
<td>9.186*</td>
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<tr>
<td>Locus (B)</td>
<td>1</td>
<td>160.908</td>
<td>.202</td>
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<tr>
<td>A x B</td>
<td>2</td>
<td>572.876</td>
<td>.719</td>
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<tr>
<td>Residual</td>
<td>37</td>
<td>796.459</td>
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</tr>
</tbody>
</table>

*p<.01.

Table 2. Distribution of Subjects into Similarity-Convergence Groups*

<table>
<thead>
<tr>
<th>Similarity-Convergence</th>
<th>Absolute Frequency</th>
<th>Relative Frequency</th>
<th>Cumulative Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-Low</td>
<td>2</td>
<td>4.4</td>
<td>4.4</td>
</tr>
<tr>
<td>Low-Medium</td>
<td>4</td>
<td>8.9</td>
<td>13.3</td>
</tr>
<tr>
<td>Low-High</td>
<td>9</td>
<td>20.0</td>
<td>33.3</td>
</tr>
<tr>
<td>Medium-Low</td>
<td>3</td>
<td>6.7</td>
<td>40.0</td>
</tr>
<tr>
<td>Medium-Medium</td>
<td>8</td>
<td>17.8</td>
<td>57.8</td>
</tr>
<tr>
<td>Medium-High</td>
<td>4</td>
<td>8.9</td>
<td>66.7</td>
</tr>
<tr>
<td>High-Low</td>
<td>10</td>
<td>22.2</td>
<td>88.9</td>
</tr>
<tr>
<td>High-Medium</td>
<td>3</td>
<td>6.7</td>
<td>95.6</td>
</tr>
<tr>
<td>High-High</td>
<td>2</td>
<td>4.4</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*All frequencies are in percent.
therapists' value systems and that these clients tended to show a moderate level of convergence during treatment.

**Convergence-Improvement Relationship**

Since the principal components analysis revealed three significant improvement factors, the convergence-improvement relationship must be considered within each of these factors.

With regard to the first factor reflecting improvement in the clients' self-reported symptomatology, the data revealed that convergence and improvement (as measured by GSI scores) were not significantly related. This finding was contrary to the second hypothesis. However, when improvement was measured via percent gain on the individual scales of the SCL-90-R, there were three interesting results. The first emerged on the Paranoia scale where an analysis of variance indicated that there was a significant similarity-convergence interaction affecting improvement and a barely nonsignificant main effect of convergence on improvement (see Table 3). More specifically, the interaction indicated that the following situation existed: (1) for clients who showed a low patient-therapist value similarity, a low level of convergence was associated with a decrease in symptoms of paranoia that was significantly greater than patient-therapist dyads with moderate or high convergence; (2) for clients who were moderately similar to their therapists, improvement was unaffected by convergence; and (3) for clients who were highly similar to their therapists, a high convergence level predicted significantly
Table 3. The Effects of Similarity and Convergence on Improvement (Paranoia) (N = 44)

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
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</thead>
<tbody>
<tr>
<td>Similarity (A)</td>
<td>2</td>
<td>433.323</td>
<td>1.005</td>
</tr>
<tr>
<td>Convergence (B)</td>
<td>2</td>
<td>1304.071</td>
<td>3.025*</td>
</tr>
<tr>
<td>A x B</td>
<td>4</td>
<td>1396.694</td>
<td>3.240**</td>
</tr>
<tr>
<td>Residual</td>
<td>35</td>
<td>431.049</td>
<td></td>
</tr>
</tbody>
</table>

*p<.10.

**p<.05.

greater improvement than low convergence and it also predicted more improvement than moderate convergence but this latter difference was not of significant proportions (see Figure 1). Overall, looking at the symptom of paranoia, the combinations of low similarity-low convergence and high similarity-high convergence were optimal for producing a decrease in symptoms. As for the suggestive main effect of convergence, high convergence was optimal for improvement and a moderate level of convergence was associated with the smallest gains.

The second result emerged when the percent gain on the somatization factor was considered. The convergence-improvement relationship was somewhat affected by the patients' initial locus of control. An analysis of variance showed that there was a substantial but nonsignificant interaction between convergence and
Figure 1. The Interactional Effects of Similarity and Convergence on Improvement (Paranoia) (N = 44)*

*Note: Negative values indicate improvement on the dependent variable.
patient locus of control (see Table 4). Basically, the noteworthy difference within the interaction was between those patients who showed a high degree of convergence. In this instance, internal subjects improved more than external subjects (see Figure 2). There were no other differences which approached significance. Thus, in the case of clients who showed a relatively high degree of convergence in their value systems, those who had a sense of control over their lives tended to improve more than those who felt that their control emanated from an external source.

Finally, the third factor found to describe improvement was based solely on the therapists' rating of the clients' overall psychological functioning after termination of therapy. This was indicated by scores on the Discharge Summary. Using this criterion, there was a significant positive correlation between convergence and improvement ($r = .31, p<.05$). In the same vein, convergence had a significant effect on improvement as shown by an analysis of variance (see Table 5). The data pattern could be described as a linear relationship between convergence and improvement. As convergence increased, the amount of improvement steadily increased also. In particular, those clients who showed medium or high levels of convergence improved significantly more than those who manifested low convergence.
Table 4. The Interactional Effects of Convergence and Locus of Control on Improvement (Somatization) (N = 42)

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Convergence (C)</td>
<td>2</td>
<td>300.207</td>
<td>.618</td>
</tr>
<tr>
<td>Locus (B)</td>
<td>1</td>
<td>1450.599</td>
<td>2.987*</td>
</tr>
<tr>
<td>C x B</td>
<td>2</td>
<td>1393.616</td>
<td>2.869*</td>
</tr>
<tr>
<td>Residual</td>
<td>36</td>
<td>85.710</td>
<td></td>
</tr>
</tbody>
</table>

* p<.10.

Table 5. The Effects of Convergence and Locus of Control on Therapist-Rated Improvement (N = 40)

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Convergence (C)</td>
<td>2</td>
<td>1875.326</td>
<td>3.906*</td>
</tr>
<tr>
<td>Locus (B)</td>
<td>1</td>
<td>110.899</td>
<td>.231</td>
</tr>
<tr>
<td>C x B</td>
<td>2</td>
<td>672.066</td>
<td>1.400</td>
</tr>
<tr>
<td>Residual</td>
<td>34</td>
<td>480.071</td>
<td></td>
</tr>
</tbody>
</table>

* p<.05.
Figure 2. The Interactional Effects of Convergence and Locus of Control on Improvement (Somatization) (N = 42)*

*Note: Negative values indicate improvement on the dependent variable.
Similarity-Locus of Control Relationship

The third hypothesis of this experiment predicted that there would be an interaction effect of initial patient-therapist value similarity and the client's locus of control on improvement. Considering improvement in terms of the three principal component factors, there was no evidence that this interaction significantly affected outcome. However, when outcome was analyzed in terms of the percent gain on the individual SCL-90-R scales, two important relationships were discovered. An analysis of variance revealed that initial patient-therapist value similarity had a significant effect with regard to percent gain on the Interpersonal Sensitivity scale. Furthermore, the effect of the clients' initial locus of control on changes in interpersonal sensitivity approached significance. However, as can be seen in Table 6, there was no significant interaction between the two independent variables. A close inspection of the data provided further clarification. In the case of the similarity variable, those clients who exhibited a moderate degree of value similarity with their therapist made the greatest gains in therapy and their mean level of improvement (i.e., a decrease in symptoms of interpersonal sensitivity) was significantly greater than those who showed initially high similarity. With regard to locus of control, the data revealed that internal clients tended to improve more than external clients. That is, they tended to make greater positive changes in the area of interpersonal sensitivity.
Table 6. The Effects of Value Similarity and Locus of Control on Improvement (Interpersonal Sensitivity) (N = 42)

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
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<th>F</th>
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</thead>
<tbody>
<tr>
<td>Similarity (A)</td>
<td>2</td>
<td>1265.380</td>
<td>5.416*</td>
</tr>
<tr>
<td>Locus (B)</td>
<td>1</td>
<td>921.295</td>
<td>3.943**</td>
</tr>
<tr>
<td>A x B</td>
<td>2</td>
<td>323.046</td>
<td>1.383</td>
</tr>
<tr>
<td>Residual</td>
<td>36</td>
<td>233.647</td>
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</tr>
</tbody>
</table>

*p < .01.

**p < .05.

Overall, then both similarity and locus of control affected improvement in interpersonal sensitivity with similarity having a slightly more substantial impact than locus of control.

For the scale measuring the patient's level of hostility, once again there was no significant similarity-locus of control interaction. However, the impact of value similarity on improvement (i.e., a decrease in symptoms of hostility) approached significance (see Table 7). On the average, clients who were moderately similar to their therapist made more substantial changes than either low-similarity clients or high-similarity clients. The difference in outcome gains between the medium-similarity and the high-similarity group approached significance. Thus, when a decrease in patient hostility was considered as an independent measure of improvement, the hypothesis of a significant
Table 7. The Effects of Similarity and Locus of Control on Improvement (Hostility) (N = 42)

<table>
<thead>
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<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
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<tr>
<td>Similarity (A)</td>
<td>2</td>
<td>2033.610</td>
<td>2.693*</td>
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<tr>
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<td>.522</td>
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<tr>
<td>Residual</td>
<td>36</td>
<td>751.311</td>
<td></td>
</tr>
</tbody>
</table>

*p<.10.

similarity-locus of control interaction effect was not supported but there was a trend suggesting that value similarity, in itself, affected improvement.

Locus of Control Change and Improvement

Contrary to the final hypothesis, there was no evidence to support the idea that an increase in the patient's internality during treatment was associated with therapeutic gains. Using a multiple regression analysis, it was found that neither initial value similarity nor convergence predicted improvement (GSI scores) at a significant level. Once again, though, an analysis of the individual SCL-90-R scales provided an interesting finding. When improvement was viewed as percent gain on the Paranoia scale (i.e., a decrease in symptoms of paranoia), there was a significant positive correlation between changes in locus
of control (percent gain I-E) and outcome, $r = .40$, $p < .05$ ($N = 28$). This finding can be interpreted as partial support for the hypothesis that the degree of a client's change toward greater internality varies directly with therapeutic gains. More specifically, if clients gained an increased sense of control over the experiences in their lives during therapy, they became less paranoid. Of course, the corollary of this is that clients who perceived a loss of control (increased externality) tended to exhibit an exacerbation of paranoid symptoms at posttherapy evaluation.

In summary, there was little evidence to support the general hypothesis that a change in locus of control predicts improvement if only the three factors described by the principal components analysis are considered. However, the data revealed that this hypothesized relationship did hold for the specific case in which improvement was measured by a decrease in symptoms of paranoia.

**Additional Findings**

Beyond the data mentioned above, several interesting relationships were noteworthy. First, there was some evidence that the patient's initial locus of control may have affected outcome. Although this relationship did not hold true for any of the three principal outcome factors, the data did suggest that initial locus of control had a substantial effect on improvement. This was the case not only when improvement was measured by
interpersonal sensitivity but also by somatization (see Table 4). Furthermore, the trend was consistent across both of these outcome factors. Clients who entered therapy with an internal locus of control tended to make substantially greater therapeutic gains than external clients in the areas of somatization and interpersonal sensitivity.

Another comparison that deserves mention was the difference between patient- and therapist-rated improvement. The Personal Evaluation form was completed at the termination of therapy by both the patient and the therapist (Discharge Summary). As one can see from Table 8, patients tended to perceive more improvement than did their therapists. The difference in mean percent gain between the two rating sources proved to be highly significant, t(39) = 5.05, p<.01. Apparently the clients saw themselves as making more improvement in the area of overall psychological functioning and ability to adapt to a social environment than did their therapists. Furthermore, the percent gain on the Personal Evaluation and on the Discharge Summary showed the greatest correlation with the same two SCL-90-R scales, the Depression and Anxiety scales. The percent gain in Personal Evaluation correlated highly with both the percent gain on the Depression scale (r = -.73) and with the Anxiety scale (r = -.68). In the same manner, percent gain on the Discharge Summary was most closely associated with these same two scales (r = -.37 and r = -.43 respectively), but at lower levels.
Table 8. Comparative Measures of Improvement*

<table>
<thead>
<tr>
<th>Source</th>
<th>% Gain ($\bar{X}$)</th>
<th>N</th>
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<tr>
<td>Personal Evaluation</td>
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<td>43</td>
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<tr>
<td>Discharge Summary</td>
<td>34.83</td>
<td>42</td>
</tr>
<tr>
<td>Somatization</td>
<td>-8.76</td>
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<tr>
<td>Obsession Complex</td>
<td>-10.20</td>
<td>44</td>
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<tr>
<td>Interpersonal Sensitivity</td>
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<td>44</td>
</tr>
<tr>
<td>Depression</td>
<td>-16.92</td>
<td>44</td>
</tr>
<tr>
<td>Anxiety</td>
<td>-13.56</td>
<td>44</td>
</tr>
<tr>
<td>Hostility</td>
<td>-10.20</td>
<td>44</td>
</tr>
<tr>
<td>Phobia</td>
<td>-18.12</td>
<td>44</td>
</tr>
<tr>
<td>Paranoia</td>
<td>-6.51</td>
<td>44</td>
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<tr>
<td>Psychoticism</td>
<td>-18.15</td>
<td>44</td>
</tr>
<tr>
<td>GSI</td>
<td>-17.15</td>
<td>44</td>
</tr>
</tbody>
</table>

*For the individual SCL-90-R scales and the GSI factor, negative values indicate improvement.
Finally, after scrutinizing the gains made in therapy using the SCL-90-R scales as the criteria, it was found that, as a group, the clients seemed to make the most improvement in the areas of phobic and psychotic-like symptoms (see Table 8). Substantial decreases were also seen in symptoms of depression as well as interpersonal sensitivity. The areas in which therapy apparently had the least impact were paranoia and somatization. Overall, the group mean reflected a decrease in the severity of symptoms when all nine scales were collapsed (GSI scores).
CHAPTER 4

DISCUSSION

This chapter presents a discussion of the results regarding each of the four hypothesized relationships. Also, it includes a discussion of the additional findings, implications of the study, and some suggestions for future research.

**Similarity-Convergence Relationship**

In the present study, the relationship between initial patient-therapist (pretherapy) value similarity and convergence could best be described as a negative linear relationship. Low similarity predicted high convergence, medium similarity predicted moderate convergence, and high similarity led to low convergence. The social attitude theory which most closely predicts this pattern is Festinger's (1957) dissonance theory. Those clients who exhibited low similarity tended to show the greatest convergence and those who exhibited a moderate difference in values showed a moderate level of convergence. For the case of high patient-therapist value similarity, the vast majority of clients exhibited a low level of convergence. However, in a few cases, clients' values actually diverged from their therapists' over the course of treatment. In these latter
instances, the data would corroborate uniqueness theory (Snyder and Fromkin, 1990) which predicts that people tend to maintain a moderate degree of difference from others. According to this theory, persons (i.e., clients) perceiving a high degree of similarity would tend to diverge from another person (i.e., the therapist) in terms of value systems.

Overall, then, dissonance theory seems to be the most viable predictor of the data involving the similarity-convergence relationship. In isolated instances, though, uniqueness theory provides the most reasonable explanation. The fact that most clients tended to converge with their therapists even when their initial value systems were highly similar may suggest that the effect of another factor, such as the therapist's perceived credibility, outweighs the impact of initial value similarity.

The fact that the data did not support a similarity-locus of control interaction effect on convergence could have at least three explanations. First, it may be that the persuasive process of therapy is rather subtle or subconscious. If this is true, convergence would not be consistently affected by a conscious factor such as perceived locus of control.

A second explanation for the absence of a locus of control effect on the similarity-convergence relationship might be that, from the standpoint of the client, the perceived importance and/or credibility of the therapist was not taken into account. For example, suppose clients did not view their therapist as a credible, significant figure in their lives. In this case,
clients' initial locus of control would probably not affect the degree of influence the therapists had with respect to value systems. On the other hand, locus of control would likely be a substantial factor in the case where therapists were perceived as having a high level of credibility. Patients' perception of therapist credibility has been postulated to be an important factor for the prediction of improvement in previous research (Beutler et al., 1975).

Still another reason for the failure to establish a significant locus of control effect could be explained on methodological grounds. As stated earlier, subjects were categorized as having an internal or external locus of control based on a median split of I-E scores. Although the data revealed a significant difference in mean I-E scores for these two groups, it is quite possible that if only those subjects who represented the extremes of the I-E distribution (e.g., the top and bottom one-third of all I-E scores) were considered, the interaction effects of control expectancy may have reached significant proportions. It is also reasonable to entertain the possibility that Rotter's (1966) instrument for measuring locus of control is not sufficiently sensitive or specific enough for use in a therapy context.

**Convergence-Improvement Relationship**

In general, the hypothesized relationship between convergence and improvement was not supported by the data except when
improvement was evaluated by the therapist. The relationship between convergence and therapist-rated improvement indicated that therapists had a tendency to rate those clients who became more like themselves (in terms of value systems) as being most improved in the sense of adaptability to one's social environment and overall psychological functioning. This suggests that therapists tend to view successful psychotherapy as a persuasion process in which the client adopts, to some degree, the value characteristics of the therapist. Hence, it can be speculated that therapists see their role as being somewhat akin to a modeling role. This finding agrees with the results obtained by Ukeritis (1977) who suggested that convergence may be an indication of therapists' desire to see patients as moving toward a value system that is more congruent with their own. However, earlier evidence (Beutler, 1971b; Beutler et al., 1975) suggested that there was no such convergence-improvement relationship even for therapist-rated improvement. At least at this point, only tentative conclusions can be drawn about the association of convergence and therapist-rated improvement.

According to this study, convergence did not significantly affect improvement when the latter was measured on a global symptom scale such as the GSI. However, when considering specific symptoms of the SCL-90-R, it was found that measuring improvement in terms of a decrease in symptoms of paranoid ideation or somatization provided significant results. In the case of paranoia symptoms, the similarity-convergence interaction
revealed that paranoid clients who were initially dissimilar to their therapists tended to improve the most if they did not converge with them and those who were highly similar made the greatest gains when they showed a high convergence level. These results are difficult to explain in light of the aforementioned negative relationship between similarity and convergence. However, considering object relations theory, these results can be explained quite adequately. In the case of initial low patient-therapist value similarity, the client apparently perceives the therapist (whose image is typically internalized by the client as a self-other object) as threatening due to this disparity in value systems and the fact that these clients tend to be hypersensitive and suspicious of others. This would probably lead to a tendency to withdraw rather than "approach" the therapist for the purpose of gaining a sense of safety and comfort (i.e., low convergence). The low-similarity paranoid client, apparently, is able to benefit more from therapy under these conditions of withdrawal. In the instance of high initial patient-therapist value similarity, the client manifesting symptoms of paranoia is less threatened by the therapist (and, hence, the self-other internalized object) and is probably comfortable in moving toward the therapist, at least in terms of value systems. Once again, the condition of initial patient comfort would likely be a prerequisite for therapeutic progress among clients showing symptoms of this type. In terms of treatment strategy, for the case of low patient-therapist value similarity, it seems that therapists
would do well to operate in a fairly unstructured manner in which they are relatively supportive and nondirective (i.e., the client has substantial freedom within the relationship). However, for those patient-therapist dyads that show a high initial value similarity, the therapist would probably be most helpful by being fairly structured, directive, and active thus enhancing the persuasion process. It appears from these data that individuals manifesting symptoms of paranoia are most receptive to persuasion from an external source when they perceive themselves as being highly similar to that source. When they perceive themselves as being dissimilar, in terms of values, they can benefit most if they are allowed to work within their own value system with minimal "guidance" provided by the therapist. Furthermore, there was the suggestion that, overall, those clients who showed the highest levels of convergence improved the most. This implies that matching patients and therapists on the basis of their initial value systems will tend to maximize the probability of improvement for the case in which improvement is measured by a decrease in symptoms of paranoia.

When improvement was calculated as a decrease in somatization symptoms, the convergence-improvement relationship was affected by the client's initial locus of control. More specifically, for those clients who manifested a relatively high convergence level, those who were internally oriented improved considerably more than those who expected the control in their lives to emanate from an external source(s). Thus, to the degree
that a major problem of clients was their tendency to deal with anxiety through somatization, the ones who were both persuaded by the therapist and had a sense of personal control over their lives tended to improve more than those who converged with their therapist but did not have this sense of control. Those with an external locus of control may have been more fearful and anxious since they perceived that they could not control the reinforcement in their lives. Even though they did adopt a value system that was more like that of their therapist, the anxiety generated by their perception of being out of control may have negated the impact of changing values, at least to a large extent.

Overall, the results on the convergence-improvement relationship suggested three salient trends. First, the convergence-improvement relationship is not straightforward but is evidently affected by the patient's locus of control and patient-therapist value similarity, at least for the instances in which improvement is measured by a change in symptoms of paranoia and somatization. Second, the evaluator of improvement may be a significant factor in this relationship. In this study, the convergence-improvement relationship was significant when improvement was therapist-rated (Discharge Summary scores) but not when it was patient-rated (GSI and Personal Evaluation scores). This disparity among rating sources points to the need for independent evaluators as many authors have suggested (Luborsky, Singer, and Luborsky, 1975; Strupp and Hadley, 1977). Finally, the findings suggested the need to look at improvement in a more focused manner such as
through specific symptoms. This finding seems to support current psychotherapy researchers who advocate increased specificity in examining the therapeutic process (Bergin and Lambert, 1978).

**Similarity-Locus of Control Relationship**

The hypothesis that similarity and locus of control would interact on a significant level in affecting improvement was not supported by the data. Once again, though, when specific symptoms were used as measures of improvement, several noteworthy relationships involving both similarity and locus of control were discovered. For example, when a decrease in symptoms of interpersonal sensitivity was used as the improvement criterion, initial patient-therapist value similarity had a significant effect on improvement and the patient's initial locus of control also had a noticeable impact on improvement although the latter finding did not reach a significant level. In terms of initial value similarity, the data indicated that moderate patient-therapist similarity was optimal for improvement. Also, the moderately similar patient-therapist dyads made significantly greater gains (decrease in symptoms of interpersonal sensitivity) than the high similarity dyads.

Along the same lines, when improvement was measured as a decrease in symptoms of hostility, virtually the same relationship existed. That is, initial value similarity substantially, but not significantly, affected outcome and the patients from the moderately similar patient-therapist dyads made considerably more
improvement than either the low or high similarity patients. The similarity-improvement association for both the interpersonal sensitivity scores and the hostility scores can best be explained by the uniqueness theory (Snyder and Fromkin, 1980). The authors hypothesized that moderate similarity on the part of the perceivers (client) would lead to high acceptability of the stranger (therapist). That is, people are most comfortable with and receptive to those with whom they sense a moderate degree of difference. Their theory also predicts that perceived low and high similarity will produce low acceptability on the part of the perceivers. Furthermore, there is evidence to suggest that perceived high similarity motivates the perceivers to change their attitudes (Weir, 1971) and personality characteristics in the direction of increased dissimilarity (Snyder, Smith, and Batson, 1974), to physically distance themselves from a stranger (Snyder and Endelman, 1977), and to express more intense negative affect (Fromkin, 1972). Using this rationale, it appears from the data that clients who are moderately similar to their therapists initially will tend to be most comfortable and accepting of them. Since patient involvement has been linked to improvement on a significant level (Gomes-Schwartz, 1978), it is clear that a moderate level of patient-therapist similarity, in which the client would be most accepting of the therapist, would likely predict the greatest therapeutic gains at least insofar as symptoms of hostility and interpersonal sensitivity are concerned.
As mentioned earlier, the client's initial locus of control had an impact on improvement that approached significant levels when improvement was assessed via a decrease in symptoms of interpersonal sensitivity. More specifically, internal clients showed more improvement than external clients. This pattern seems to indicate that having a sense of personal control over the contingencies of reinforcement in one's life is critical for maximizing the process of therapy (as far as interpersonal sensitivity is concerned). This relationship appears to have a logical basis since those clients who have a sense of control are probably better able to overcome their extreme sensitivity to their therapists and, hence, benefit from their interactions with them. However, for clients who are hypersensitive to others, and view the therapist as a significant source of control in their lives (i.e., externally oriented), it would probably be more difficult to become "involved" in therapy. In other words, they would tend to maintain some degree of distance with the therapist possibility diluting, or at least retarding, the progress of therapy.

In summary, while there was no significant similarity-locus of control interaction effect which predicted improvement, both of these variables affected improvement in their own right when therapeutic gains were measured by the alleviation of interpersonal sensitivity and hostility. As Cook (1966) and others have predicted, a moderate level of initial patient-therapist value similarity is apparently optimal for improvement.
Finally, internal clients tended to benefit more from therapy than external clients insofar as symptoms of interpersonal sensitivity and hostility were concerned.

**Locus of Control Change and Improvement**

The final hypothesis predicted that a change by the client toward greater internality (an increased sense of personal control in life) over the course of therapy would predict therapeutic gains at a significant level. Looking only at the three improvement factors outlined by the principal components analysis, there was no significant correlation between I-E change and improvement on any of the factors. However, an analysis of the individual SCL-90-R scales revealed that when improvement was calculated by a decrease in symptoms of paranoid ideation, the percent gain in patient I-E (locus of control change) correlated significantly with improvement. According to the data, as clients perceived an increased sense of control over the contingencies of reinforcement in their lives, they tended to show a decrease in symptoms of paranoia. If we view paranoid symptoms as inclusive of a hypersensitivity to one's social environment, clients apparently become less suspicious and sensitive to others as they feel more and more control over their own lives. This finding seems to corroborate the aforementioned finding that internally-oriented clients showed more improvement than externally-oriented clients when improvement was measured in the realm of interpersonal sensitivity.
Overall, it can be said that clients' locus of control seems to be an important factor associated with improvement in terms of helping them to be less suspicious of others. From the data obtained in this study, one can state that it is critical for clients to gain a strong sense of personal control in order to benefit maximally from therapy. Based on the literature regarding control expectancy and the degree of structure in therapy (Fry, 1975; Kilmann et al., 1975; Strickland, 1978; Albrecht, 1979), it would probably be most beneficial if therapists were to provide minimal structure for those clients who initially (i.e., pretherapy) exhibit an internal locus of control. For those who are externally oriented, though, a helpful strategy would be one in which the initial stages of therapy were fairly structured and the therapists were somewhat active and directive. However, as clients began to gain a stronger sense of control, therapists would do well to become less directive and more supportive, allowing the clients to exercise their own control and to explore the nature of their relationship with others, including the therapist.

Additional Findings

Beyond the data concerning the hypothesized relationships, the client's initial locus of control had a salient effect on improvement not only for symptoms of interpersonal sensitivity, but also for somatic symptoms. In the latter instance, it can be said that those who had a relatively high degree of
control expectancy (internal) were more able to benefit from therapy than those who were externally oriented. The difference was manifested by substantially greater decreases in somatic symptoms. This finding runs contrary to previous results which suggest that external clients, in general, tend to benefit more from overt and/or covert persuasion attempts and show less resistance than internals (Ritchie and Phares, 1969; Hjelle and Clouser, 1970; Biondo and McDonald, 1971; Doctor, 1971). Apparently this is not a universal relationship and the data from this study certainly point to the need to view improvement in more specific terms.

Another interesting comparison that should be addressed is that between therapist- and patient-rated improvement. The results here indicated that clients saw themselves as making significantly greater gains than did their therapists. Once again, this is not supported by previous results which have shown just the opposite trend (Strupp and Hadley, 1979). The essential point is that the measurement of improvement tends to be rater-specific and perhaps a composite score including ratings by the client, therapist, an experienced independent rater, and a significant other(s) would be the most meaningful way to conceptualize improvement. Thus, the results from this study indicated that the idea of therapeutic gains needs to be defined in a more specific manner (e.g., specific areas or symptoms of improvement should be denoted) and in a way that combines several sources of evaluation.
Finally, the clients in this study showed the greatest therapeutic gains in the areas of phobic symptoms and psychotic symptoms. Considering that the average length of stay in therapy was relatively brief, it makes sense that those clients with more circumscribed symptoms, such as phobias, would show the most improvement. The comparatively high level of improvement on the symptom dimension of psychoticism (e.g., withdrawn, isolated, schizoid life style, delusions, hallucinations, etc.) is somewhat more unexpected. One can only speculate that clients manifesting severe symptomatology tend to benefit considerably from engagement in a relationship-offered environment. Perhaps there is a correlation between the severity of psychopathology (i.e., symptoms that approach psychotic proportions) and the degree to which the client is motivated to become involved in the therapeutic relationship. As Gomes-Schwartz (1978) has demonstrated, the level of patient involvement tends to be the primary predictor of improvement.

The fact that the smallest overall gains were made in the realm of paranoia is quite interesting. One expects that paranoid individuals would have a difficult time establishing a therapeutic relationship and becoming involved in a meaningful way since they typically are hypersensitive and suspicious of others. Such an agenda would probably maximize the potential for resistance and, therefore, minimize the chances of establishing a solid working alliance. What has been gleaned from this study is that, for patients with paranoid symptoms, the degree to which
the therapist should be active, explorative, directive, etc., is a crucial factor which may depend, at least in part, on the level of initial patient-therapist value similarity.

**Implications of This Study and Directions for Future Research**

Despite the results obtained from this study, the nature of the relationship between initial patient-therapist value similarity, the client's locus of control, convergence, and improvement is still unclear. The only relationship that seems to be well developed, at this point, is the negative correlation between initial value similarity and convergence. Perhaps the two most important implications of this study are the following: (1) that the idea of improvement needs to be defined with more specificity than has been done in the past; that is, it is necessary to analyze improvement in terms of various areas of psychological functioning (e.g., symptomatology, defense systems, etc.) and social adjustment; and (2) the source of improvement ratings has a profound effect on the aforementioned relationships. The results of this study showed a wide disparity between therapist and patient ratings. Some type of composite improvement score involving patient, therapist, independent raters, and a significant other(s) would likely be a more valid method of measuring therapeutic gains.

There are several areas that deserve further investigation which might prove to be helpful in elucidating the impact of values systems in psychotherapy. First, this study used the
patient's and therapist's terminal values from the Rokeach Value Survey. The list of terminal values includes such items as "a comfortable life," "freedom," "inner harmony," etc. These long-term values would probably be less affected by a relatively short-term event such as psychotherapy than instrumental values (e.g., "broadminded," "independent," etc.) which are of a more temporary nature and perhaps more susceptible to change. Therefore, it would likely be worthwhile to scrutinize the similarity-improvement and convergence-improvement relationships using instrumental rather than terminal values. One caution in employing instrumental values is that they have not been investigated as to whether they are subject to a social desirability influence (Rokeach, 1973). Also, the instrumental values are slightly less stable than terminal values (test-retest reliability is lower) which, of course, might tend to confound a subject's convergence score (i.e., the change in values from pre- to post-therapy might be the result of low reliability rather than convergence due to the persuasion process). Despite these shortcomings, a recommendation for the investigation of instrumental values is in order.

A second area which might prove fruitful to investigate would be the relationship between convergence and the length of therapy (number of sessions). From a logical standpoint, one might hypothesize that the longer a client remains in therapy the greater the opportunity for the persuasion process to develop and, therefore, the greater the probability of convergence.
A factor which might help to further explain the similarity-convergence relationship is the therapist's level of credibility as perceived by the client. It is conceivable that clients may differ substantially in pretherapy value systems from their therapists but may demonstrate little or no convergence over the course of treatment due to the fact that the therapists are not viewed as an important figure. As Beutler (1971a) suggested, a significant other, such as a spouse, may be more influential than the therapist. There are several credibility and process scales which could be used to assess the perceived credibility of the therapist.

Still another relationship worthy of future attention is the comparison of initial patient-therapist value similarity of those who prematurely terminate therapy versus those who pursue therapy to mutually (i.e., patient and therapist) agreed upon termination. According to Snyder and Endelman (1977), perceived high similarity between two people will lead the perceivers (clients) to physically distance themselves from the other person. Is it reasonable to think that matching patients and therapists on value systems could be detrimental? It would seem more viable that initial value similarity would enhance attraction. Certainly patient-therapist value similarity warrants some attention as a potential factor in predicting length of stay in therapy. Furthermore, the results of such an investigation might have critical implications for matching patients and therapists in the
realm of socioeconomic status since value systems are generally thought to differ between the social classes.
APPENDIX A

RESIDUAL GAIN

Residual Gain (change) = B - (A \cdot r_{B \cdot A})

B = posttherapy score
A = pretherapy score

r_{B \cdot A} = correlation between all pre- and posttherapy scores for a given test
APPENDIX B

PERCENT GAIN (GSI)

The percent gain for a given variable "A" measured before and after (post) treatment would be computed as follows:

\[
\text{Percent Gain} = \frac{A_{\text{post}} - A_{\text{pre}}}{A_{\text{pre}}} \times 100
\]
APPENDIX C

CONVERGENCE

The client's convergence of values (toward the therapist) was calculated using the following formula:

\[
\text{Convergence} = \frac{\text{CON} - \text{SIM}}{1 - \text{SIM}} \times 100
\]

\text{CON} = \text{rank order correlation between the client's posttherapy values and the therapist's pretherapy values.}

\text{SIM} = \text{rank order correlation between the client's pretherapy values and the therapist's pretherapy values.}
APPENDIX D

IMPROVEMENT (CLIENT-RATED)

The client's improvement was measured by averaging the first six items on the Personal Evaluation for both pre- and posttherapy and using the following formula:

\[
PCTPE = \frac{PEP - PEI}{100 - PEI} \times 100
\]

PCTPE = percent gain on the Personal Evaluation score.

PEP = Personal Evaluation score at posttherapy.

PEI = Personal Evaluation score at pretherapy (initial).

NOTE: The therapist-rated improvement was calculated in the same manner except Discharge Summary scores were used instead of Personal Evaluation scores.
APPENDIX E

PERSONAL EVALUATION

Name ______________________

Instructions to Rater

Following are seven lines intended to represent an overall measure of psychological functioning, functioning in five specific areas, and a measure of your liking for the therapist. On each of these lines, put a vertical mark to indicate your condition upon coming to the hospital. Place another vertical mark on the line to indicate your present level of functioning. Indicate the direction of change in your functioning by placing an arrow between the two marks. If there has been no change, put only one vertical mark on the line. Follow the same procedure with regard to liking the therapist, i.e., one mark to indicate present degree of liking for the therapist and another mark to indicate your liking for the therapist during the initial stages of treatment, with an arrow to indicate direction of change, if any.

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<th>severe problems</th>
<th>no symptoms</th>
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</thead>
</table>

1. Overall psychological functioning

2. Sexual adjustment

71
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<th>No Symptoms</th>
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<tbody>
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<td></td>
</tr>
<tr>
<td>4. Capacity to adapt to environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Handling of disturbing feelings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Problems with authority figures and/or discipline</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. How much do you like your therapist?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- strongly dislike
- strongly like
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