

THE USE OF TAPE-RECORDED FEEDBACK  
IN AN ANALOGUE GROUP THERAPY SETTING

by

JAMES ROBERT REID

B.A., Brandon College, 1967

A THESIS SUBMITTED IN PARTIAL FULFILLMENT  
OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

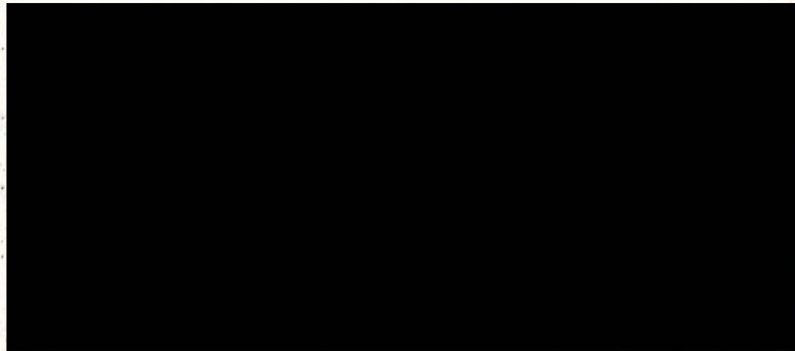
in the Department

of

Psychology

We accept this thesis as conforming  
to the required standard

*Accepted  
faculty  
graduate  
Studies*  
*for  
the*  
*201 1970*  
*May*



© JAMES ROBERT REID, 1970

UNIVERSITY OF VICTORIA

April 1970

UNIVERSITY OF VICTORIA  
LIBRARY  
Victoria, B.C.

## Abstract

This study explores the effectiveness of tape-recorded feedback in improving the level of self-actualization and the accuracy of interpersonal perception in a group setting. Previous researchers dealing with objective feedback have used such techniques as written minutes, photographs, tape recordings and videotapes but have not provided experimental evidence as to the usefulness of such feedback. The widespread use of the taped feedback technique by therapists indicates a belief in its effectiveness, and such a belief should have some grounding in experimental evidence.

Forty-eight senior undergraduate university students participated in the research. The subjects were divided into eight groups of six people each, three male and three female. Four conditions were included in the design, with two groups operating under each condition. In one condition the groups met for 30 minutes of analogue therapy and then listened to a tape recording of that discussion. A second condition involved 60-minute meetings with no taped feedback, and a third had 30-minute meetings with no feedback. Groups met one evening a week for six weeks. The fourth condition consisted solely of assessment with no meetings.

Assessment of improvement in self-actualization was made with the Personal Orientation Inventory. A rating scale of self and others was devised to measure accuracy in interpersonal perception. The hypotheses in the study were that greater improvement on the POI and the rating scale would be

achieved by those subjects receiving taped feedback.

The hypotheses received little support from the results of the study. Increases were noted generally in all conditions on the scales of the POI. The accuracy of perception increased to a greater extent in the feedback condition on one of the three sections of the rating scale.

Failure to support the hypotheses was explained partially by differences in initial levels of functioning on the measurement devices. Some limitations of the study were discussed in terms of their possible contributions to the failure to find the expected results.

3 Description of scales of the POI . . . . . 13

4 Interpersonal Perception Rating Scale . . . . . 17

5 Questionnaire presented to potential subjects . . . . . 21

6 Summary of instructions . . . . . 23

7 Guidelines for list . . . . . 25

8 Summary tables for the scales of the POI . . . . . 27

9 Summary tables for the scales of the POI . . . . . 31

10 Summary tables for repeated measures ANOVA's on the POI . . . . . 35

11 Summary tables for repeated measures ANOVA's on the POI . . . . . 39



## TABLE OF CONTENTS

	<u>Page</u>
List of tables . . . . .	iv
List of figures . . . . .	v
Introduction . . . . .	1
Method . . . . .	21
Results . . . . .	27
Discussion . . . . .	46
References . . . . .	60
Appendices	
A Personal Orientation Inventory . . . . .	64
B Description of scales of the POI . . . . .	65
C Interpersonal Perception Rating Scale . . . . .	67
D Questionnaire presented to potential subjects . . . . .	72
E Summary of instructions to therapists . . . . .	73
F Guidelines for listening to taped sessions. . . . .	74
G Summary tables for change score ANOVA's on the scales of the POI . . . . .	75
H Summary tables for repeated measures ANOVA's on the scales of the POI . . . . .	82
J Summary tables for change score ANOVA's on the IPRS . . . . .	94
K Summary tables for repeated measures ANOVA's on the IPRS . . . . .	97

## List of Figures

	Page
Figure 1. Situational paradigms involved in four experimental conditions for each weekly meeting	23
Figure 2. Mean scores before and after treatment on the Time Competence Scale of the Personal Orientation Inventory	29

## List of Tables

	Page
Table 1. Obtained $F$ -ratios for effect of treatment conditions in analysis of variance of change scores for each scale of the Personal Orientation Inventory, plus other significant $F$ -ratios from the analyses	28
Table 2. Summary table of analysis of variance of pre-treatment scores on Time Competence scale of the POI	31
Table 3. Significant $F$ -ratios obtained in a repeated measures analysis of variance of the scale scores from the Personal Orientation Inventory	32
Table 4. Differences between pre-test and post-test means for the treatment and no-treatment subjects on the scales of the Personal Orientation Inventory	33
Table 5. Group means before and after treatment on the scales of the Personal Orientation Inventory	34
Table 6. Summary of ANOVA with change scores for the Interpersonal Perception Rating Scale	38
Table 7. Summary of repeated measures analysis of variance on Interpersonal Perception Rating Scale	45
Figure 10. Mean error scores before and after treatment on Question 2 of the Interpersonal Perception Rating Scale by comparison type SA-AA	41
Figure 11. Mean error scores before and after treatment on Question 2 of the Interpersonal Perception Rating Scale by comparison type BA-AA	42

## List of Figures

	Page
Figure 1. Situational paradigms involved in four experimental conditions for each weekly meeting	23
Figure 2. Mean scores before and after treatment on the Time Competence Scale of the Personal Orientation Inventory	29
Figure 3. Pre-treatment group means on the scales of the Personal Orientation Inventory	30
Figure 4. Post-treatment group means on the scales of the Personal Orientation Inventory	30
Figure 5. Mean profiles on the Personal Orientation Inventory before and after treatment for the Feedback condition	35
Figure 6. Mean profiles on the Personal Orientation Inventory before and after treatment for the One-hour condition	35
Figure 7. Mean profiles on the Personal Orientation Inventory before and after treatment for the Half-hour condition	36
Figure 8. Mean profiles on the Personal Orientation Inventory before and after treatment in the No-contact condition.	36
Figure 9. Mean error scores before and after treatment on Question 1 of the Interpersonal Perception Rating Scale by comparison type BB-AA	39
Figure 10. Mean error scores before and after treatment on Question 1 of the Interpersonal Perception Rating Scale by comparison type BA-AA	40
Figure 11. Mean error scores before and after treatment on Question 2 of the Interpersonal Perception Rating Scale by comparison type BB-AA	41
Figure 12. Mean error scores before and after treatment on Question 2 of the Interpersonal Perception Rating Scale by comparison type BA-AA.	42

	Page
Figure 13. Mean error scores before and after treatment on Question 3 of the Interpersonal Perception Rating Scale by comparison type BB-AA	43
Figure 14. Mean error scores before and after treatment on Question 3 of the Interpersonal Perception Rating Scale by comparison type BA-AA	44

The author wishes to express his most grateful and sincere appreciation to Dr. Pam Duncan for her supervision and advice during the course of this research project. The author also wishes to thank Dr. H.E. Tryn and Dr. P. Van den Driessche, the other members of the thesis committee, for their constructive criticisms and many helpful suggestions.

## ACKNOWLEDGMENT

The author wishes to express his most grateful and sincere appreciation to Dr. Pam Duncan for her supervision and advice during the course of this research project. The author also wishes to thank Dr. H.E. Tryk and Dr. P. Van den Driessche, the other members of the thesis committee, for their constructive criticisms and many helpful suggestions.

## Introduction

This study explores the effectiveness of objective feedback on a person's interpersonal verbal behavior and perceptions, with the use of tape recording as a means of obtaining and providing such feedback. Previous articles dealing with objective feedback of various sorts have been almost exclusively of a non-experimental, anecdotal nature in spite of the widespread use of the taped feedback technique by therapists. To Marg and Duchess my wonderful motivators is very recent years, the theoretical foundations have been well established for some time.

One of the most prominent aspects of behavior disorders involves the concept of communication skills (Sullivan, 1953; Tannenbaum, Wechsler and Massarik, 1964). A great deal of the inappropriateness displayed by many individuals may be attributed to an inability to send and receive messages accurately, a lack of understanding about oneself and about those with whom one interacts. Carl Rogers (1967) has discussed the problem in terms of lack of insight into one's behavior and a denial and distortion of communication due to incongruencies between self-concept and experience.

The whole process of interaction involves many intricate steps, including the ability to make a communication clear; the ability to evaluate the meaning and effectiveness of one's own communications; the anticipation of the reaction of the

## Introduction

This study explores the effectiveness of objective feedback on a person's interpersonal verbal behavior and perceptions, with the use of tape recording as a means of obtaining and providing such feedback. Previous articles dealing with objective feedback of various sorts have been almost exclusively of a non-experimental, anecdotal nature in spite of the widespread use of the taped feedback technique by therapists. Though the practice of providing objective feedback has become popular only in very recent years, the theoretical foundations have been well established for some time.

One of the most prominent aspects of behavior disorders involves the concept of communication skills (Sullivan, 1953; Tannenbaum, Weschler and Massarik, 1964). A great deal of the inappropriateness displayed by many individuals may be attributed to an inability to send and receive messages accurately, a lack of understanding about oneself and about those with whom one interacts. Carl Rogers (1967) has discussed the problem in terms of lack of insight into one's behavior and a denial and distortion of communication due to incongruencies between self-concept and experience.

The whole process of interaction involves many intricate steps, including the ability to make a communication clear; the ability to evaluate the meaning and effectiveness of one's own communications; the anticipation of the reaction of the

other person to one's communications; and the ability to interpret accurately the communications received from others. A breakdown at any point can hamper an individual's ability to interact effectively. For example, if a person does not interpret his own presentations correctly, then the message he thinks he is sending may not in fact become clear to the other person, and the response may not be consistent with the intended meaning of the initial communication. Over a period of time, this could lead to a chronic misperception of the communications of others, and hence to inappropriate responding and interacting.

The system responsible for the perceptions and evaluations of experience has been described by Rogers (1967) as being centered around an "organismic valuing process", which values experience in terms of the organism's self-actualizing tendency. Events or experiences which are perceived as enhancing or maintaining the self will be valued positively and the individual will behave with adience toward these experiences. Events which are perceived as dangerous or destructive to the self will be valued negatively and will be treated with avoidance. The system and the integrity of the organism obviously will depend upon the accuracy of the perception involved in the valuing process. If perceptual incongruence should develop, then inappropriateness may arise in the behavior of the individual. It would appear from Rogers' description of this system that the perceptions of self (and of others) must be accurate in order for effective

inter-personal behavior to be maintained.

The approach offered by Rogers for studying effectiveness or adequacy of an individual can be conceived of as being based on an internal vantage point (Courson, 1968), that is, attempting to explore how people perceive the world and themselves. Maslow (1954, 1962), on the other hand, has approached the problem from an external point of view, from which he described the characteristics and behaviors of effective people. As Courson (1968, p.29) has noted, the distinction is rather arbitrary, and there is much common ground. Maslow has studied a large sample of individuals and has developed a general description of the characteristics of a few very healthy, effective individuals whom he has labelled as "self-actualizing" persons. Self-actualization he defined as

ongoing actualization of potentials, capacities and talents, as fulfillment of mission ... as a fuller knowledge of, and acceptance of, the person's own intrinsic nature, as an unceasing trend toward unity, integration or synergy within the person. (Maslow, 1962, p.25)

The people whom Maslow described as self-actualized had a number of clinically observed characteristics (Maslow, 1962, p.26) including a more accurate perception of reality, increased acceptance of self and others, good interpersonal relationships, and a greater capacity for appreciation and emotional reaction.

Maslow has posited two kinds of perception -- need-interested perception, resulting from a motivation to fill basic deficiency needs; and "desireless" or need-disinterested

perception, coming from growth motivation toward self-actualization. Normally we would move more and more toward the latter type of perception as most of our basic needs are continually met, but many people never move too far away from the need-dominated mode of perception (Maslow, 1962). Studies of the effects of need and value structures on perceptual processes are well documented in social psychological literature (Tajfel, 1957; McClelland and Atkinson, 1948). Since the growth-motivated perception is so much more concrete and less selective, the individual dominated by this type of perception will generally have a more accurate and objective viewpoint from which to evaluate his behavior and interpersonal environment.

We may not be aware when we perceive in a need-determined way. But we certainly are aware of it when we ourselves are perceived in this way, e.g. simply as a money-giver, a food-supplier, a safety-giver, someone to depend on, or as a waiter or other anonymous servant or means-object. (Maslow, 1962, p.40)

Need-dominated (or non-self-actualizing) individuals perceive in such a way as to limit the extent and objectivity of awareness. It follows from this, then, that an increase in self-actualizing qualities should correspond to more accurate and objective perception and to more appropriate behavior

Because self-actualizing people ordinarily do not have to abstract need-gratifying qualities nor see the person as a tool, it is much more possible for them to take a non-valuing, non-judging, non-interfering, non-condemning

attitude toward others, a desirelessness, a "choiceless awareness". This permits much clearer and more insightful perception of what is there. (Maslow, 1962, p.40-41)

Rogers (1964) has described some of the characteristics of the person who has an accurate valuing process. This individual has an open, constantly changing experience of the present. His evaluations are inner-directed, but he is also receptive to the environment. The fully functioning person can trust his organismic self and makes his choices on the basis of evaluations by that self. He may make errors, but since he is open to experience, the errors can be corrected.

If his chosen course of action is not self-enhancing, this will be sensed and he can make an adjustment or revision. He thrives on a maximum feedback interchange, and thus, like the gyroscopic compass on a ship, can continually correct his course toward his true goal of fulfillment. (Rogers, 1964, p.164-165)

The key to functioning is the "maximum feedback interchange". We obtain feedback in various ways -- by listening to ourselves, by receiving it verbally and non-verbally from other people, and by evaluating the accuracy of all these messages. If we can be sensitive to this feedback, we can adjust our course of action by the process referred to above by Rogers.

One of the main problems of feedback, however, is that people may distort their reporting to us, and we may distort our perceptions of our own or others' reports. If feedback can be made more objective and accurate, then the individual should be better equipped to adjust his behavior and to act

more appropriately. One of the major goals of psychotherapy might be to improve this feedback, and various ways have been attempted to effect this improvement. When feedback from ourselves and from other individuals is inadequate to produce change, the most effective alternative would appear to be an objective representation of one's behavior. Some of the methods for producing this type of feedback include the use of written minutes (Pinney, 1955; Golner, Geddes and Arsenian, 1959), tape recordings (Cameron, 1958; Armstrong, 1964), still photographs (Cornelison and Arsenian, 1960), and videotape (Kagan, Krathwohl and Miller, 1963; Stoller, 1967). It is this goal of feedback improvement, with the use of tape recording, which is the focus of the present research.

Several authors have presented theories which attempt to explain why inaccuracy in feedback on one's behavior or in its perception occur in interpersonal situations. From the viewpoint of Maslow, it may be explained in terms of deficiency motivation which causes selective perception. Rogers' theory of incongruence between self and experience is a second approach. Other writers have also been concerned with the breakdown in feedback, as evidenced by Stoller's (1968) discussion of a monitoring process whereby an individual attends to or hears only a portion of what he verbalizes. Cameron (1956, 1958) offered two principal explanations for this partial inattention. The first was that the "shielding" may be due to the fact that one perceives his own communications by way of tissue and bone

conduction as well as by air conduction, and that this somehow prevents the individual from "grasping the full import of his own communication" (Cameron, 1958, p.19). The second explanation, considerably more plausible and parsimonious, involves the amount of work attached to speaking. When we talk, we are thinking about what we are going to say, choosing our words, monitoring our tone, calculating the listener's receptivity, monitoring his response, and thinking about our goal in the conversation. With all these processes going on, there is little wonder that we do not have much time to listen to ourselves carefully. This explanation of the partial-inattention phenomenon has also been mentioned by other authors (Stoller, 1967; Rogers, 1968).

Whatever the reason or reasons for the inability of some persons to receive accurate feedback, the process of making available more objective reports has been the focus of an increasing amount of research in the past few years. The methods used have been refined as technological innovation has made more sophisticated devices available, but the first studies in the area simply used written minutes of therapy sessions. Pinney (1955) began to collect a written record of the sessions when a group member volunteered to take notes. However, it would appear that this would be little better than ordinary verbal feedback since the patient might well have had a distorted perception of what occurred. In order to correct this possible bias, Golner, Geddes, and Arsenian (1959) brought an outside

observer into the group to take minutes. But here it must again be recognized that since the record is based on one person's perception of what happened, it cannot be completely objective. Furthermore, the introduction of a non-participating observer into the group would most likely have some effect on the nature of the interaction. In any case, both of these researchers had the minutes read back to the group at the next meeting as a stimulus to further discussion. Pinney introduced them toward the end of the session so as not to stifle any spontaneous material that might arise, while Golner had them read at the beginning of the session. Both studies suggested that feedback of this type helped to improve "self-objectification" and reality-testing in many of the group members. Golner stated that of his group of 11 chronic psychotics, five seemed to be affected positively, two were affected negatively (withdrew more) and four were not affected at all.

In all the articles to be reviewed here on written and tape recorded feedback, there is not one experimental test of the effectiveness of the technique. The technological explosion has robbed this procedure of validation by racing ahead of scientific psychological inquiry, with the result that the tape recorder as a therapeutic tool has not been explored to any extent. By the time feedback by mechanical means was recognized as having considerable importance, the videotape had become available, at least on a limited basis. Investigators interested in feedback moved ahead

en masse to audio-visual presentation, assuming that this more complete and complex information-giver would bring even better results than those presumed to exist (but not yet established) with sound recording alone. Evidence for this jump is provided by the fact that studies were still being reported on written minutes (Golner, Geddes and Arsenian, 1959) only one year before the literature on audio-visual feedback began to appear (Cornelison and Arsenian, 1960).

As tape recorders began to become readily available, they were used extensively in therapy but almost solely for the purposes of refreshing the memory of the therapist or training new therapists. The use of tapes for feedback was not done on a regular basis for some time, but fairly early in the "tape recorder era" Gaier (1952) published a study in which he uses what he called the "method of stimulated recall", which consisted of playing back to students recordings of previous conversations in which they were involved. Gaier was attempting to explore various personality characteristics and mental processes as they affected the learning process, and he found that his technique allowed the subjects to remember not only the overt behaviors occurring at the time of the event but also the thoughts and feelings that accompanied those behaviors. "The individual becomes both the participant and the observer" (Gaier, 1952, p.3). He claimed that the technique offered the advantage of gaining information on mental activities without influencing the events by so doing. The method was used subsequently by Bloom (1954) to study

the same type of variables. Both of these writers came to the conclusion that taped playback was effective in producing almost total recall for feelings and thoughts as well as behavior after as much as a week.

Sacks and Berger (1954) made tape recordings of chronic schizophrenics in group therapy and played them back to subsequent sessions of the group. They concluded that this was a useful technique for enabling the members to gain a more objective and less distorted view of themselves. However, the taped feedback was a minor part of the design and was not investigated experimentally. A similar method was reported for individual therapy with narcissistic patients by Schindler (1956). He termed the technique "tape-recorder shock" and claimed that it was effective in producing insight, which he believed to be a necessary ingredient for therapeutic success.

While the previous studies had used the playback technique more or less as a "refresher" to the memory and presumably went through the tape only once, Cameron (1956, 1958) used a more intensive method which he called "psychic driving". He obtained tape recordings of individual therapy sessions and went through them to find what he considered to be dynamically important sections showing evidence of repression and then played them back 20 or 30 times to the patient. Since Cameron believed that the patient was being shielded from the full meaning of his own communications, he felt that the best way to break through the defences was to play back evidence of these defences over and over until they were

understood and acknowledged by the patient. Cameron discovered that the process did aid the perception of a wide range of cues that were emitted unconsciously by the patient, and that with practice the capacity of both patient and therapist for picking up these cues was increased.

A report by Armstrong (1964) discussed the use of feedback methods and used taped playback with alcoholics. The discussion was based on a Freudian interpretation of repression and proposed to eliminate denial by playing back the recordings of group therapy sessions to the members. The theoretical orientation here was similar to that of Schindler and of Cameron, but the use of playback was more central in the research than had been the case in most previous studies. One of the problems encountered in this project was the fairly rapid turnover of patients. Armstrong felt, however, that the use of tapes helped new members get a "better and quicker idea of the group processes" (Armstrong, 1964, p.250), thus cutting down on the orientation time for the new members. The general conclusions of the study were that taped feedback was helpful in tying together, in serving as a springboard for further discussion, and for helping members to interpret their own behaviors more objectively.

Giving feedback by tape recording has been used in other situations as well as therapy. The Gaier (1952) and Bloom (1954) studies were concerned with personality variables and learning among university students. Another situation in which the procedure has been implemented is the T-group, or

sensitivity training group (Bradford, Gibb and Benne, 1964). The main purpose of tapes in the group has been the training and checking of individual perceptions of crucial incidents occurring in the sessions.

The use of videotape or films of individuals for the purpose of feedback was discussed at length by Nielsen (1962) in his presentation of the method of "self-confrontation". He described two major benefits accruing from the practice of filming and viewing one's own behavior. The first was the gaining of information about thoughts and feelings occurring at the time of a given event, which is similar to the interests of Gaier (1952) and Bloom (1954). The second was an increased self-awareness and interest in understanding oneself. He too believed that we are involved in so many activities during communication that we are unaware of the full range of signals we emit. Nielsen described the intense involvement apparent among his subjects while they viewed themselves and claimed that considerable improvement in behavior followed such experiences.

Kagan, Krathwohl and Miller (1963) incorporated the feedback method into a therapy situation and were impressed with the results. Their patient expressed astonishment at the "transparency" of her defences. The authors remarked that many people do not realize how transparent they are. One advantage they claimed was that even though the defences may not be completely transparent, the subjects will usually recall the thoughts which were present when the statement

was made and will perceive their communications as very easy to see through. The subjects know what the meaning is, and so it shows up quite clearly to them. Once again, this is not an experimental study, and the authors could conclude only that feedback and subsequent discussion "seemed" to facilitate therapy.

Several other studies have been reported in recent years using videotape feedback in variations of the situations already discussed. Only one of these (Moore, et al., 1965) utilized what might be called an experimental approach. Moore played back a videotape of a short psychiatric interview to patients and reported a significantly higher improvement rate among those patients as compared to a control group of patients receiving conventional therapy in the same institution. Other studies have used videotape to improve self-perception in individual cases (Geertsma and Reivich, 1965), to increase interpersonal awareness in conjoint marital therapy (Alger and Hogan, 1967), to improve self-perception and interpersonal competence of counselors (Walz and Johnston, 1963), and to clarify and objectify feedback in group therapy (Stoller, 1967; Rogers, 1968).

The present research involves the use of sound recordings as feedback material rather than videotape, for several reasons. In the first place, videotaping a group presents certain technical difficulties. If only one camera is used, and is installed in a stationary position, some of the members will not be in clear view -- one cannot get a full-face view

of all members if the camera does not move. There are two possible alternatives. A number of cameras could be installed, which would be expensive and would cause playback complications, or a roving camera might be used. The operator of such a camera would certainly need some "psychological sense", and in moving around the room he could cause some distraction which might affect the interaction in the same manner as Golner's outside recording member may have. A second consideration is that no experimentation has been carried out on the use of taped feedback, and since it is being used in therapy, some solid evidence of its effectiveness is long overdue. Also, since tape recording is considerably less expensive and complex than videotape, it is more amenable to general adoption by practicing therapists. A further reason for the use of sound recording is that videotape feedback has caused some difficulties by virtue of its complexities, as it offers a plethora of stimuli to which the subject may attend.

It has been noted that when self-viewing is done in a passive fashion, patients tend to concentrate on aspects of their physical appearance rather than on meaningful elements of their interpersonal impact. (Stoller, 1967, p.160)

The use of tape recording eliminates much of this extra stimulation and allows the individual to concentrate on his verbal behavior and communication skills.

There have been two principal methods of selecting the material to be used for feedback -- presentation of total sessions or interviews (Alger and Hogan, 1967; Kagan,

Krathwohl and Miller, 1963; Walz and Johnston, 1963) and presentation of selected portions of sessions considered to be meaningful or dynamically potent (Cameron, 1956, 1958; Armstrong, 1964; Stoller, 1967). The reasons for selection of portions in the Cameron and Armstrong studies were based on the specific purposes they had in mind, i.e. evidence of repression and denial. Stoller used the method, which he called "focused feedback", because of the tendency of patients to be more concerned with physical appearance than with meaningful and important communicating when viewing total sessions. However, editing has the built-in danger of resulting in distortions due to the therapist's selection biases. A further problem in editing is that it necessitates delay in feedback because the tapes must be reviewed to make the selections. The effectiveness of immediate reinforcement on which programmed texts and teaching machines are based is well known in training laboratories and is applicable to the feedback process (Bradford, Gibb and Benne, 1964). Using the whole tape allows almost immediate feedback to be administered.

Essentially there are two types of information received by patients in therapy -- interpretation and feedback. Stoller (1968) pointed out that while interpretation is often a basic ingredient in individual therapy, it is not as appropriate in a group setting, and feedback is more indigenous to group therapy.

Since the group member reacts to a variety of people, the most important information he may bring is his way of behaving within this setting. Thus, the group can deal with direct behavior rather than with behavior described in a secondhand fashion. (Stoller, 1968, p.211-212)

The exploration of feedback and its effects would thus appear to be more advantageous and relevant in a group setting than in an individual setting.

The assessment of change in patients undergoing therapy is at present in what might generously be described as a state of uncertainty. There are many measures of self and characteristics of self available, but none have proved to be more than minimally successful. Several new assessment devices have begun to appear very recently which seem to hold more promise, though there are still serious limitations. One of these measures is the Personal Orientation Inventory (Shostrom, 1964). This questionnaire was based mainly on Maslow's characteristics of self-actualized persons, and the items were selected from value judgments of clinically healthy and clinically troubled patients, as well as being derived in part from the research and theoretical statements of various writers of the humanistic and existential schools (e.g. Ellis, 1962; Rogers, 1961; Watts, 1951). Shostrom reports test-retest reliability coefficients ranging from .58 to .74 for the various scales, and further research (Ilardi and May, 1968) showed test-retest coefficients ranging from .32 to .74, with a median of .58, which compares favourably with figures for more established clinical measures such as the

Minnesota Multiphasic Personality Inventory and the Edwards Personal Preference Schedule. A validity study (Shostrom, 1964) showed that individuals who were clinically rated as "self-actualized" score significantly higher on 11 of the 12 scales than did a group of subjects rated as non-self-actualized. This information would seem to indicate that the measure is at least acceptable for use in clinical research at the present time. Appendix A provides a list of the items on this inventory.

Clinical evidence for the suitability of the POI for assessing change is not yet abundant. However, it has been used for this purpose. Shostrom and Knapp (1966) administered the POI to two groups of clients, one a beginning group and the other a group which had been meeting for some time. The authors found that the scores of the advanced therapy group were significantly higher (at the .01 significance level) on all 12 scales than the scores of the beginning group. Another indication of the clinical relevance is provided in Knapp's (1965) study which showed the POI to be related positively and significantly to the lack of neurotic tendencies as measured by Eysenck Personality Inventory.

Culbert, Clark and Bobele (1968) reported a study in which they administered the POI to two randomly selected groups of college seniors, then gave the subjects 14 two-hour sessions of sensitivity training, and administered the POI again. Their independent variable was degree of

self-disclosure by the therapist. A comparison of initial with final scores showed unexpected differences in the two groups. One group started at a higher level than the other, but this group showed no improvement after 14 sensitivity-training sessions while the group which started at a lower level increased significantly on four scales. Culbert, Clark and Bobele also attempted to correlate improvement on this measure of self-actualization (POI) with improvement on a behavioral measure, but they failed to find any relationship with their sample.

The relationship among self-actualization, objective self-perception and appropriate behavior has been discussed by both Maslow (1962) and Rogers (1961, 1964), and was described here to some extent. However, the measurement of behavioral change is beyond the scope of the present study. The other two dimensions do appear to be amenable to exploration. To the extent that the relationship mentioned above is a valid one, changes in behavior will be reflected by the changes which are found in self-actualization and in self-perception.

Since the Personal Orientation Inventory appears to be a valid and reasonably reliable measure of self-actualization, it has been used here to determine change due to therapy, in testing the following hypothesis:

Hypothesis 1. Subjects receiving taped feedback will display a greater increase in self-actualizing qualities than will subjects not receiving feedback.

Since no single score or measure of self-actualization is available, each of the 12 scales of the POI is used to evaluate the effects of feedback. Appendix B contains a brief description of the scales of the POI.

The second major dimension under examination in this study is the change in accuracy of the perception of self in interpersonal situations as a result of feedback, since this involves another link in the proposed self-actualization--perception - behavior chain. The hypothesis growing from this dimension is as follows:

Hypothesis 2. Subjects receiving taped feedback will achieve a greater increase in accuracy of self-perception in interpersonal situations (i.e. will become more congruent with the perceptions of those with whom they are interacting) than will subjects not receiving feedback.

Objective self-perception can be measured with the use of rating scales, and one such scale has been developed for this study (Appendix C). Ratings of self and of others have become very acceptable methods of collecting data in recent years in the field of psychology (Sechrest, 1969). Their validity has generally proven to be at least equal to that of commercial tests, and in many cases they are much more appropriate than any published test available. The scale used in this study was designed specifically to

explore the problem of self-perception with regard to interpersonal behavior and was adapted from a perceptual-factors rating scale (Courson, 1968) and an interpersonal-competence measure (Little, 1968; Saward, 1968).

Students enrolled in two fourth-year psychology courses at the University of Victoria were enlisted for the program with the use of a survey to determine interest in such a project (Appendix D). This method of recruitment has been used in previous studies to obtain subjects for clinical research (Rothman and Benzaghi, 1962; Sabarot and Benzaghi, 1963). Based on the results of the survey, students who had shown an interest in the research were approached, and the procedure was explained. Subjects were limited to those between the ages of 18 and 30, and no one presently under psychiatric care was accepted. After explanation of the project, the potential subjects were again asked if they wished to participate. This selection process was continued until 48 subjects were obtained, 24 male and 24 female. Fourth-year students were used rather than introductory students in an attempt to obtain a more stable and permanent population, thereby aiding in reducing the risk of subject loss through withdrawal.

#### Design

The subjects were divided into eight groups of six, with three males and three females in each group. This number per group was selected since six is within the optimal range of effective group size suggested by many theorists, which is five to ten (Gale, 1964; Kegan, et al., 1963). As few

## Method

### Subjects

Students enrolled in two fourth year psychology courses at the University of Victoria were enlisted for the program with the use of a survey to determine interest in such a project (Appendix D). This method of recruitment has been used in previous studies to obtain subjects for clinical research (Rottschafer and Renzaglia, 1962; Roberts and Renzaglia, 1965). Based on the results of the survey, students who had shown an interest in the research were approached, and the procedure was explained. Subjects were limited to those between the ages of 18 and 30, and no one presently under psychiatric care was accepted. After explanation of the project, the potential subjects were again asked if they wished to participate. This selection process was continued until 48 subjects were obtained, 24 male and 24 female. Fourth-year students were used rather than introductory students in an attempt to obtain a more stable and permanent population, thereby aiding in reducing the risk of subject-loss through withdrawal.

### Design

The subjects were divided into eight groups of six, with three males and three females in each group. This number per group was selected since six is within the optimal range of effective group size suggested by many therapists, which is five to ten (Gazda, 1968; Kadis, et al., 1963). As few

members per group as possible would appear to be the best arrangement in order for each of the participants to have the opportunity to do a reasonable amount of interacting in each session.

Four conditions were included in the design, with two groups operating under each condition. One condition was that of no contact (Condition N), serving simply as a no-therapy control. Each of the other three conditions included a "therapy" session, with the emphasis being on feelings, reactions, thoughts and communication within the group. All sessions were recorded on tape. The differences among conditions occurred in the type of post-session treatment received. The experimental groups who received feedback (Condition F), were taken immediately following each session to a room where they listened in individual stalls to the tape recording of the session they had just completed. The stalls were equipped with earphones and the recording was presented through these earphones to all group members simultaneously. One control condition involved simply disbanding at the end of the regular therapy session (Condition T), thus receiving no feedback other than that obtained in the normal verbal manner during the sessions. One of the deficiencies of this control condition is that members are receiving only half as much attention in terms of total time as are the feedback subjects. Therefore, a fourth condition was introduced in which the participants received a "double dose" of the regular therapy (Condition D), i.e.

each of their therapy sessions was twice as long as those of the groups under Condition T, and their total time commitment was the same as that for Condition F. This design allows a direct comparison of the effects of the treatment received in the last half of each meeting, i.e. feedback versus extra therapy versus no treatment. Figure 1 illustrates the paradigms involved.

---

Condition	First half session	Last half session
N	----	----
T	Therapy	----
D	Therapy	Therapy
F	Therapy	Feedback

Figure 1. Situational paradigms involved in four experimental conditions for each weekly meeting.

---

### Procedure

The groups met one evening per week for six weeks (with the exception of the no-contact groups). All subjects were informed at the outset that the project would be terminated at the end of six sessions. The length of each session was regulated by a timer. For the groups under Condition D ("double" therapy) the sessions were 60 minutes long, while

those in conditions F and T lasted for 30 minutes. In each case there was a short introductory period of a few minutes during which greetings and seating took place. The therapist announced the beginning of the session and set the timer for the appropriate time. He started the tape recorder and the session was underway. The buzzing of the timer signalled the end of the session, and the discussion was drawn to a close as quickly as possible. The tape recorder remained on until the subjects had left the room, in order to record the termination behavior of the participants.

The therapists in this study were two male graduate students in clinical psychology at the University of Victoria who were enrolled in the group therapy seminar and who had previous experience in group therapy. Each therapist handled one group under each of the experimental conditions. The training of these therapists was supervised by the instructor of the group-therapy seminar. Appendix E contains an outline of the set of instructions used in the orientation of the therapists.

One of the problems anticipated was the possibility that attention to the taped feedback might vary and that some of the subjects might not perceive the relevant aspects of the playback. Other investigators (Stoller, 1968; Cameron, 1958) have commented on the situation and have dealt with it in a variety of ways, such as selecting what they consider relevant parts of sessions, or stopping the tape at important junctures to discuss the implications of the interaction. In

order to provide some direction to the subjects without editing or interrupting the playback, a general set of guidelines was set out and given to the subjects, and they were asked to comment on their impressions and feelings about the session after having heard the tape. Appendix F contains the guidelines for listening.

The assessment of change in self-actualization was made with the Personal Orientation Inventory. All subjects filled out this inventory shortly before the program and again at the end of the six weeks. In addition to the POI, the rating questionnaire dealing with self-perception was administered to all subjects (with the exception of the no-contact groups) at the end of the first session and after completion of the project.

### Analysis

Each of the 12 dimensions of the POI involved in this study was analysed in a 4 x 2 factorial analysis of variance, with the difference scores between first and second testing providing the raw data. The two variables involved are treatment effects and therapist effects.

Analysis of variance was also used to evaluate the results of the rating questionnaire dealing with accuracy of self-perception. A 3 x 2 factorial design was implemented to compare the individual's rating of himself and the group's mean rating of him before and after therapy under each condition.

Because there are two ways in which one may derive scores,

the analysis of the Interpersonal Perception Rating Scale was carried out in two different ways. First, one may arrive at a discrepancy score by comparing an individual's initial rating of himself with the mean rating given him initially by the group. The change is measured by subtracting this discrepancy score from the equivalent measure for final ratings. This method of obtaining the measure has been labelled the BB-AA comparison set because the score involves (self-rating Before - group rating Before) - (self-rating After - group rating After).

The second method of comparison was comprised of the individual's self-rating as compared to a constant, the final mean group-rating of him. The final group rating was used as the base in both discrepancy scores, thus showing how the individual changes in relation to this final rating. This comparison method has been labelled the BA-AA set, because it is composed of (self-rating Before - group rating After) - (self-rating After - group rating After).

( $t = 3.23, p < .05$ ). This difference is illustrated in Figure 3 along with the post-score differences of this scale. Illustration of the pre-score differences among the individuals for all scales of the IPI is provided in Figure 4. Figure 4 shows the post-score differences.

A repeated measures analysis of variance was also performed on the scale scores to determine whether or not any change had taken place from the pre-test to the

## Results

The analyses of change scores for the 12 scales of the Personal Orientation Inventory are summarized briefly in Table 1, and the complete analysis of variance summary tables are presented in Appendix G. From Table 1 it may be seen that significant differences among conditions occurred on only one scale, Time Competence ( $F = 4.988, p < .01$ ).

Further analysis by means of a Neuman-Keuls test (see Appendix G) showed that the differences on this scale were not in the predicted direction. The half-hour (T) and one-hour (D) groups improved significantly more than the feedback (F) and no-contact (N) groups. Two scales, Time Competence and Feeling Reactivity, yielded a significant therapist effect, and one scale, Nature of Man, included a significant interaction between conditions and therapists. The pre-treatment scores of the groups on the Time Competence scale were analysed (Table 2), and a significant difference among experimental conditions was found ( $F = 2.879, p < .05$ ). This difference is illustrated in Figure 2 along with the post-score differences on this scale. Illustration of the pre-score differences among the conditions for all scales of the POI is provided in Figure 3, and Figure 4 shows the post-score differences.

A repeated measures analysis of variance was also performed on the scale scores to determine whether in fact any change had taken place from the pre-test to the

Table 1

Obtained  $F$ -Ratios for Effect of Treatment Conditions in Analysis of Variance of Change Scores for Each Scale of the Personal Orientation Inventory, Plus Other Significant  $F$ -Ratios From the Analyses

Scale	Source of Variance	MS	df	F
Time Competence	Conditions (C)	17.854	3,40	4.988**
	Therapists (T)	17.520	1,40	4.895**
Inner Directed	C	26.165	3,40	--
Self-Actualizing Value	C	2.686	3,40	--
Existentiality	C	15.165	3,40	1.863
Feeling Reactivity	C	2.805	3,40	--
	T	14.082	1,40	2.986*
Spontaneity	C	3.833	3,40	--
Self-Regard	C	4.519	3,40	--
Self-Acceptance	C	3.742	3,40	--
Nature of Man	C	1.721	3,40	--
	CxT	9.056	3,40	3.150*
Synergy	C	2.444	3,40	1.543
Acceptance of Aggression	C	6.027	3,40	--
Capacity for Intimate Contact	C	18.742	3,40	1.831

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

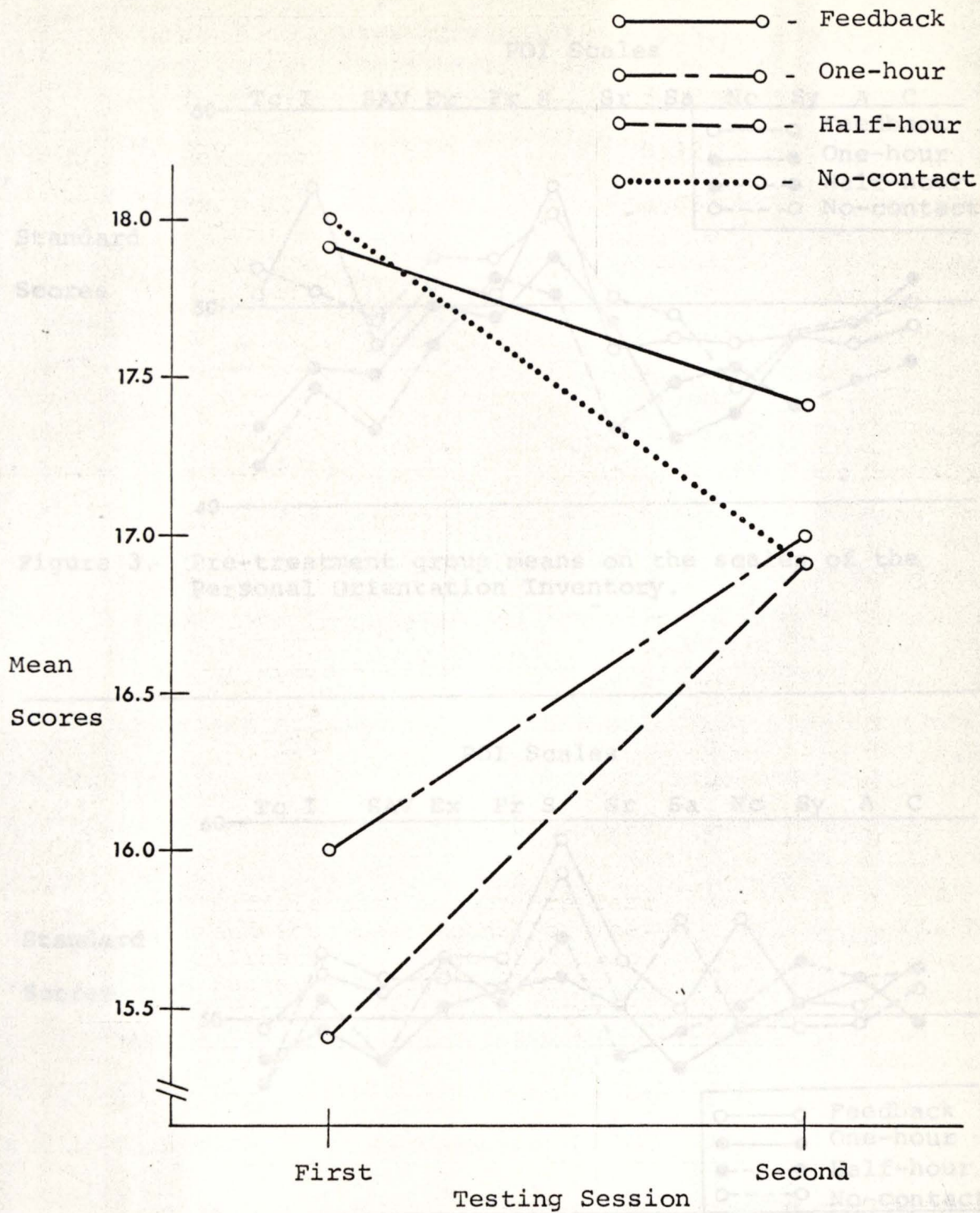


Figure 2. Mean scores before and after treatment on the Time Competence Scale of the Personal Orientation Inventory.

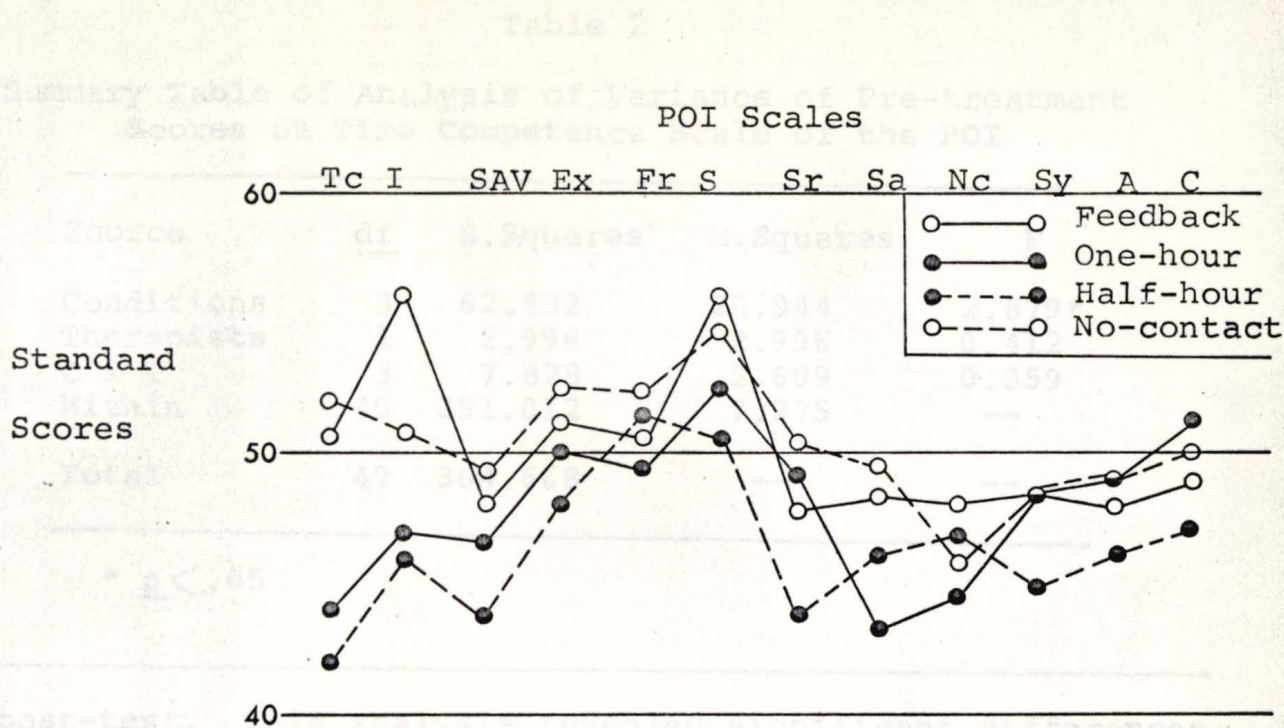


Figure 3. Pre-treatment group means on the scales of the Personal Orientation Inventory.

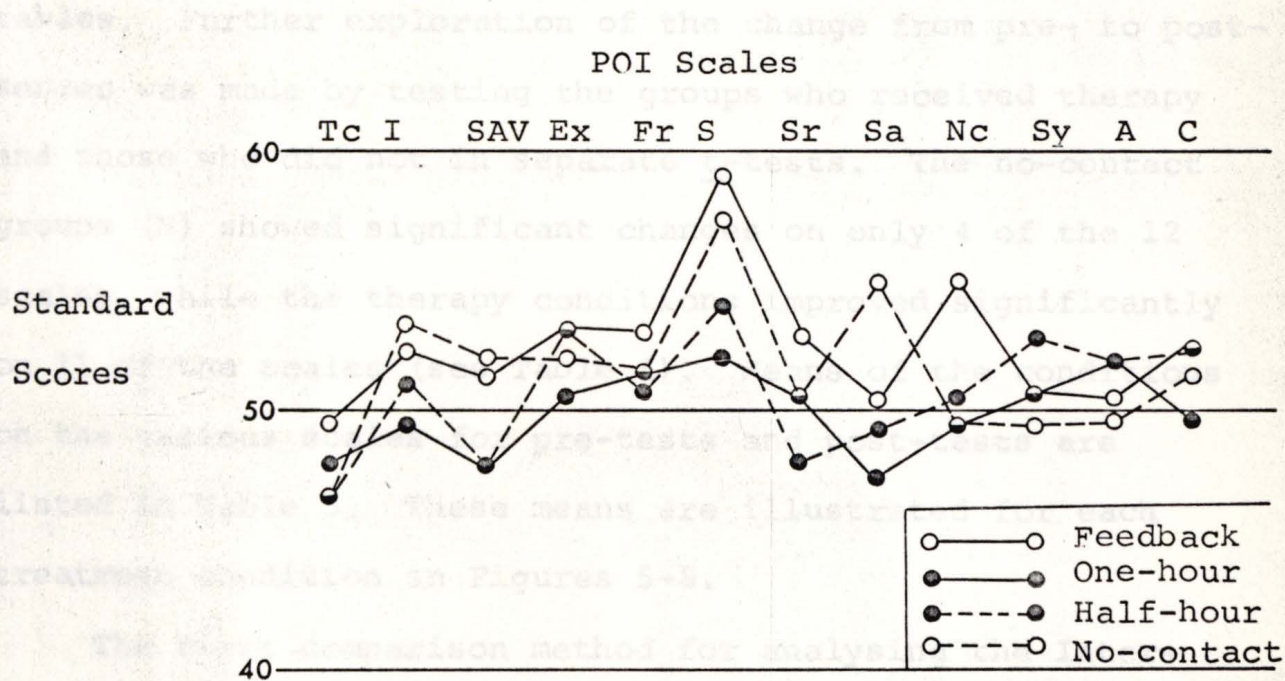


Figure 4. Post-treatment group means on the scales of the Personal Orientation Inventory.

Table 2

Summary Table of Analysis of Variance of Pre-treatment Scores on Time Competence Scale of the POI

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Conditions	3	62.832	20.944	2.879*
Therapists	1	2.996	2.996	0.412
C x T	3	7.828	2.609	0.359
Within	40	291.012	7.275	--
Total	47	364.668	--	--

\*  $p < .05$

post-test. This analysis revealed significant differences in the pre-test vs. post-test scores on 8 of the 12 scales. Table 3 summarizes the significant F-ratios found in this analysis, and Appendix H contains the complete summary tables. Further exploration of the change from pre- to post-scores was made by testing the groups who received therapy and those who did not in separate t-tests. The no-contact groups (N) showed significant changes on only 4 of the 12 scales, while the therapy conditions improved significantly on 11 of the scales (see Table 4). Means of the conditions on the various scales for pre-tests and post-tests are listed in Table 5. These means are illustrated for each treatment condition in Figures 5-8.

The first comparison method for analysing the Interpersonal Perception Rating Scale (IPRS), called the BB-AA comparison set, involved the use of change scores. The results of this analysis are shown in the first half of

Table 3

Significant F-ratios Obtained in a Repeated Measures  
Analysis of Variance of the Scale Scores  
From the Personal Orientation Inventory

Scale	SOV	MS	df	F
Tc	Conditions x Replications Therapists x Replications	8.927 8.750	3,40 3,40	4.987* 4.888*
I	---	---	---	---
SAV	Replications	17.512	1,40	6.362*
Ex	Replications	41.344	1,40	10.319**
Fr	---	---	---	---
S	---	---	---	---
Sr	Replications	14.258	1,40	8.717**
Sa	Replications	40.043	1,40	10.536**
Nc	Replications	16.664	1,40	11.589**
Sy	Replications	4.164	1,40	5.260*
A	Replications	26.043	1,40	7.440**
C	Replications	31.512	1,40	6.352*

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

Table 4

Differences Between Pre-Test  
and Post-Test Means For The  
Treatment and No-Treatment  
Subjects on the Scales of the  
Personal Orientation Inventory

Scale	Pre	Post	Treatment	No Treatment	Pre	Post
			(N=36) Mean Change	(N=12) Mean Change		
Tc	17.92	18.42	0.67*	-1.08	18.00	16.92
I	84.75	91.83	4.64**	5.08**	87.67	92.75
SAV	19.67	20.07	0.83*	0.92*	20.00	20.92
Ex	22.98	23.83	1.53**	0.66	22.75	23.41
Fr	16.00	17.00	0.67*	0.16	16.17	16.33
S	13.42	14.23	0.53	0.75	13.17	13.82
Sr	12.25	13.27	0.97**	0.16	11.92	12.08
Sa	16.33	17.00	1.06*	2.08**	16.92	19.00
Nc	12.00	13.33	0.94**	0.50	11.75	12.25
Sy	7.17	7.42	0.53*	0.08	7.17	7.25
A	16.00	16.75	1.28**	0.33	16.25	16.58
C	18.25	19.00	1.08*	1.33*	18.42	19.75

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

On this and following scales dealing with means, high scores are considered good on all scales, and upward change is seen as improvement.

Table 5

Group Means before and after  
Treatment on the Scales of the  
Personal Orientation Inventory\*

Scale	Feedback		Double		Therapy		No Contact	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Tc	17.92	17.42	16.00	17.00	15.42	16.92	18.00	16.92
I	94.75	91.92	83.67	86.25	83.33	89.17	87.67	92.75
SAV	19.67	20.83	19.42	19.58	18.42	19.58	20.00	20.92
Ex	22.58	23.83	21.92	22.33	21.00	23.92	22.75	23.41
Fr	16.00	17.00	15.42	16.33	16.08	16.17	16.17	16.33
S	13.42	14.25	12.33	12.08	11.92	12.92	13.17	13.92
Sr	11.25	12.67	11.75	12.08	10.17	11.33	11.92	12.08
Sa	16.33	17.00	14.33	15.50	15.50	16.75	16.92	19.00
Nc	12.00	13.33	11.42	12.33	11.92	12.50	11.75	12.25
Sy	7.17	7.42	7.12	7.42	6.67	7.75	7.17	7.25
A	16.00	16.75	16.25	17.33	15.33	17.33	16.25	16.58
C	18.25	20.00	19.16	18.50	17.83	20.00	18.42	19.75

\* On this and following tables dealing with means, high scores are considered good on all scales, and upward change is seen as improvement.

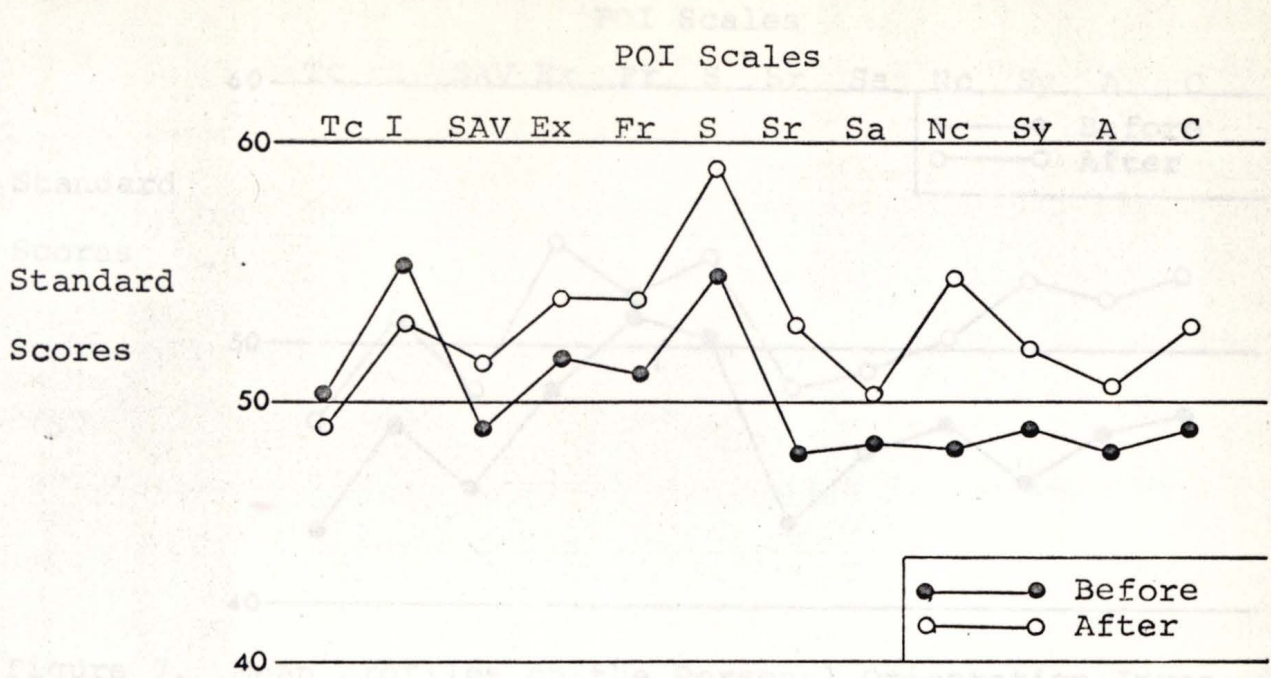


Figure 5. Mean profiles on the Personal Orientation Inventory before and after treatment for the Feedback condition.

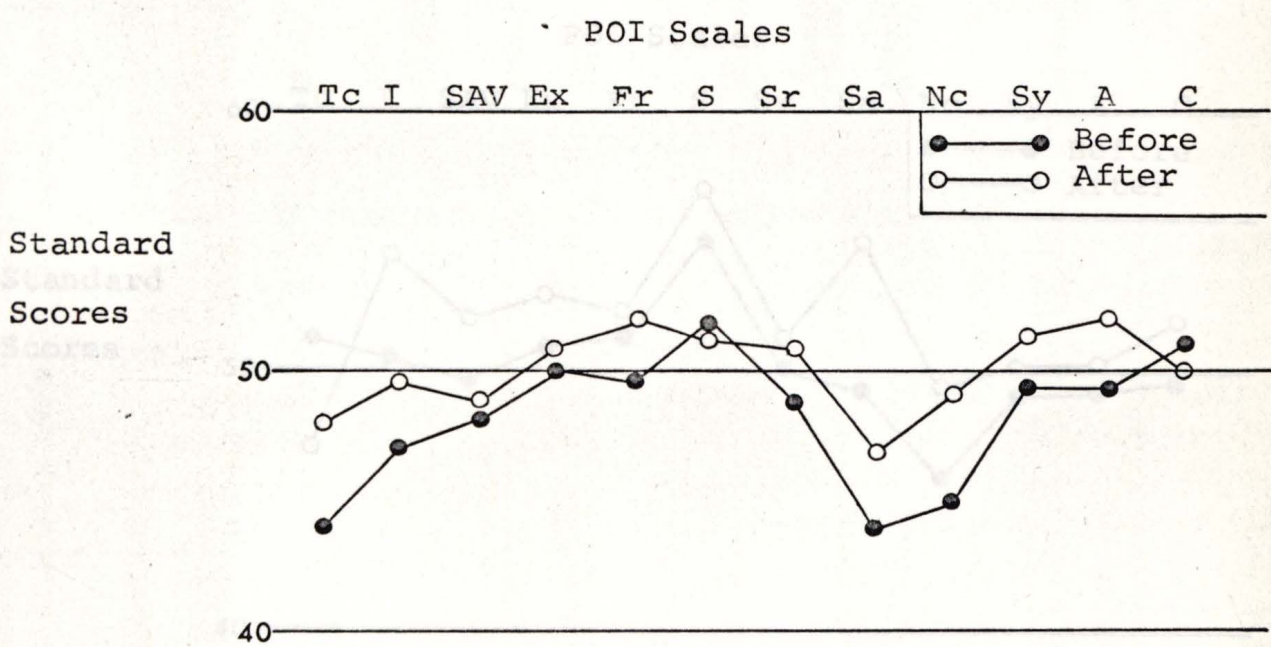


Figure 6. Mean profiles on the Personal Orientation Inventory before and after treatment for the One-hour condition.

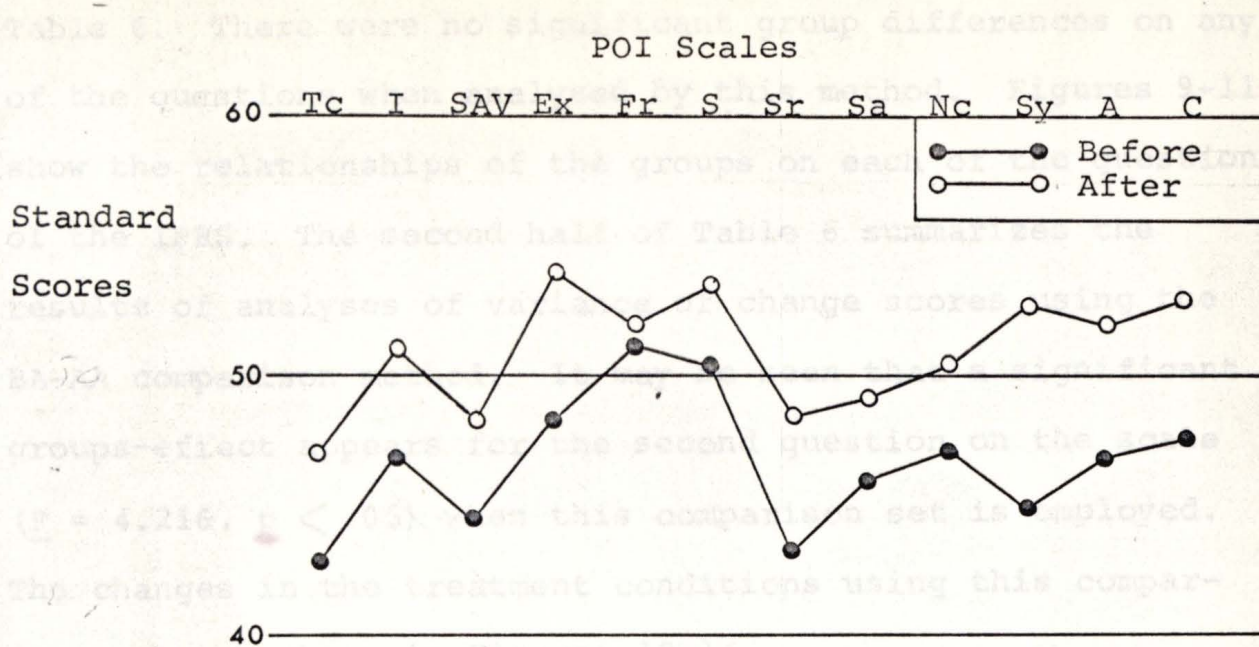


Figure 7. Mean profiles on the Personal Orientation Inventory before and after treatment for the Half-hour condition.

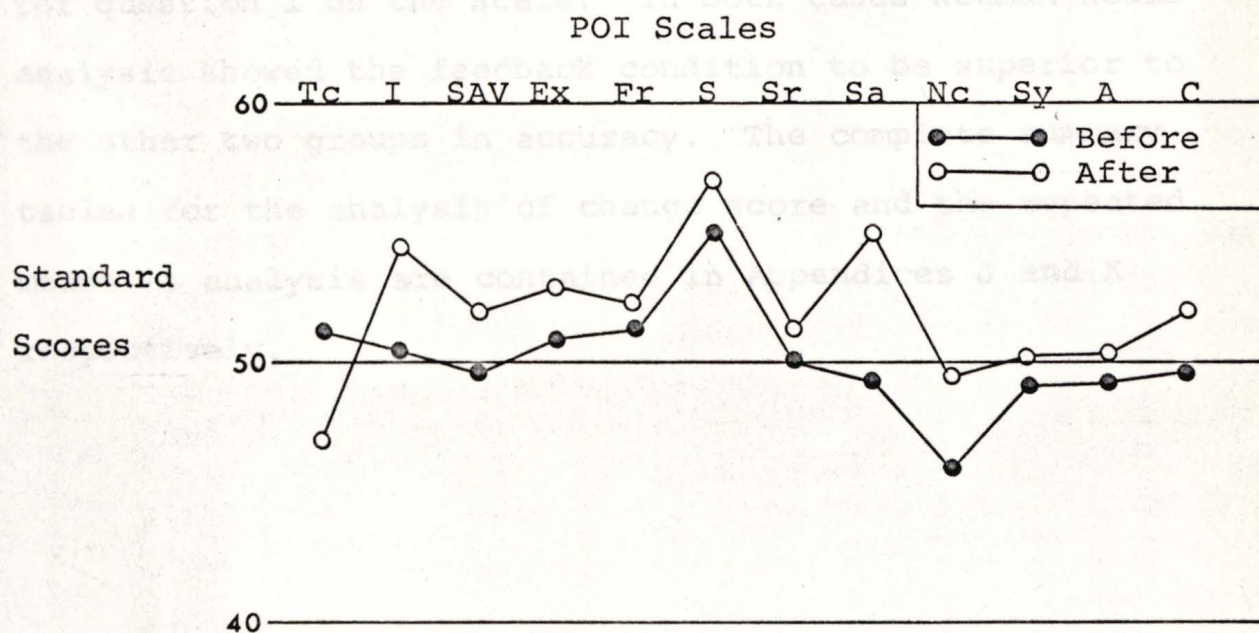


Figure 8. Mean profiles on the Personal Orientation Inventory before and after treatment in the No-contact condition.

Table 6. There were no significant group differences on any of the questions when analysed by this method. Figures 9-11 show the relationships of the groups on each of the questions of the IPRS. The second half of Table 6 summarizes the results of analyses of variance of change scores using the BA-AA comparison method. It may be seen that a significant groups-effect appears for the second question on the scale ( $F = 4.216, p < .05$ ) when this comparison set is employed. The changes in the treatment conditions using this comparison set are shown in Figures 12-14.

The results of the IPRS were also analysed using a repeated measures design, the results of which are summarized in Table 7. The two comparison methods were again employed, and a significant groups-effect was present on both methods for question 1 on the scale. In both cases Neuman-Keuls analysis showed the feedback condition to be superior to the other two groups in accuracy. The complete summary tables for the analysis of change score and the repeated measures analysis are contained in Appendices J and K respectively.

Table 6

Summary of ANOVA with change  
Scores for the  
Interpersonal Perception Rating Scale

Comparison Type	Question	SOV	df	F
BB-AA	1	Groups (G)	2	-
		Therapists (T)	1	-
		G x T	2	-
	2	G	2	1.79
		T	1	1.17
		G x T	2	1.59
	3	G	2	-
		T	1	-
		G x T	2	-
BA-AA	1	G	2	-
		T	1	1.94
		G x T	2	-
	2	G	2	4.22*
		T	1	2.18
		G x T	2	2.74
	3	G	2	1.34
		T	1	2.74
		G x T	2	-

\*  $p < .05$

Figure 7. Mean error scores before and after treatment on Question 1 of the IPPS by comparison type BB-AA.

(Question 1 deals with understanding people)

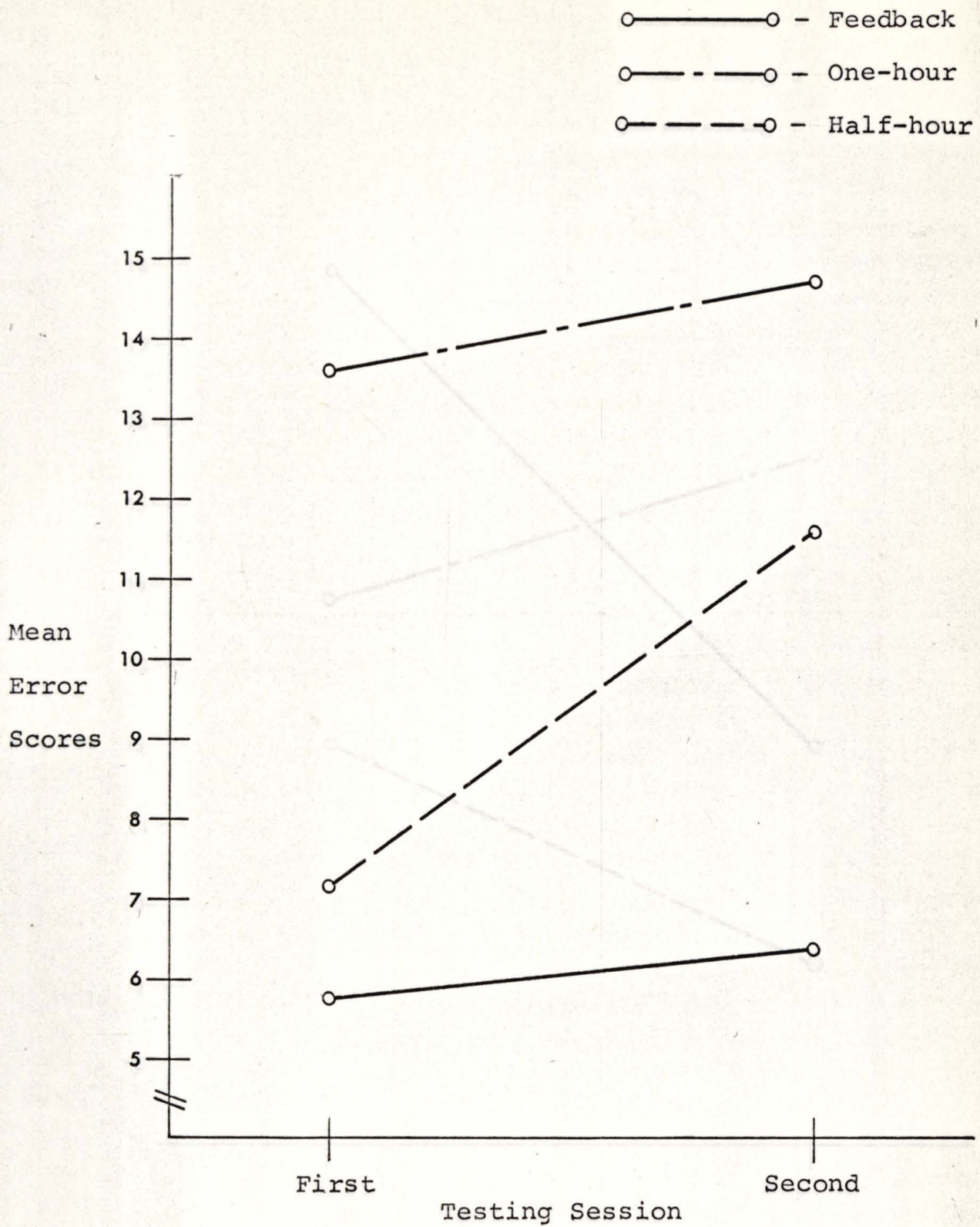


Figure 9. Mean error scores before and after treatment on Question 1 of the IPRS by comparison type BB-AA. (Question 1 deals with understanding people)

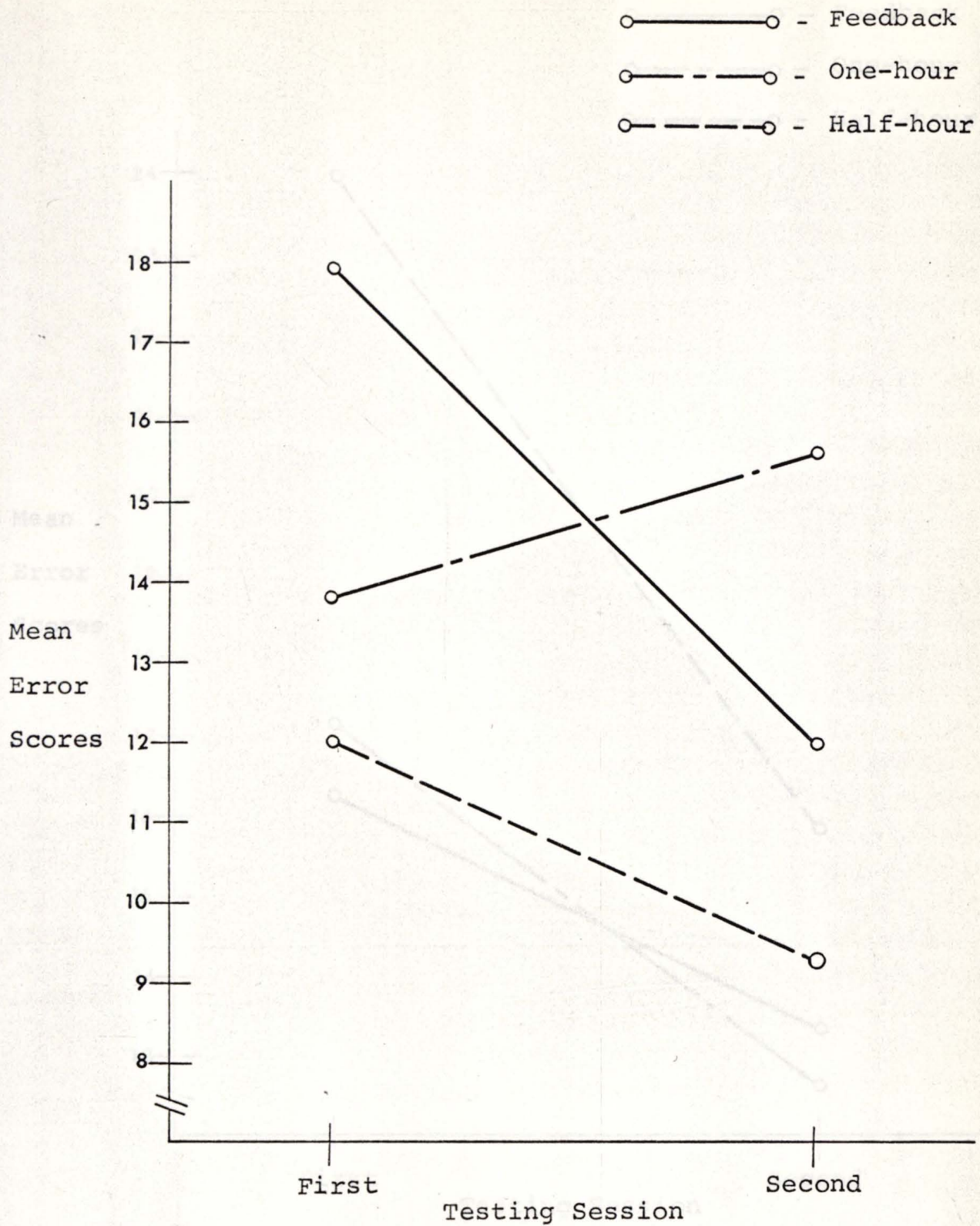


Figure 10. Mean error scores before and after treatment on Question 2 of the IPRS by comparison type BB-AA.

(Question 2 deals with expressing thoughts and feelings)

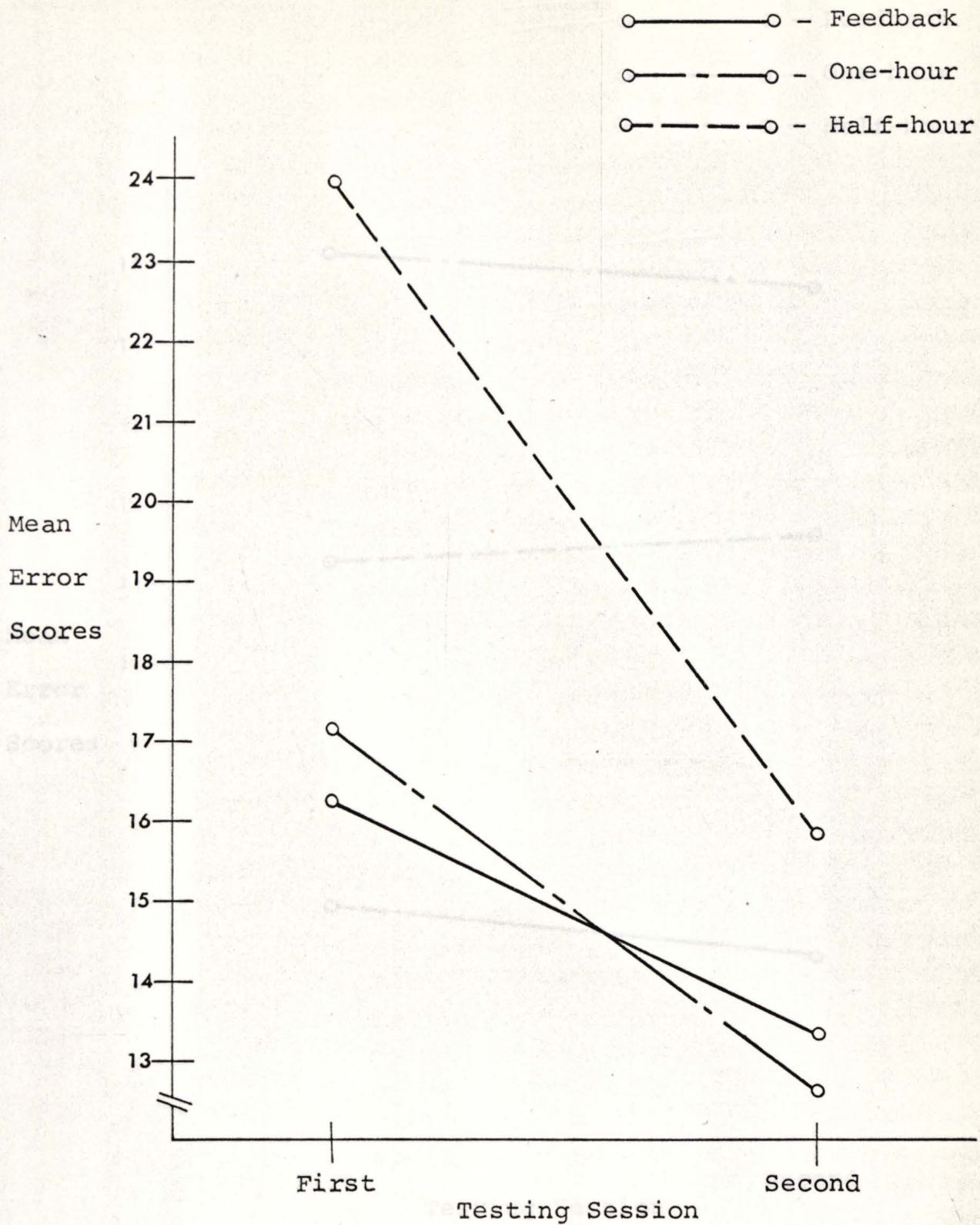


Figure 11. Mean error scores before and after treatment on Question 3 of the IPRS by comparison type BB-AA.  
(Question 3 deals with interpersonal competence)

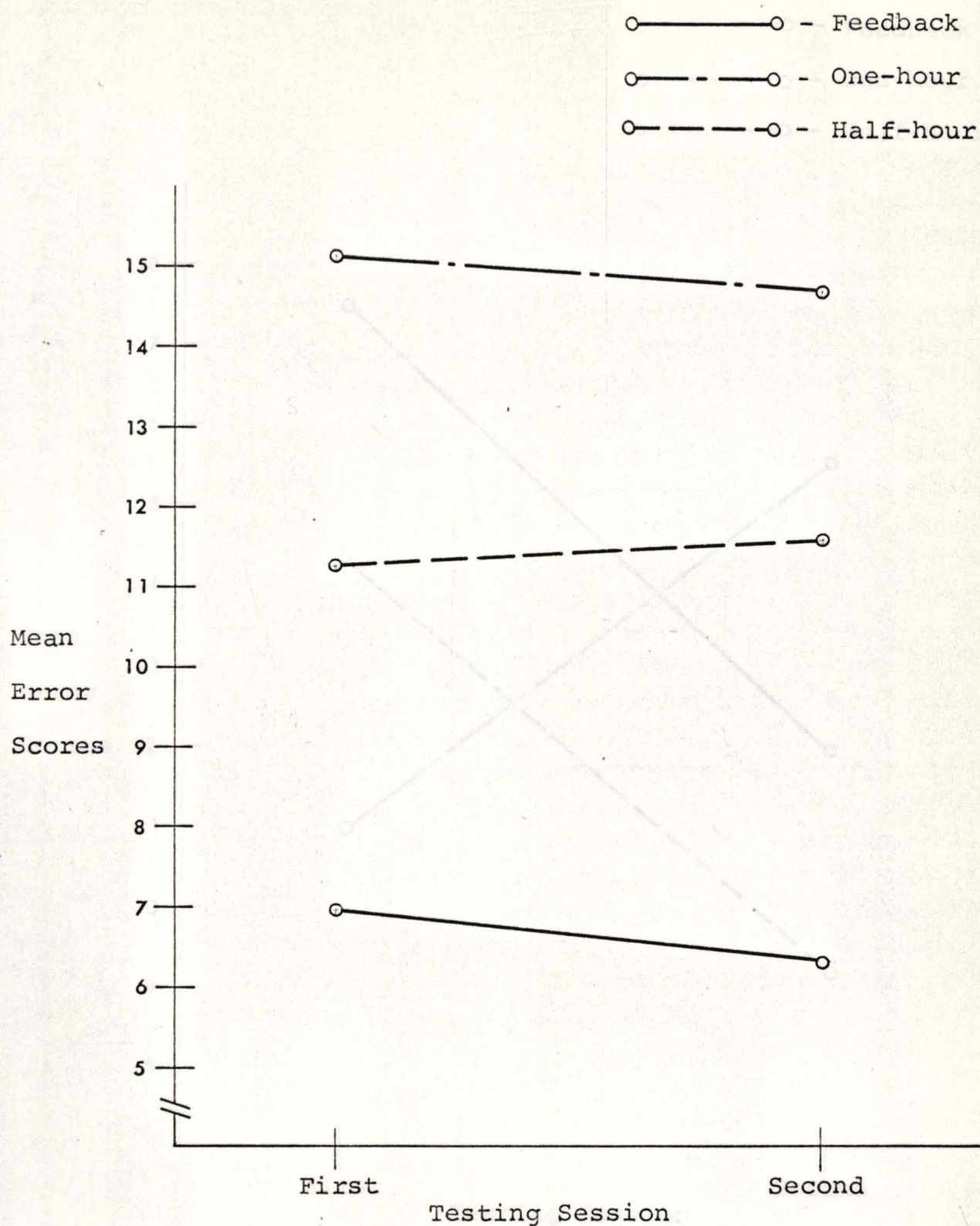


Figure 12. Mean error scores before and after treatment on Question 1 of the IPRS by comparison type BA-AA.

(Question 1 deals with understanding people)

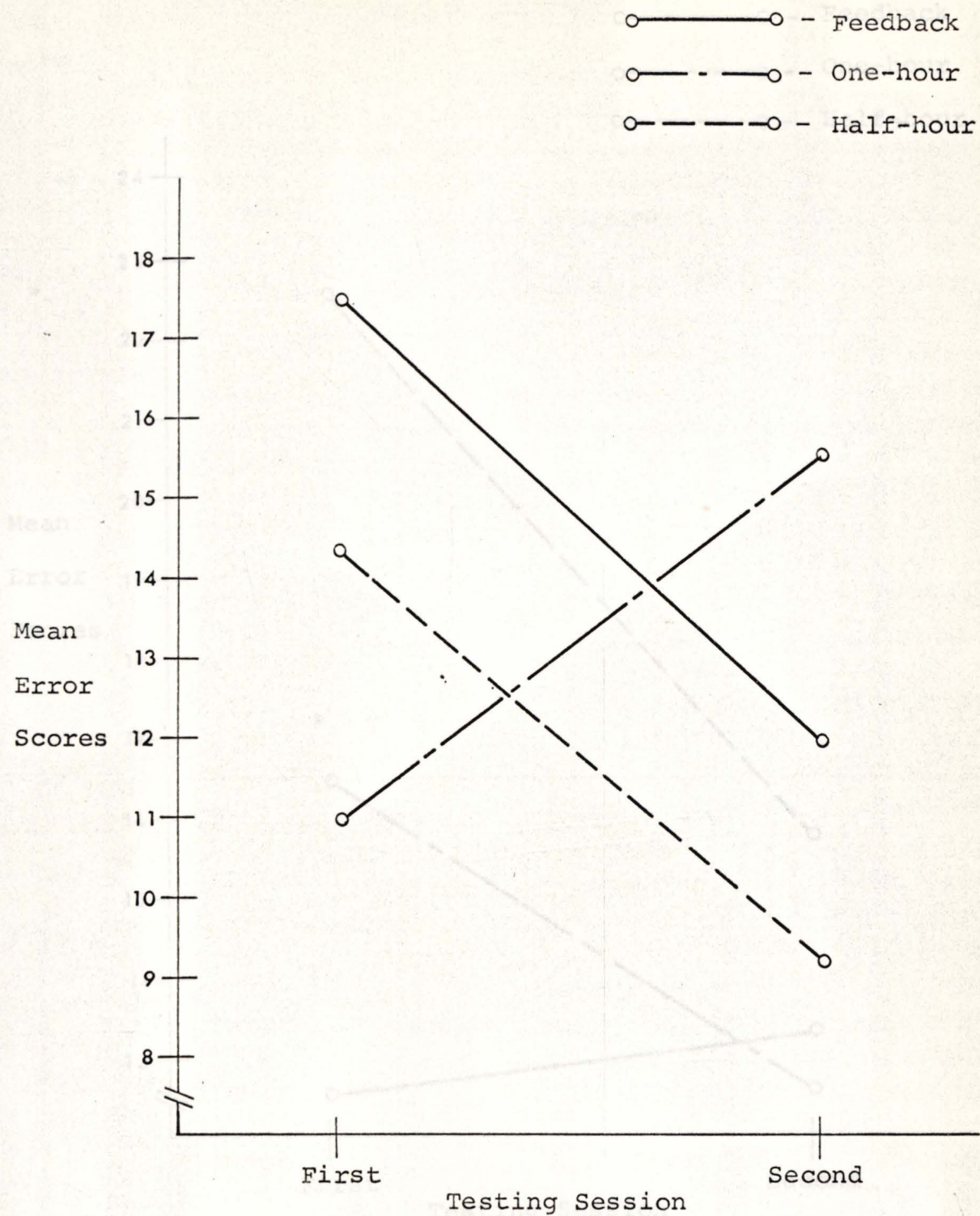


Figure 13. Mean error scores before and after treatment on Question 2 of the IPRS by comparison type BA-AA.

(Question 2 deals with expressing thoughts and feelings)

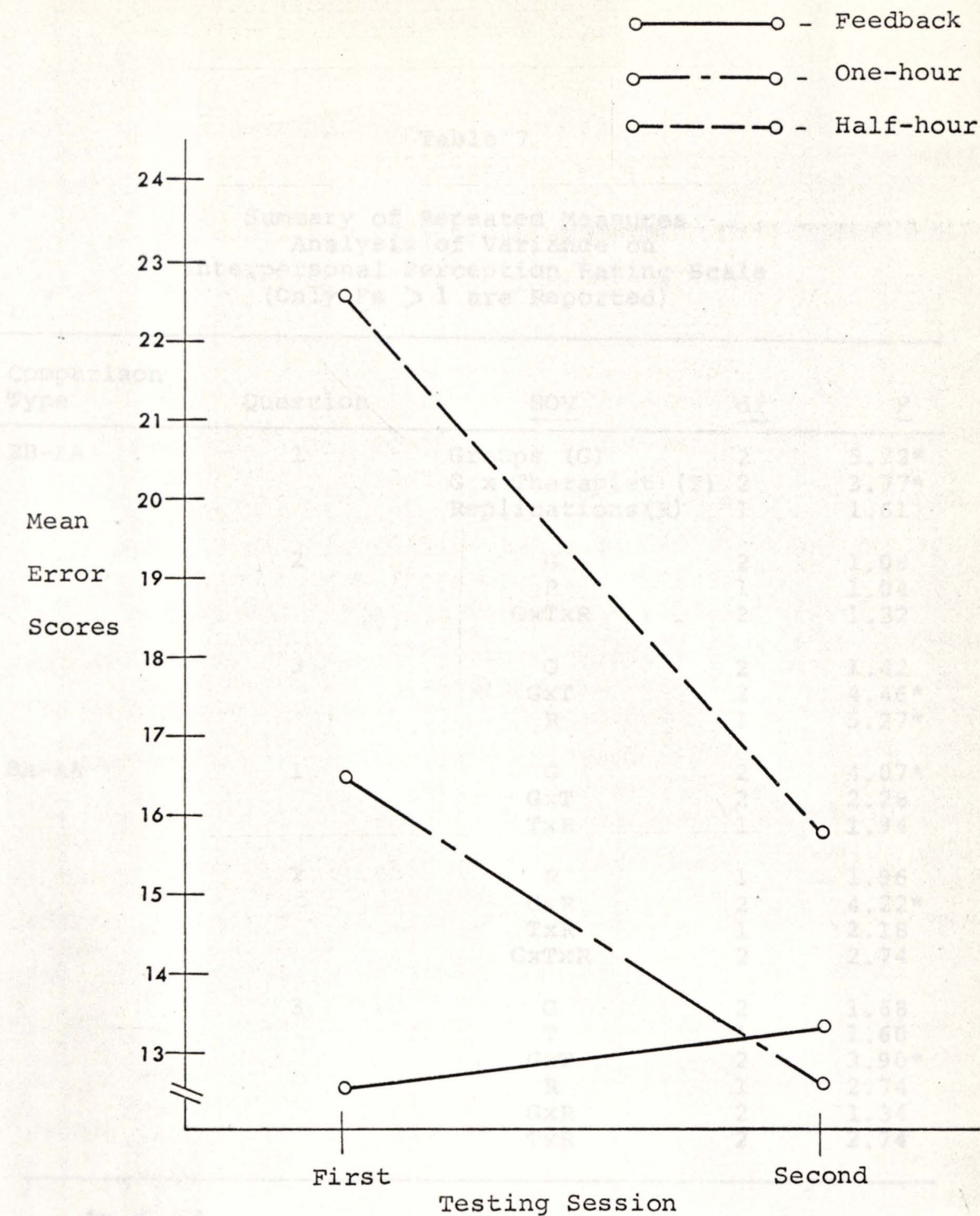


Figure 14. Mean error scores before and after treatment on Question 3 of the IPRS by comparison type BA-AA.

(Question 3 deals with interpersonal competence)

## Discussion

The first hypothesis in this study stated that there would be greater improvement on the 12 scales of the POI attained by those people receiving tape-recorded feedback than by those receiving no feedback. This hypothesis was not supported. Analysis of variance for change scores on each of the scales indicated that a significant difference was found among conditions on the compliance scale, and on the orientation to the present scale. The POI is scored such that high scores are considered good on all scales, and upward change indicates improvement. The difference here obviously is the opposite direction of what was predicted by the first hypothesis.

Table 7

Summary of Repeated Measures  
Analysis of Variance on  
Interpersonal Perception Rating Scale  
(Only  $F_s > 1$  are Reported)

Comparison Type	Question	SOV	df	F
BB-AA	1	Groups (G)	2	5.22*
		G x Therapist (T)	2	3.77*
		Replications (R)	1	1.61
	2	G	2	1.08
		R	1	1.04
		GxTxR	2	1.32
	3	G	2	1.42
		GxT	2	4.46*
		R	1	5.27*
BA-AA	1	G	2	4.07*
		GxT	2	2.28
		TxR	1	1.94
	2	R	1	1.96
		GxR	2	4.22*
		TxR	1	2.18
		GxTxR	2	2.74
	3	G	2	1.68
		T	1	1.60
		GxT	2	3.90*
		R	1	2.74
		GxR	2	1.34
TxR	2	2.74		

\* $p < .05$

is unlikely that the sampling procedure would yield such wide differences in initial levels.

Figure 3 (p.38) illustrated the initial differences on all 12 scales of the POI among conditions. The differences

## Discussion

The first hypothesis in this study stated that there would be greater improvement on the 12 scales of the POI attained by those people receiving tape-recorded feedback than by those not receiving such feedback. This hypothesis was not supported by the results of the analysis of variance for change scores on each of the scales. The only scale on which a difference was found among conditions was the Time Competence scale, and on this scale the recipients of feedback actually declined slightly (see Figure 2, p. 29) while the other two therapy conditions produced large increases. The POI is scored such that high scores are considered good on all scales, and upward change indicates improvement. The difference here obviously is in the opposite direction to that which was predicted by the first hypothesis.

One factor which appears to be partially responsible for the unexpected finding on the Time Competence scale is the significant discrepancy in the initial levels of scores from one condition to another (see Table 2, p.31). This finding indicates that there was a difference in the amount of "orientation to the present" in the self-percepts of people in the feedback condition and people in the other therapy conditions at the beginning of the research. It is unfortunate that the sampling procedure would yield such wide differences in initial levels.

Figure 3 (p.30) illustrates the initial differences on all 12 scales of the POI among conditions. The differences

on the final 12 scales are not significant statistically, due partially to high within-group variations, but the general pattern is for a higher profile in the feedback and no-contact conditions than in the half-hour and one-hour therapy conditions. These differences in initial level on the scales are probably indicative of some qualitative differences in the people in each condition, and these qualitative distinctions may well be relevant to the research. For example, on the second scale (Inner vs. Other Directed) a high score would seem to indicate a high degree of reliance on inner evaluations of events and behavior than on outside sources. If this is true then those people scoring high on this scale should be less affected by feedback and less affected by therapy than those scoring low on the scale. It is clear in Figure 3 that those in the feedback condition scored considerably higher on this scale at the start of the project than those in the other conditions. One possible interpretation of the results, then, is that those in the feedback condition might have had the beneficial effects of feedback offset to some extent by their tendency not to accept information from external sources as readily as would the subjects in the other conditions.

An interesting extension of the above line of thought takes into account the fact that by the end of the project all groups had moved closer (Figure 4, p.30) to the mean

profile established by Shostrom (1964) on the Inner Directed scale. The logical interpretation from this would be that those individuals in the feedback condition, who were higher on this scale to begin with, became more able to utilize external sources of feedback as a result of participating in the research project. On the other hand those people in the one-hour and half-hour groups, who initially were lower than average on this scale, were from the beginning much more able to receive the interpersonal feedback provided by therapy and incorporate it into their self-perception. At the same time these people gained some measure of confidence in their ability to judge their actions for themselves and so became more competent interpersonally. Support for this notion that inner-directed people are less able to use information from external sources has been given by the work of Harvey (1961) and by Rotter (1966). The descriptions these writers present of their "System II's" and "Internals" respectively appear very similar to Shostrom's remarks concerning the characteristics of people who score high on his Inner Directed scale.

The change-score analyses of variance on the POI scales yielded significant therapist effects on two scales. The interpretation of these findings may be related directly to the specific properties of the scales in question. One of the differences occurs on the Time Competence scale, and this may indicate a greater ability on the part of one of

the therapists in directing and maintaining a balanced and integrated orientation to the present. The second scale on which a therapist difference was detected was the Feeling Reactivity scale, and this difference may be seen as evidence that one therapist may have been somewhat more facile in inducing emotional openness and trust within the groups, thus allowing the people to bring out their feelings to a greater extent. The fact that no other scales produced differences between the therapists indicates that both were about equally competent in most respects.

The repeated measures analysis of the POI data was performed in order to ascertain the amount of change that actually took place on the scales. The new information provided by this analysis was the significance of the difference between initial level and final level across all groups in the study. A definite pattern emerged for these differences corresponding to the general goals of the inventory. Several factors are represented by the twelve scales, and these are described by Shostrom as being composed of two general scales and five pairs of scales measuring five different aspects of self-actualization (see Appendix B). The first two scales (Time Competence and Inner Directed) are the general scales, and neither of them had differences on the measurement of change (Replication factor). Table 3 (p. 32) contains a summary of these findings. It would appear from this set of results that the "feeling" component

of self-actualization as measured by the POI did not increase from the beginning of the project to the end, but that the valuing, self-perception, synergistic awareness and interpersonal sensitivity did increase for those people involved in the research.

The two significant interaction effects on the Time Competence scale help to shed some light on the main effects which were found in the change-score analysis of this scale. The first was a conditions by replications interaction and the second was a therapists by replications interaction. In both cases the main effects were no longer significant, suggesting a more complex relationship than had previously been apparent. Inspection of Figure 2 (p.29) makes clear the changing nature of the relationship among conditions over time.

Previous research (Shostrum and Knapp, 1966) has indicated that groups of patients who were in an advanced stage of therapy should score higher on the POI scales than those just beginning therapy. In the Shostrum and Knapp study the advanced patients had been in therapy an average of over two years, so the change found in the present study after no more than six hours of therapy might be an encouraging indication of the efficacy of the treatment afforded by the therapists. However, there is one problem not encountered by Shostrum and Knapp that was a factor in this study. As can be seen in Figures 5-8 (p.35 and 36), there were increases in all groups.

Even the no-contact groups appeared to have improved over the six weeks from beginning to end of the project. In order to determine the extent of this improvement, a set of t-tests was performed on the no-contact condition as well as on the groups who had received treatment. The results of this analysis (Table 4, p.33) were that four scales were improved significantly in the no-contact condition, suggesting some sort of contaminating variable operating external to the independent variables. For the treatment conditions 11 of the 12 scales improved significantly, indicating that while the contaminating variable observed in the no-contact group is a factor in the amount of change recorded, it by no means can account for the majority of the improvement produced in the treatment conditions. The nature of the contaminating variable is open to question. One strong possibility is a practice or test-retest effect because of the relatively short time between administrations of the POI. This type of effect has not been researched as yet for this instrument. An alternative explanation could be that the six-week period of this research coincided with some external events in the university which caused a significant growth in all those involved in the research on the four dimensions where improvement was found in the control subjects (Inner Directed, Self-Actualizing Value, Self Acceptance, and Capacity for Intimate Contact). In any case it is evident that improvement was much greater across all dimensions for those people who participated in the therapy

analogue than in the no-contact subjects.

The overall impression of the results of exploring the first hypothesis does not indicate any kind of superiority produced by feedback which could be detected with the use of POI scores. At least a portion of this failure to support the hypothesis can be attributed to the nature of the assessment device. The interpretations of positions on the scales made by previous researchers would tend to support this statement. Culbert, Clark and Bobele (1968) found differences in the initial levels in their groups which were remarkably similar to the differences in the present study between the feedback group and the other two treatment conditions. Their initially high group did not increase at all while the initially low group improved on four of the scales. The differential results may be understood in terms of an explanation centred around the meaning of the initial differences between the groups. Shostrom (1964) characterized individuals falling between the standard scores of 50 and 60 on the scales as being relatively self-actualized, and those falling between 40 and 50 as relatively non-self-actualized. Applying the same type of explanation as Culbert, Clark and Bobele (1968) to the present study, qualitative differences between the groups may be seen as partly responsible for the consequences of treatment. Two of the conditions (Feedback and No-contact) have groups which may be characterized as approximating a population of self-actualizers in their initial levels, which for the most part are above the standard

score of 50. Treatment administered to these groups should not greatly affect them since they are already high on the dimensions being measured. They have less to gain from therapy than do people scoring low initially. The people in the other two conditions of the present research produced scores which were for the most part below 50 and so may be described as being similar to a population of non-self-actualizers. Since these people have more to gain there should be greater improvement among them than for the initially high individuals.

This set of expectations appears to explain some of the changes found in the four conditions. The half-hour group in particular gained a great deal from its initially low level. The one-hour group also rose, though not as much as the half-hour group. The feedback group, which seemed to have less to gain from treatment, may have had any beneficial effects accruing from feedback masked by their high initial level of self-actualization. In other words, a ceiling effect was operating in a manner detrimental to the support of the hypothesis.

One finding not explained by either initial position or the experimental hypotheses is the rather poor performance of the one-hour group relative to the half-hour and feedback groups (see Figure 6, p.35). It is possible that a one-hour session may be a rather awkward length of time for group meetings as compared to both 30 minutes and 90 minutes. An hour may be too long to sit and remain somewhat

superficial in discussion but not long enough to settle all the problems that arise. Many therapists and researchers (e.g. Gazda, 1968; Kadis et al., 1963) feel that the optimal length of group sessions is about 90 minutes. In the sessions of the present study a warming-up period of about 15 to 20 minutes was apparent in all groups at the beginning of the project, and there was still some warming-up taking place in the final sessions. This left only about 15 minutes of real discussion in those groups that met for 30 minutes. Therefore it is possible that these people did not really have time to work their way into deep or disturbing problems to nearly the same extent as those who met for an hour. On the other hand, those people who did meet for an hour may have worked their way into a series of disturbing problems and may not have had time to resolve all of them.

The second hypothesis in this study stated that a greater increase in accuracy of self-perception as measured by the Interpersonal Perception Rating Scale would be achieved by those people receiving feedback than by those not receiving feedback. Using the BB-AA comparison type, which involves what might be called a moving base (the group's changing evaluation of the individual over the course of the project) no support for the hypothesis was found in the change-score analysis of variance on any of the three questions. (see Table 6, p.38). There was some support using the fixed base (i.e. the BA-AA comparison type) on the question of expressing thoughts and feelings.

The feedback group attained the greatest increase in accuracy on this question. ~~that for other reasons such as exposure~~

The repeated measures analysis of the IPRS data yielded findings different from those on the change-score analysis. The feedback group appeared to be more accurate than the other two conditions in the perception of persons' understanding of others. In other words there was on the whole a smaller discrepancy between each individual's estimate of his ability to understand others and the group's mean rating of his ability in this respect for the feedback condition than for those in the other groups. It might be argued that feedback could produce such a result, but other complications enter the picture here. As can be seen in Figures 9 (p. 39) and 12, (p. 42) those people in the feedback condition have a much lower error rate on this question at the start of the project than do people in the other groups, and this more accurate self-perception may well be related to their higher self-actualizing qualities as measured by the POI. Since this type of relationship would fit well with the hypothesized connection between self-actualization and interpersonal perception, it may be assumed to offer support to such an interpretation. Apparently this relationship does not hold for the second question dealing with expression of thoughts and feelings (Figure 10, p.40 and Figure 13, p.43), because the feedback group is the highest on error score for this question at the start of the project. It is possible that the

expression of oneself is related to things other than self-actualization and that for other reasons such as exposure to a variety of social situations, this question taps a different area of functioning. On the third question, dealing with general social competence, the feedback group is again relatively low on errors at the beginning (Figure 11, p.41 and Figure 14, p.44) although not as markedly so as on the first question.

There appears, therefore, to be some similarity between the initial level on the POI and initial level on two of the questions on the IPRS. The same explanation for lack of significant differences between the feedback condition and other groups that was employed in the discussion of the POI results, the fact of having less to gain from therapy, is applicable to these two questions. On the question wherein the feedback group does not start with a lower error score (i.e. Question 2, expression of thoughts and feelings), a significantly greater improvement occurs in their accuracy as a result of the treatment (see Figure 10, p.40). Feedback thus seems to improve the accuracy of individuals' assessment of their ability to express their thoughts and feelings.

The two specific hypotheses in the present study were both aimed at finding out whether or not the presentation of tape-recorded feedback would have an appreciable effect on people in their thoughts and actions. An evaluation must be made not only as to whether there is support for the

hypothesis but also as to whether an adequate test of the hypothesis has been made. The answer to the question on the basis of the tests conducted in this study is that there is little supportive evidence. The answer to the challenge as to the adequacy of the test can be determined only through an examination of the limitations of the research.

One of the major limitations of the present study was the small amount of time involved on the part of the subjects. None of the people involved in the project spent more than six hours in the analogue therapy situation. This is a very short time indeed, for any systematic changes in attitudes toward self and life to have occurred and stabilized. In a future investigation greater exposure to therapy and to feedback would ensure a more definitive evaluation of feedback. A further problem raised by the shortness of time (six weeks) was the possibility of a memory factor affecting the second administration of the assessment instruments. A longer program would also reduce this problem.

A second limiting factor on the adequacy of this assessment of feedback involves the nature of the subject population. Since the question will ultimately be applied to actual therapy situations, a population of psychiatric patients participating in therapy with professional therapists would provide a much better setting for the research. The motivation of senior undergraduates to improve their levels of functioning may be considerably lower than that of people

who have sought professional help for themselves. Also, of course, the university students often are more self-actualized to begin with, as was discussed earlier.

One of the problems brought forward by the participants during the course of the project was the length of the sessions. The consensus of opinion was that meetings of 30 minutes were not long enough to get anything done. The subjects claimed that there was not enough time to develop trust in the other members of the group and that discussions would just get started when the session ended. Even the one-hour sessions appeared to be too short for adequate discussion. These session lengths were chosen in view of the economics of the situation at the outset of the project, and in further research the meeting time should certainly be lengthened to allow adequate discussion and development of trust.

There appeared to be some serious problems with the actual format for the presentation of feedback. Subjects stated that they could not gain much from listening to the whole tape immediately after completion of the session. Two sources of potential improvement are apparent. First, the impact of feedback might be greater if used as a supplement to discussion and presented at the beginning of the following session. This has been one of the most popular methods used in previous research on feedback (Stoller, 1968; Pinney, 1955). It was not used in this study because of the idea that

immediate reinforcement (i.e. feedback) should be the most effective learning situation. However, the presentation of feedback without discussion seems to be less than optimally effective. The second change which could improve the effectiveness of feedback is the editing of the tape to eliminate much of the irrelevant material on the tape. Stoller (1967) has strongly recommended this procedure, and Danet (1969) reported that the rather global use of feedback was a disrupting influence on the progress of psychotherapy in groups.

The future of research in the area of tape-recorded feedback is still very promising. Investigators should be cognizant of the limitations of this study and undertake to avoid some of the problems which arose here, such as the initial differences from one group to another in levels of self-actualization. The answer may lie in a matching procedure to assign subjects to groups, or perhaps a more direct measure of functioning can be instituted to test the hypothesis. In any case, the findings of the present study should prove of some value to future investigators who wish to assess the effect of the use of taped feedback in a group situation.

Ellis, A. Reason and emotion in psychotherapy. New York: Holt Rinehart, 1962.

Galax, B.W. Selected personality variables and the learning process. Psychological Monographs, 1952, 65(17), Whole no. 349, 1-31

## References

- Alger, I. and Hogan, P. The use of videotape recordings in conjoint marital therapy. American Journal of Psychiatry, 1967, 123, 1425-1430.
- Armstrong, R.G. Playback technique in group psychotherapy Psychiatric Quarterly Supplement, 1964, 38, 247-252.
- Bloom, B.S. The thought processes of students in discussion. In French, S. (ed.), Accent on teaching. New York: Harper, 1954.
- Bradford, L.P., Gibb, J.R. and Benne, K.D. (eds.) T-group theory and the laboratory method. New York: Wiley, 1964.
- Cameron, D.E. Psychic driving. American Journal of Psychiatry, 1956, 112, 502-509.
- Cameron, D.E. Ultraconceptual communication. In Hoch, P.H. and Zubin, J. (eds.), Psychopathology of communication. New York: Grune and Stratton, 1958, 17-27.
- Cornelison, F.S. and Arsenian, J.M. A study of the responses of psychotic patients to photographic self-image experience. Psychiatric Quarterly, 1960, 34, 1-8.
- Courson, C.C. Personal adequacy and self-perception in high school students: a study of behavioral and internal perceptual factors. Journal of Humanistic Psychology, 1968, 8, 29-38.
- Culbert, S.A., Clark, J.V. and Bobele, H.K. Measures of change toward self-actualization in two sensitivity training groups. Journal of Counseling Psychology, 1968, 15, 53-57.
- Danet, B.N. Impact of audio-visual feedback on group psychotherapy. Journal of Consulting and Clinical Psychology, 1969, 33, 632.
- Ellis, A. Reason and emotion in psychotherapy. New York: Lyle Stuart, 1962.
- Gaier, E.L. Selected personality variables and the learning process. Psychological Monographs, 1952, 66(17), Whole no. 349, 1-28.

- Gazda, G.M. Basic approaches to group psychotherapy and group counseling. Springfield, Ill.: Thomas, 1968.
- Geertsma, R.H. and Reivich, R.S. Repetitive self-observation by videotape playback. Journal of Nervous and Mental Disease, 1965, 141, 29-41.
- Golner, J.H., Geddes, H.M. and Arsenian, J. Notes on the use of recorded minutes in group therapy with chronic psychotic patients. Psychiatric Quarterly, 1959, 33, 312-325.
- Harvey, O.J., Hunt, D.E. and Schroder, H.M. Conceptual systems and personality organization. New York: Wiley, 1961.
- Ilardi, R.L. and May, W.T. A reliability study of Shostrom's Personal Orientation Inventory. Journal of Humanistic Psychology, 1968, 8, 68-72.
- Kadis, A.L., Krasner, J.D., Winick, C. and Foulkes, S.H. A practicum of group psychotherapy. New York: Hoeber, 1963.
- Kagan, N., Krathwohl, D.R. and Miller, R. Stimulated recall in therapy using videotape: a case study. Journal of Counseling Psychology, 1963, 10, 237-243.
- Knapp, R.R. Relationship of a measure of self-actualization to neuroticism and extraversion. Journal of Consulting Psychology, 1965, 29, 163-172.
- Little, B.R. Psychospecialization: functions of differential interest in persons and things. Bulletin of the British Psychological Society, 1968, 21, 113.
- Maslow, A.H. Motivation and personality. New York: Harper, 1954.
- Maslow, A.H. Toward a psychology of being. Princeton: Van Nostrand, 1962.
- McClelland, D.C. and Atkinson, J.W. The projective expression of needs: I. The effect of different intensities of the hunger drive on perception. Journal of Psychology, 1948, 25, 205-222.
- Moore, F.J., Chernell, E. and West, M.J. Television as a therapeutic tool. Archives of General Psychiatry, 1965, 12, 217-220.

- Neilsen, G.S. Studies in self-confrontation. Copenhagen: Munksgaard, 1962.
- Pinney, E.L. The use of recorded minutes of group meetings in group psychotherapy. Psychiatric Quarterly Supplement, 1955, 29, 1-8.
- Roberts, R.R. and Renzaglia, G.A. The influence of tape recording on counseling. Journal of Counseling Psychology, 1965, 12, 10-16.
- Rogers, A.H. Videotape feedback in group psychotherapy. Psychotherapy: Theory, Research and Practice, 1968 5, 37-39.
- Rogers, C.R. On becoming a person. Boston: Houghton-Mifflin, 1961.
- Rogers, C.R. Toward a modern approach to values: the valuing process in the mature person. Journal of Abnormal and Social Psychology, 1964, 68, 160-167.
- Rogers, C.R. A theory of personality. In Millon, T.(ed.), Theories of psychopathology. Philadelphia; Saunders, 1967, 262-269.
- Rotter, J.B. Generalized expectancies for internal versus external control of reinforcement. Psychological Monographs, 1966, 80(1), No. 609.
- Rottschafer, R.H. and Renzaglia, G.A. The relationship of dependent-like verbal behaviors to counselor style and induced set. Journal of Consulting Psychology, 1962, 26, 172-177.
- Sacks, J.M. and Berger, S. Group therapy techniques with hospitalized chronic schizophrenic patients. Journal of Consulting Psychology, 1954, 18, 297-302.
- Saward, J. The content and structure of aesthetic construing: a psychospecialization approach. Unpublished paper: Oxford University, 1968.
- Schindler, R. The development of psychotherapy in Austria since 1945. In Fromm-Reichmann, F. and Moreno, J.L. (eds.), Progress in psychotherapy. New York: Grune and Stratton, 1956, 267-276.

- Sechrest, L. Testing, measuring and assessing people. In Bourgatta, E. (ed.), Handbook of personality theory and research. New York: Rand-McNally, 1969.
- Shostrom, E.L. An inventory for the measurement of self-actualization. Educational and Psychological Measurement, 1964, 24, 207-218.
- Shostrom, E.L. and Knapp, R.R. The relationship of a measure of self-actualization (POI) to a measure of pathology (MMPI) and to therapeutic growth. American Journal of Psychotherapy, 1966, 20, 193-202.
- Stoller, F.H. Group psychotherapy on television: an innovation with hospitalized patients. American Psychologist, 1967, 22, 158-162.
- Stoller, F.H. Focused feedback with videotape: extending the group's functions. In Gazda, G.M. (ed.), Innovations to group psychotherapy. Springfield, Ill.: Thomas, 1968.
- Sullivan, H.S. The interpersonal theory of psychiatry. New York: Norton, 1953.
- Tajfel, H. Value and the perceptual judgment of magnitude. Psychological Review, 1957, 64, 192-204.
- Tannenbaum, R., Weschler, I.R. and Massarik, F. The process of understanding people. In Bennis, W.G., Schein, E.H., Berlew, D.E. and Steele, F.I. (eds.), Interpersonal dynamics: essays and readings on human interaction. Homewood, Ill.: Dorsey Press, 1964, 725-239.
- Walz, G.R. and Johnston, J.A. Counselors look at themselves on videotape. Journal of Counseling Psychology, 1963, 10, 232-236.
- Watts, A. The wisdom of insecurity. New York: Pantheon, 1951.

# DIRECTION: Appendix A

This inventory consists of pairs of statements. Read each statement and decide which of the two paired statements most completely applies to you.

You are to mark your answers on this answer sheet. Read the examples of the answer sheet at the right. If the first statement of the pair is TRUE or PARTLY TRUE, an "X" is marked in the column headed "True". If the second statement of the pair is TRUE or PARTLY TRUE, an "X" is marked in the column headed "Partly True".

## Personal Orientation Inventory

When you mark the answer sheet, be sure that the number of "X" marks in each column is the same as the number of statements in that column. If you have more "X" marks in one column than in the other, you will not be able to score your answers. If you have more "X" marks in one column than in the other, you will not be able to score your answers.

When marking your answers on the answer sheet, be sure that the number of "X" marks in each column is the same as the number of statements in that column. If you have more "X" marks in one column than in the other, you will not be able to score your answers.

When marking your answers on the answer sheet, be sure that the number of "X" marks in each column is the same as the number of statements in that column.

When marking your answers on the answer sheet, be sure that the number of "X" marks in each column is the same as the number of statements in that column.

When marking your answers on the answer sheet, be sure that the number of "X" marks in each column is the same as the number of statements in that column.



# POI

## PERSONAL ORIENTATION INVENTORY

EVERETT L. SHOSTROM, Ph.D.

### DIRECTIONS

This inventory consists of pairs of numbered statements. Read each statement and decide which of the two paired statements most consistently applies to you.

You are to mark your answers on the answer sheet you have. Look at the example of the answer sheet shown at the right. If the first statement of the pair is TRUE or MOSTLY TRUE as applied to you, blacken between the lines in the column headed "a". (See Example Item 1 at right.) If the second statement of the pair is TRUE or MOSTLY TRUE as applied to you, blacken between the lines in the column headed "b". (See Example Item 2 at right.) If neither statement applies to you, or if they refer to something you don't know about, make no answer on the answer sheet. Remember to give YOUR OWN opinion of yourself and do not leave any blank spaces if you can avoid it.

Section of Answer Column Correctly Marked		
	a	b
1.	█	⋮
2.	⋮	█

In marking your answers on the answer sheet, be sure that the number of the statement agrees with the number on the answer sheet. Make your marks heavy and black. Erase completely any answer you wish to change. Do not make any marks in this booklet.

Remember, try to make some answer to every statement.

Before you begin the inventory, be sure you put your name, your sex, your age, and the other information called for in the space provided on the answer sheet.

NOW OPEN THE BOOKLET AND START WITH QUESTION 1.

© Copyright 1962 by Everett L. Shostrom  
© Copyright 1963 by Educational & Industrial Testing Service

1. a. I am bound by the principle of fairness.  
b. I am not absolutely bound by the principle of fairness.
2. a. When a friend does me a favor, I feel that I must return it.  
b. When a friend does me a favor, I do not feel that I must return it.
3. a. I feel I must always tell the truth.  
b. I do not always tell the truth.
4. a. No matter how hard I try, my feelings are often hurt.  
b. If I manage the situation right, I can avoid being hurt.
5. a. I feel that I must strive for perfection in everything that I undertake.  
b. I do not feel that I must strive for perfection in everything that I undertake.
6. a. I often make my decisions spontaneously.  
b. I seldom make my decisions spontaneously.
7. a. I am afraid to be myself.  
b. I am not afraid to be myself.
8. a. I feel obligated when a stranger does me a favor.  
b. I do not feel obligated when a stranger does me a favor.
9. a. I feel that I have a right to expect others to do what I want of them.  
b. I do not feel that I have a right to expect others to do what I want of them.
10. a. I live by values which are in agreement with others.  
b. I live by values which are primarily based on my own feelings.
11. a. I am concerned with self-improvement at all times.  
b. I am not concerned with self-improvement at all times.
12. a. I feel guilty when I am selfish.  
b. I don't feel guilty when I am selfish.
13. a. I have no objection to getting angry.  
b. Anger is something I try to avoid.
14. a. For me, anything is possible if I believe in myself.  
b. I have a lot of natural limitations even though I believe in myself.
15. a. I put others' interests before my own.  
b. I do not put others' interests before my own.
16. a. I sometimes feel embarrassed by compliments.  
b. I am not embarrassed by compliments.
17. a. I believe it is important to accept others as they are.  
b. I believe it is important to understand why others are as they are.
18. a. I can put off until tomorrow what I ought to do today.  
b. I don't put off until tomorrow what I ought to do today.
19. a. I can give without requiring the other person to appreciate what I give.  
b. I have a right to expect the other person to appreciate what I give.
20. a. My moral values are dictated by society.  
b. My moral values are self-determined.
21. a. I do what others expect of me.  
b. I feel free to not do what others expect of me.
22. a. I accept my weaknesses.  
b. I don't accept my weaknesses.
23. a. In order to grow emotionally, it is necessary to know why I act as I do.  
b. In order to grow emotionally, it is not necessary to know why I act as I do.
24. a. Sometimes I am cross when I am not feeling well.  
b. I am hardly ever cross.

GO ON TO THE NEXT PAGE

25. a. It is necessary that others approve of what I do.  
b. It is not always necessary that others approve of what I do.
26. a. I am afraid of making mistakes.  
b. I am not afraid of making mistakes.
27. a. I trust the decisions I make spontaneously.  
b. I do not trust the decisions I make spontaneously.
28. a. My feelings of self-worth depend on how much I accomplish.  
b. My feelings of self-worth do not depend on how much I accomplish.
29. a. I fear failure.  
b. I don't fear failure.
30. a. My moral values are determined, for the most part, by the thoughts, feelings and decisions of others.  
b. My moral values are not determined, for the most part, by the thoughts, feelings and decisions of others.
31. a. It is possible to live life in terms of what I want to do.  
b. It is not possible to live life in terms of what I want to do.
32. a. I can cope with the ups and downs of life.  
b. I cannot cope with the ups and downs of life.
33. a. I believe in saying what I feel in dealing with others.  
b. I do not believe in saying what I feel in dealing with others.
34. a. Children should realize that they do not have the same rights and privileges as adults.  
b. It is not important to make an issue of rights and privileges.
35. a. I can "stick my neck out" in my relations with others.  
b. I avoid "sticking my neck out" in my relations with others.
36. a. I believe the pursuit of self-interest is opposed to interest in others.  
b. I believe the pursuit of self-interest is not opposed to interest in others.
37. a. I find that I have rejected many of the moral values I was taught.  
b. I have not rejected any of the moral values I was taught.
38. a. I live in terms of my wants, likes, dislikes and values.  
b. I do not live in terms of my wants, likes, dislikes and values.
39. a. I trust my ability to size up a situation.  
b. I do not trust my ability to size up a situation.
40. a. I believe I have an innate capacity to cope with life.  
b. I do not believe I have an innate capacity to cope with life.
41. a. I must justify my actions in the pursuit of my own interests.  
b. I need not justify my actions in the pursuit of my own interests.
42. a. I am bothered by fears of being inadequate.  
b. I am not bothered by fears of being inadequate.
43. a. I believe that man is essentially good and can be trusted.  
b. I believe that man is essentially evil and cannot be trusted.
44. a. I live by the rules and standards of society.  
b. I do not always need to live by the rules and standards of society.
45. a. I am bound by my duties and obligations to others.  
b. I am not bound by my duties and obligations to others.
46. a. Reasons are needed to justify my feelings.  
b. Reasons are not needed to justify my feelings.

47. a. There are times when just being silent is the best way I can express my feelings.  
b. I find it difficult to express my feelings by just being silent.
48. a. I often feel it necessary to defend my past actions.  
b. I do not feel it necessary to defend my past actions.
49. a. I like everyone I know.  
b. I do not like everyone I know.
50. a. Criticism threatens my self-esteem.  
b. Criticism does not threaten my self-esteem.
51. a. I believe that knowledge of what is right makes people act right.  
b. I do not believe that knowledge of what is right necessarily makes people act right.
52. a. I am afraid to be angry at those I love.  
b. I feel free to be angry at those I love.
53. a. My basic responsibility is to be aware of my own needs.  
b. My basic responsibility is to be aware of others' needs.
54. a. Impressing others is most important.  
b. Expressing myself is most important.
55. a. To feel right, I need always to please others.  
b. I can feel right without always having to please others.
56. a. I will risk a friendship in order to say or do what I believe is right.  
b. I will not risk a friendship just to say or do what is right.
57. a. I feel bound to keep the promises I make.  
b. I do not always feel bound to keep the promises I make.
58. a. I must avoid sorrow at all costs.  
b. It is not necessary for me to avoid sorrow.
59. a. I strive always to predict what will happen in the future.  
b. I do not feel it necessary always to predict what will happen in the future.
60. a. It is important that others accept my point of view.  
b. It is not necessary for others to accept my point of view.
61. a. I only feel free to express warm feelings to my friends.  
b. I feel free to express both warm and hostile feelings to my friends.
62. a. There are many times when it is more important to express feelings than to carefully evaluate the situation.  
b. There are very few times when it is more important to express feelings than to carefully evaluate the situation.
63. a. I welcome criticism as an opportunity for growth.  
b. I do not welcome criticism as an opportunity for growth.
64. a. Appearances are all-important.  
b. Appearances are not terribly important.
65. a. I hardly ever gossip.  
b. I gossip a little at times.
66. a. I feel free to reveal my weaknesses among friends.  
b. I do not feel free to reveal my weaknesses among friends.
67. a. I should always assume responsibility for other people's feelings.  
b. I need not always assume responsibility for other people's feelings.
68. a. I feel free to be myself and bear the consequences.  
b. I do not feel free to be myself and bear the consequences.

69. a. I already know all I need to know about my feelings.  
b. As life goes on, I continue to know more and more about my feelings.
70. a. I hesitate to show my weaknesses among strangers.  
b. I do not hesitate to show my weaknesses among strangers.
71. a. I will continue to grow only by setting my sights on a high-level, socially approved goal.  
b. I will continue to grow best by being myself.
72. a. I accept inconsistencies within myself.  
b. I cannot accept inconsistencies within myself.
73. a. Man is naturally cooperative.  
b. Man is naturally antagonistic.
74. a. I don't mind laughing at a dirty joke.  
b. I hardly ever laugh at a dirty joke.
75. a. Happiness is a by-product in human relationships.  
b. Happiness is an end in human relationships.
76. a. I only feel free to show friendly feelings to strangers.  
b. I feel free to show both friendly and unfriendly feelings to strangers.
77. a. I try to be sincere but I sometimes fail.  
b. I try to be sincere and I am sincere.
78. a. Self-interest is natural.  
b. Self-interest is unnatural.
79. a. A neutral party can measure a happy relationship by observation.  
b. A neutral party cannot measure a happy relationship by observation.
80. a. For me, work and play are the same.  
b. For me, work and play are opposites.
81. a. Two people will get along best if each concentrates on pleasing the other.  
b. Two people can get along best if each person feels free to express himself.
82. a. I have feelings of resentment about things that are past.  
b. I do not have feelings of resentment about things that are past.
83. a. I like only masculine men and feminine women.  
b. I like men and women who show masculinity as well as femininity.
84. a. I actively attempt to avoid embarrassment whenever I can.  
b. I do not actively attempt to avoid embarrassment.
85. a. I blame my parents for a lot of my troubles.  
b. I do not blame my parents for my troubles.
86. a. I feel that a person should be silly only at the right time and place.  
b. I can be silly when I feel like it.
87. a. People should always repent their wrongdoings.  
b. People need not always repent their wrongdoings.
88. a. I worry about the future.  
b. I do not worry about the future.
89. a. Kindness and ruthlessness must be opposites.  
b. Kindness and ruthlessness need not be opposites.
90. a. I prefer to save good things for future use.  
b. I prefer to use good things now.
91. a. People should always control their anger.  
b. People should express honestly-felt anger.

92. a. The truly spiritual man is sometimes sensual.  
b. The truly spiritual man is never sensual.
93. a. I am able to express my feelings even when they sometimes result in undesirable consequences.  
b. I am unable to express my feelings if they are likely to result in undesirable consequences.
94. a. I am often ashamed of some of the emotions that I feel bubbling up within me.  
b. I do not feel ashamed of my emotions.
95. a. I have had mysterious or ecstatic experiences.  
b. I have never had mysterious or ecstatic experiences.
96. a. I am orthodoxly religious.  
b. I am not orthodoxly religious.
97. a. I am completely free of guilt.  
b. I am not free of guilt.
98. a. I have a problem in fusing sex and love.  
b. I have no problem in fusing sex and love.
99. a. I enjoy detachment and privacy.  
b. I do not enjoy detachment and privacy.
100. a. I feel dedicated to my work.  
b. I do not feel dedicated to my work.
101. a. I can express affection regardless of whether it is returned.  
b. I cannot express affection unless I am sure it will be returned.
102. a. Living for the future is as important as living for the moment.  
b. Only living for the moment is important.
103. a. It is better to be yourself.  
b. It is better to be popular.
104. a. Wishing and imagining can be bad.  
b. Wishing and imagining are always good.
105. a. I spend more time preparing to live.  
b. I spend more time actually living.
106. a. I am loved because I give love.  
b. I am loved because I am lovable.
107. a. When I really love myself, everybody will love me.  
b. When I really love myself, there will still be those who won't love me.
108. a. I can let other people control me.  
b. I can let other people control me if I am sure they will not continue to control me.
109. a. As they are, people sometimes annoy me.  
b. As they are, people do not annoy me.
110. a. Living for the future gives my life its primary meaning.  
b. Only when living for the future ties into living for the present does my life have meaning.
111. a. I follow diligently the motto, "Don't waste your time."  
b. I do not feel bound by the motto, "Don't waste your time."
112. a. What I have been in the past dictates the kind of person I will be.  
b. What I have been in the past does not necessarily dictate the kind of person I will be.
113. a. It is important to me how I live in the here and now.  
b. It is of little importance to me how I live in the here and now.
114. a. I have had an experience where life seemed just perfect.  
b. I have never had an experience where life seemed just perfect.
115. a. Evil is the result of frustration in trying to be good.  
b. Evil is an intrinsic part of human nature which fights good.

116. a. A person can completely change his essential nature.  
b. A person can never change his essential nature.
117. a. I am afraid to be tender.  
b. I am not afraid to be tender.
118. a. I am assertive and affirming.  
b. I am not assertive and affirming.
119. a. Women should be trusting and yielding.  
b. Women should not be trusting and yielding.
120. a. I see myself as others see me.  
b. I do not see myself as others see me.
121. a. It is a good idea to think about your greatest potential.  
b. A person who thinks about his greatest potential gets conceited.
122. a. Men should be assertive and affirming.  
b. Men should not be assertive and affirming.
123. a. I am able to risk being myself.  
b. I am not able to risk being myself.
124. a. I feel the need to be doing something significant all of the time.  
b. I do not feel the need to be doing something significant all of the time.
125. a. I suffer from memories.  
b. I do not suffer from memories.
126. a. Men and women must be both yielding and assertive.  
b. Men and women must not be both yielding and assertive.
127. a. I like to participate actively in intense discussions.  
b. I do not like to participate actively in intense discussions.
128. a. I am self-sufficient.  
b. I am not self-sufficient.
129. a. I like to withdraw from others for extended periods of time.  
b. I do not like to withdraw from others for extended periods of time.
130. a. I always play fair.  
b. Sometimes I cheat a little.
131. a. Sometimes I feel so angry I want to destroy or hurt others.  
b. I never feel so angry that I want to destroy or hurt others.
132. a. I feel certain and secure in my relationships with others.  
b. I feel uncertain and insecure in my relationships with others.
133. a. I like to withdraw temporarily from others.  
b. I do not like to withdraw temporarily from others.
134. a. I can accept my mistakes.  
b. I cannot accept my mistakes.
135. a. I find some people who are stupid and uninteresting.  
b. I never find any people who are stupid and uninteresting.
136. a. I regret my past.  
b. I do not regret my past.
137. a. Being myself is helpful to others.  
b. Just being myself is not helpful to others.
138. a. I have had moments of intense happiness when I felt like I was experiencing a kind of ecstasy or bliss.  
b. I have not had moments of intense happiness when I felt like I was experiencing a kind of bliss.

139. a. People have an instinct for evil.  
b. People do not have an instinct for evil.
140. a. For me, the future usually seems hopeful.  
b. For me, the future often seems hopeless.
141. a. People are both good and evil.  
b. People are not both good and evil.
142. a. My past is a stepping stone for the future.  
b. My past is a handicap to my future.
143. a. "Killing time" is a problem for me.  
b. "Killing time" is not a problem for me.
144. a. For me, past, present and future is in meaningful continuity.  
b. For me, the present is an island, unrelated to the past and future.
145. a. My hope for the future depends on having friends.  
b. My hope for the future does not depend on having friends.
146. a. I can like people without having to approve of them.  
b. I cannot like people unless I also approve of them.
147. a. People are basically good.  
b. People are not basically good.
148. a. Honesty is always the best policy.  
b. There are times when honesty is not the best policy.
149. a. I can feel comfortable with less than a perfect performance.  
b. I feel uncomfortable with anything less than a perfect performance.
150. a. I can overcome any obstacles as long as I believe in myself.  
b. I cannot overcome every obstacle even if I believe in myself.

## Appendix B

Description of the scales of the  
Personal Orientation Inventory

## I. General scales

1. Time competence - measures degree to which one is "present" oriented
2. Inner directed - measures whether reactivity orientation is basically towards others or self

## II. Sub-Scales

## A. Valuing

3. Self-Actualizing Value - measures affirmation of a primary value of self-actualizing people
4. Existentiality - measures ability to situationally or existentially react without rigid adherence to principles

## B. Feeling

5. Feeling Reactivity - measures sensitivity of responsiveness to one's own needs and feelings
6. Spontaneity -- measures freedom to react spontaneously or to be oneself

## C. Self-Perception

7. Self Regard - measures affirmation of self because of worth or strength
8. Self Acceptance - measures affirmation or acceptance of self in spite of weaknesses or deficiencies

## D. Synergistic Awareness

9. Nature of Man - measures degree of the constructive view of the nature of man, masculinity, femininity
10. Synergy - measures ability to be synergistic, to transcend dichotomies

E. Interpersonal Sensitivity

11. Acceptance of Aggression - measures ability to accept one's natural aggressiveness as opposed to defensiveness, denial, and repression of aggression

12. Capacity for Intimate Contact - measures ability to develop contactful intimate relationships with other human beings, unencumbered by expectations and obligations

Rate yourself on the following scale. (Circle one number)

Rate yourself on the following scale. (Circle one number)

0 1 2 3 4 5 6 7 8
Very Poor Average Very Good

2. How well do you express your thoughts and feelings?

0 1 2 3 4 5 6 7 8
Very Poorly Average Very Well

3. Do you feel competent and comfortable in interpersonal situations?

0 1 2 3 4 5 6 7 8
Not at all Average Completely

Rate each of the other members of your group on the following questions by circling a number on the scale accompanying their names.

Table with 10 columns (0-8) and 6 rows for rating group members. Includes labels 'Very Poorly', 'Average', and 'Very Well' at the bottom.

Appendix C  
 How well does he/she express his (her) thoughts and feelings?

I. Pre-treatment Questionnaire

Interpersonal Assessment Sheet

Name \_\_\_\_\_

1. How competent do you feel you are in estimating other people's states of mind during interactions with them?  
 Rate yourself on the following scale. (Circle one number)

0	1	2	3	4	5	6	7	8
Very				Average				Very
Poor								Good

2. How well do you express your thoughts and feelings?

0	1	2	3	4	5	6	7	8
Very				Average				Very
Poorly								Well

3. Do you feel competent and comfortable in interpersonal situations?

0	1	2	3	4	5	6	7	8
Not				Average				Completely
at all								Good

Rate each of the other members of your group on the following questions by circling a number on the scale accompanying their names.

_____	0	1	2	3	4	5	6	7	8
_____	0	1	2	3	4	5	6	7	8
_____	0	1	2	3	4	5	6	7	8
_____	0	1	2	3	4	5	6	7	8
_____	0	1	2	3	4	5	6	7	8
_____	0	1	2	3	4	5	6	7	8
	Very				Average				Very
	Poorly								Well



## II. Post-treatment Questionnaire

## Self Assessment

Name \_\_\_\_\_

Name \_\_\_\_\_

1. How competent do you feel you are in estimating other people's states of mind during interactions with them?  
Rate yourself on the following scale. (Circle one number)

0	1	2	3	4	5	6	7	8
Very Poor			Average			Very Good		

2. How well do you express your thoughts and feelings?

0	1	2	3	4	5	6	7	8
Very Poorly			Average			Very Well		

3. Do you feel competent and comfortable in interpersonal situations?

0	1	2	3	4	5	6	7	8
Not at all			Average			Completely		

4. Has your experience in this group led you to any changes in your thinking about yourself or your situation in life? Elaborate if possible.

5. Has anything outside the group led you to any relatively major changes in your thinking in the past six weeks? If so, can you identify them and the changes which caused them?

Name: \_\_\_\_\_

## ASSESSMENT OF \_\_\_\_\_

1. How well does he (she) seem to understand people?

0	1	2	3	4	5	6	7	8
Very Poorly			Average			Very Well		

2. How well does he (she) express his (her) thoughts and feelings?

0	1	2	3	4	5	6	7	8
Very Poorly			Average			Very Well		

3. How competent is he in interpersonal situations?

0	1	2	3	4	5	6	7	8
Not at all			Average			Very Good		

4. Do you feel there is a change in your attitude to him (her) since the beginning of this project? \_\_\_\_\_

5. If yes, is the change positive or negative? \_\_\_\_\_

6. If yes for question 4, does the change seem to be a result of: (Check one or more)

a) a change in him (her)? \_\_\_\_\_

b) a change in you? \_\_\_\_\_

c) just getting to know him (her)? \_\_\_\_\_

Name \_\_\_\_\_

How do you feel in general about the group and the research in general? Any comments you have are more than welcome here -- about the people, the leader, the structure of the experiment, anything at all about the experience you have had. Your frank evaluation will be much appreciated.

3. Age

4. Sex

5. Would you be interested in participating in a group (conducted in the evenings, once a week) which would focus on thoughts, feelings and communication skills?  
(Circle one)

No

Possibly

Probably

Definitely

6. Have you, in the past six months, been involved in any type of group or individual therapy?

Yes

No

Summary of orientations provided for therapists.

1. The sessions are to be conducted as if they were group therapy meetings.
2. Orientation is to be a combination of sensitivity training and existential therapy.

#### Appendix D

at discussion should be focused on present, ongoing processes within the group, not on outside interactions and outside problems.

1. Name

2. Address

3. Age

4. Sex

5. Would you be interested in participating in a group (conducted in the evenings, once a week) which would focus on thoughts, feelings and communication skills?

(Circle one)

No

Possibly

Probably

Definitely

6. Have you, in the past six months, been involved in any type of group or individual therapy?

Yes

No

7. All group members should be completely aware of all the foregoing guidelines.

## Appendix E

Summary of orientation provided for therapists.

1. The sessions are to be conducted as if they were group therapy meetings.
2. Orientation is to be a combination of sensitivity training and existential therapy.
  - a) discussion should be focused on present, ongoing processes within the group, not an outside interactions and outside problems.
  - b) the therapist should participate as a group member during discussion, guiding the group back to the present when necessary.
  - c) focus of discussion may be any topic which involves the ongoing interaction, e.g. nervousness at speaking up in a group, ways of getting ideas across.
3. Techniques such as games analysis and the analysis of a just-completed interaction are appropriate methods to use.
4. The goal of the discussions should be improved communication and understanding among the group members.
5. All sessions are to be tape-recorded.
6. All group members should be completely aware of all the foregoing guidelines.

## Appendix F

## Guidelines for listening to taped sessions

1. Listen to the interaction as if you were an outside observer evaluating the effectiveness of your own and other members' communicating ability.
2. Try to ascertain whether or not your statements correspond to your feelings and thoughts, and how well you say what you mean.
3. Notice at which times you seem to function best and under what circumstances you have most difficulty.

## Comments to be made after listening to the tape:

1. What, if anything, have you learned about yourself in this session.
2. Add any other comments you feel are relevant.

Within	40	1978.004	49.450
Total	47	2112.000	44.957

\*\* p < .101

## Appendix G

Scale: Self-Actualizing Value

Summary tables for change score ANOVA's on  
the scales of the  
Personal Orientation Inventory

---

Scale: Time Competence

---

Source	df	S.Squares	M.Squares	F
Conditions	3	53.563	17.854	4.988**
Therapists	1	17.520	17.520	4.895**
C x T	3	22.227	7.409	2.070
Within	40	143.172	3.579	
Total	47	236.480	5.031	

---

Scale: Inner Directed

---

Conditions	3	78.496	26.165	0.529
Therapists	1	0.0	0.0	0.0
C x T	3	56.500	18.833	0.381
Within	40	1978.004	49.450	
Total	47	2113.000	44.957	

---

\*\*  $p < .01$

## Scale: Self-Actualizing Value

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Conditions	3	8.059	2.686	0.488
Therapists	1	2.520	2.520	0.458
C x T	3	5.230	1.743	0.317
Within	40	220.172	5.504	
Total	47	235.980	5.021	

## Scale: Existentiality

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Conditions	3	45.496	15.165	1.863
Therapists	1	3.000	3.000	0.369
C x T	3	10.500	3.500	0.430
Within	40	325.672	8.142	
Total	47	384.668	8.184	

p &lt; .05

## Scale: Feeling Reactivity

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Conditions	3	8.414	2.805	0.594
Therapists	1	14.082	14.082	2.986*
C x T	3	4.750	1.583	0.336
Within	40	188.672	4.717	
Total	47	215.918	4.594	

## Scale: Spontaneity

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Conditions	3	11.500	3.833	0.693
Therapists	1	1.332	1.332	0.241
C x T	3	3.496	1.165	0.211
Within	40	221.340	5.533	
Total	47	237.668	5.057	

\*p < .05

## Scale: Self Regard

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Conditions	3	13.559	4.520	1.382
Therapists	1	1.020	1.202	0.312
C x T	3	11.063	3.688	1.128
Within	40	130.840	3.271	
Total	47	156.480	3.329	

## Scale: Self Acceptance

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Conditions	3	11.227	3.742	0.495
Therapists	1	1.020	1.020	0.135
C x T	3	9.559	3.186	0.421
Within	40	302.509	7.623	
Total	47	324.313	6.900	

## Scale: Nature of Man

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Conditions	3	5.164	1.721	0.599
Therapists	1	1.332	1.332	0.463
C x T	3	27.168	9.056	3.150*
Within	40	115.004	2.875	
Total	47	148.668	3.163	

## Scale: Synergy

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Conditons	3	7.332	2.444	1.543
Therapists	1	0.332	0.332	0.210
C x T	3	8.664	2.888	1.824
Within	40	63.340	1.583	
Total	47	79.668	1.695	

\*p < .05

Neumann-Kuls Test For Differences Between Means Of

Scale: Acceptance of Aggression

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Conditions	3	18.082	6.027	0.861
Therapists	1	0.0	0.0	0.0
C x T	3	7.828	2.609	0.373
Within	40	280.008	7.000	
Total	47	305.918	6.509	

Scale: Capacity for Intimate Contact

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Conditions	3	56.227	18.742	1.831
Therapists	1	6.020	6.020	0.588
C x T	3	0.730	0.243	0.024
Within	40	409.504	10.238	
Total	47	472.480	10.053	

Neumann-Keuls Test For Differences Between Means Of  
Change Scores On Time Competence Scale

Scale	No Contact	Feedback	One Hour	Half Hour
Source	7.33	8.33	10.33	11.00
Subjects	47	47	47	47
7.33	--	1.00	3.00**	3.67**
8.33	--	--	2.00**	3.67**
10.33	--	--	--	0.67
11.00	--	--	--	--

\*\*p < .01

Replications	1	1.262	1.262	0.705
R x C	3	26.781	8.927	4.987*
R x T	1	8.750	8.750	4.889*
RxCxT	3	11.109	3.703	2.669
Interaction	40	74.398	1.790	0.9
Total	85	644.742	6.787	9.0

\*p < .05

## Appendix H

Summary tables for repeated measures  
ANOVA's on the scales of the  
Personal Orientation Inventory

Scale: Time Competence				
Source	df	S.Squares	M.Squares	F
Subjects	47	525.242	11.175	0.0
Conditions	3	38.109	12.703	1.064
Therapists	1	0.262	0.261	0.022
C x T	3	9.613	3.204	0.269
Err(B)	40	477.257	11.931	0.0
Within	48	119.500	2.490	0.0
Replications	1	1.262	1.262	0.705
R x C	3	26.781	8.927	4.987*
R x T	1	8.750	8.750	4.888*
RxCxT	3	11.109	3.703	2.069
Interaction	40	71.598	1.790	0.0
Total	95	644.742	6.787	0.0

\* $p < .05$

Scale: Inner Directed Value

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Subjects	47	13622.688	289.844	0.0
Conditions	3	1049.813	349.938	1.124
Therapists	1	12.000	12.000	0.039
C x T	3	107.750	35.917	0.115
Err(B)	40	12453.125	311.328	0.0
Within	48	5898.000	122.875	0.0
Replications	1	170.688	170.688	1.337
R x C	3	276.750	92.250	0.723
R x T	1	104.125	104.125	0.816
RxCxT	3	240.500	80.167	0.628
Interaction	40	5105.938	127.648	0.0
Total	95	19520.688	205.481	0.0

Scale: Self-Actualizing Value

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Subjects	47	593.742	12.633	0.0
Conditions	3	32.781	10.927	0.825
Therapists	1	1.762	1.762	0.133
C x T	3	29.445	9.815	0.741
Err(B)	40	529.754	13.244	0.0
Within	48	135.500	2.823	0.0
Replications	1	17.512	17.512	6.362*
R x C	3	4.023	1.341	0.487
R x T	1	1.258	1.258	0.457
RxCxT	3	2.598	0.866	0.315
Interaction	40	110.109	2.753	0.0
Total	95	729.242	7.676	0.0

\*p < .05

## Scale: Existentiality

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Subjects	47	1281.906	27.275	0.0
Conditions	3	19.023	6.341	0.211
Therapists	1	3.758	3.758	0.125
C x T	3	56.871	18.957	0.631
Err(B)	40	1202.254	30.056	0.0
Within	48	231.500	4.823	0.0
Replications	1	41.344	41.344	10.319**
R x C	3	22.781	7.594	1.895
R x T	1	1.258	1.258	0.314
RxCxT	3	5.848	1.949	0.487
Interaction	40	160.270	4.007	0.0
Total	95	1513.406	15.931	0.0

\*\*p < .01

## Scale: Feeling Reactivity

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Subjects	47	775.625	16.503	0.0
Conditions	3	4.875	1.625	0.094
Therapists	1	5.039	5.039	0.291
C x T	3	73.703	24.568	1.420
Err(B)	40	692.008	17.300	0.0
Within	48	115.000	2.396	0.0
Replications	1	7.039	7.039	2.984
R x C	3	4.203	1.401	0.594
R x T	1	7.039	7.039	2.984
RxCxT	3	2.367	0.789	0.335
Interaction	40	94.352	2.359	0.0
Total	95	890.625	9.375	0.0

Scale: Spontaneity

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Subjects	47	555.000	11.809	0.0
Conditions	3	46.906	15.635	1.366
Therapists	1	10.664	10.664	0.931
C x T	3	39.422	13.141	1.148
Err(B)	40	458.008	11.450	0.0
Within	48	127.000	2.646	0.0
Replications	1	8.164	8.164	2.951
R x C	3	5.754	1.918	0.693
R x T	1	0.664	0.664	0.240
RxCxT	3	1.738	0.579	0.209
Interaction	40	110.680	2.767	0.0
Total	95	682.000	7.179	0.0

\*\*p &lt; .01

## Scale: Self Regard

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Subjects	47	533.156	11.344	0.0
Conditions	3	26.363	8.788	0.759
Therapists	1	1.758	1.758	0.152
C x T	3	42.277	14.092	1.218
Err(B)	40	462.758	11.569	0.0
Within	48	92.500	1.927	0.0
Replications	1	14.258	15.258	8.717**
R x C	3	6.777	2.259	1.381
R x T	1	0.508	0.508	0.310
RxCxT	3	5.531	1.844	1.127
Interaction	40	65.426	1.636	0.0
Total	95	625.656	6.586	0.0

\*\*p < .01

Scale: Self Acceptance

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Subjects	47	1053.336	22.411	0.0
Conditions	3	114.578	38.193	1.632
Therapists	1	1.043	1.043	0.045
C x T	3	1.375	0.458	0.020
Err(B)	40	936.340	23.408	0.0
Within	48	204.000	4.250	0.0
Replications	1	40.043	40.043	10.536**
R x C	3	6.211	2.070	0.545
R x T	1	0.664	0.664	0.175
RxCxT	3	5.055	1.685	0.443
Interaction	40	152.027	3.801	0.0
Total	95	1257.336	13.235	0.0

\*\*p < .01

Scale: Nature of Man

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Subjects	47	361.625	7.694	0.0
Conditions	3	8.703	2.901	0.334
Therapists	1	2.039	2.039	0.235
C x T	3	3.707	1.236	0.142
Err(B)	40	347.176	8.679	0.0
Within	48	91.000	1.896	0.0
Replications	1	16.665	16.664	11.589**
R x C	3	2.586	0.862	0.599
R x T	1	0.664	0.664	0.462
RxCxT	3	13.566	4.522	3.145
Interaction	40	57.520	1.438	0.0
Total	95	452.625	4.764	0.0

\*\*p < .01

Scale: Synergy *ance of Aggression*

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Subjects	47	92.000	1.957	0.0
Conditions	3	0.164	0.055	0.026
Therapists	1	2.664	2.664	1.264
C x T	3	4.835	1.612	0.765
Err(B)	40	84.336	2.108	0.0
Within	48	44.000	0.917	0.0
Replications	1	4.164	4.164	5.260*
R x C	3	3.668	1.223	1.544
R x T	1	0.168	0.168	0.212
RxCxT	3	4.332	1.444	1.824
Interaction	40	31.668	0.792	0.0
Total	95	136.000	1.431	0.0

\*p < .05

Scale: Acceptance of Aggression

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Subjects	47	936.961	19.935	0.0
Conditions	3	3.203	1.068	0.054
Therapists	1	48.168	48.168	2.438
C x T	3	95.250	31.750	1.607
Err(B)	40	790.340	19.758	0.0
Within	48	179.000	3.729	0.0
Replications	1	26.043	26.043	7.440**
R x C	3	9.042	3.014	0.861
R x T	1	-0.008	-0.008	-0.002
RxCxT	3	3.902	1.301	0.372
Interaction	40	140.020	3.500	0.0
Total	95	1115.961	11.747	0.0

\*\*p < .01

## Appendix J

## Summary Statistics for change-scores

Scale: Capacity for Intimate Contact

Source	df	S.Squares	M.Squares	F
Subjects	47	1129.492	23.032	0.0
Conditions	3	1.359	0.453	0.017
Therapists	1	1.762	1.762	0.067
C x T	3	65.949	21.983	0.829
Err(B)	40	1060.422	26.511	0.0
Within	48	261.500	5.448	0.0
Replications	1	31.512	31.512	6.352*
R x C	3	28.367	9.456	1.906
R x T	1	2.336	2.336	0.471
RxCxT	3	0.844	0.281	0.057
Interaction	40	198.441	4.961	0.0
Total	95	1390.992	14.642	0.0

\* $p < .05$

## Appendix J

Summary tables for change-score  
ANOVA's on the questions of the  
Interpersonal Perception Rating Scale

I BB-AA Comparison Type				
Question 1				
Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Conditions	2	0.696	0.348	0.527
Therapists	1	0.134	0.134	0.204
C x T	2	0.749	0.374	0.567
Within	30	19.793	0.660	0.0
Total	35	21.372	0.610	0.0
Question 2				
Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Conditions	2	4.895	2.448	1.793
Therapists	1	1.604	1.604	1.175
C x T	2	4.336	2.168	1.588
Within	30	40.948	1.365	0.0
Total	35	51.783	1.480	0.0

## Question 3

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Conditions	2	1.182	0.590	0.449
Therapists	1	0.187	0.187	0.142
C x T	2	1.609	0.805	0.611
Within	30	39.487	1.316	0.0
Total	35	42.466	1.213	0.0

## II BA-AA Comparison Type

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Conditions	2	0.046	0.023	0.056
Therapists	1	0.810	0.810	1.939
C x T	2	0.647	0.323	0.774
Within	30	12.527	0.418	0.0
Total	35	14.030	0.401	0.0

## Appendix K

Summary tables for repeated measures  
ANOVA's on the scales of the  
Interpersonal Perception Rating Scale

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Conditions	2	6.207	3.103	4.216*
Therapists	1	1.604	1.604	2.180
C x T	2	4.029	2.014	2.737
Within	30	22.081	0.736	0.0
Total	35	33.920	0.969	0.0

Question 3

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Conditions	2	2.602	1.301	1.336
Therapists	1	2.668	2.668	2.739
C x T	2	1.362	0.681	0.699
Within	30	29.221	0.974	0.0
Total	35	35.853	1.024	0.0

\*  $p < .05$

## Appendix K

Summary tables for repeated measures  
ANOVA's on the scales of the  
Interpersonal Perception Rating Scale

I BB-AA Comparison Type				
Source	df	S.Squares	M.Squares	F
Subjects	35	25.495	0.728	0.0
Conditions	2	5.530	2.765	5.223*
Therapists	1	0.094	0.094	0.177
C x T	2	3.988	1.994	3.766*
Err(B)	30	15.883	0.529	0.0
Within	36	11.219	0.312	0.0
Replications	1	0.534	0.534	1.618
R x C	2	0.348	0.174	0.527
R x T	1	0.067	0.067	0.204
RxCxT	2	0.374	0.187	0.567
Interaction	30	9.897	0.330	0.0
Total	71	36.715	0.517	0.0

\* $p < .05$

## Question 2

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Subjects	35	26.798	0.765	0.0
Conditions	2	1.781	0.891	1.081
Therapists	1	0.109	0.109	0.132
C x T	2	0.181	0.091	0.110
Err(B)	30	24.726	0.824	0.0
Within	36	30.880	0.858	0.0
Replications	1	0.889	0.889	1.039
R x C	2	1.615	0.807	0.943
R x T	1	0.436	0.436	0.509
RxCxT	2	2.268	1.134	1.325
Interaction	30	25.673	0.856	0.0
Total	71	57.677	0.812	0.0

PK .05

## II RA-AA Comparison Type

## Question 3

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Subjects	35	40.753	1.164	0.0
Conditions	2	2.778	1.389	1.425
Therapists	1	0.027	0.027	0.028
C x T	2	8.698	4.349	4.460*
Err(B)	30	29.250	0.975	0.0
Within	36	24.699	0.686	0.0
Replications	1	3.467	3.467	5.269*
R x C	2	0.591	0.296	0.449
R x T	1	0.094	0.094	0.143
RxCxT	2	0.804	0.402	0.611
Interaction	30	19.743	0.658	0.0
Total	71	65.453	0.921	0.0

\*p < .05

## II BA-AA Comparison Type

## Question 1

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Subjects	35	30.313	0.866	0.0
Conditions	2	5.774	2.887	4.069*
Therapists	1	0.005	0.005	0.007
C x T	2	3.243	1.622	2.285
Err(B)	30	21.290	0.710	0.0
Within	36	7.020	0.195	0.0
Replications	1	0.005	0.005	0.024
R x C	2	0.023	0.012	0.056
R x T	1	0.405	0.405	1.940
RxCxT	2	0.323	0.162	0.774
Interaction	30	6.263	0.209	0.0
Total	71	37.332	0.526	0.0

\*p < .05

## Question 2

Source	<u>df</u>	S.Squares	M.Squares	<u>F</u>
Subjects	35	36.558	1.045	0.0
Conditions	2	0.528	0.264	0.230
Therapists	1	0.320	0.320	0.279
C x T	2	1.323	0.662	0.577
Err(B)	30	34.386	1.146	0.0
Within	36	17.680	0.491	0.0
Replications	1	0.720	0.720	1.957
R x C	2	3.103	1.552	4.217*
R x T	1	0.802	0.802	2.180
RxCxT	2	2.014	1.007	2.737
Interaction	30	11.039	0.368	0.0
Total	71	54.237	0.764	0.0

\*p < .05

Surname: REID Given Name: JAMES ROBERT  
 Place of Birth: CALGARY, ALBERTA Date of Birth: NOV. 21, 1943

Educational Institutions Attended, with Dates of Entering and Leaving:

BRANDON COLLEGE, BRANDON, MANITOBA 1960 to 1967

Question 3

Source	df	S.Squares	M.Squares	F
Subjects	35	44.979	1.285	0.0
Conditions	2	3.541	1.771	1.683
Therapists	1	1.680	1.680	1.598
C x T	2	8.201	4.101	3.898*
Err(B)	30	31.557	1.052	0.0
Within	36	19.260	0.535	0.0
Replications	1	1.334	1.334	2.739
R x C	2	1.301	0.651	1.336
R x T	1	1.334	1.334	2.739
RxCxT	2	0.681	0.341	0.699
Interaction	30	14.609	0.487	0.0
Total	71	64.239	0.905	0.0

\* $p < .05$   
 Reid, James R., Frank J. Spellacy and J.R. Reid. The effect of interstimulus interval and intensity on ear asymmetry for nonverbal stimuli in dichotic listening. Neuropsychologia, 1970, Vol. 8, no. 2.

Surname: REID Given Names: JAMES ROBERT

Place of Birth: CALGARY, ALBERTA Date of Birth: NOV. 21, 1943

Educational Institutions Attended, with Dates of Entering and Leaving:

<u>BRANDON COLLEGE, BRANDON, MANITOBA</u>	<u>1960</u> to <u>1967</u>
<u>_____</u>	<u>_____</u> to <u>_____</u>
<u>_____</u>	<u>_____</u> to <u>_____</u>
<u>_____</u>	<u>_____</u> to <u>_____</u>

Degrees, Diplomas, Etc., Awarded, with Dates and Names of Institutions:

<u>B.A.</u>	<u>1967</u>	<u>Brandon College, Brandon</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>

Honors and Awards:

Manitoba Department of Health Bursary, 1968/70

University of Victoria Graduate Scholarship, 1968/69

University of Victoria Graduate Scholarship, 1969/70

\_\_\_\_\_

Publications:

Otfried Spreen, Frank J. Spellacy and J.R. Reid The effect  
of interstimulus interval and intensity on ear asymmetry for  
nonverbal stimuli in dichotic listening. Neuropsychologia,  
1970, Vol. 8, no. 2.

THE UNIVERSITY OF VICTORIA LIBRARY

MANUSCRIPT THESIS

AUTHORITY TO DISTRIBUTE

AUTHOR: This thesis may be lent or microfilm copies made available:

(a) Without restriction

(b) With the restriction that for a period of five years (until \_\_\_\_\_) the writtern approval of the following is required:

(1) The Chairman,  
School of Graduate  
Studies

(2) The Author

(3) both the Chairman,  
School of Graduate  
Studies, and the  
Author

BORROWERS: The borrower undertakes, by signing below, to give proper credit for any use made of the thesis, and to obtain the consent of the author if it is proposed to make extensive quotations, or to reproduce the thesis in whole or in part.

Signature of Borrower

Address

Date

---

---

---

---

---

---

---

---