EFFECTS OF GROUP PSYCHOTHERAPY ON SOME ASPECTS OF INTRA- AND INTERPERSONAL FUNCTIONING

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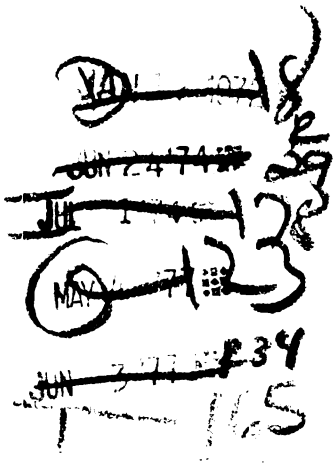

M.A. Thesis Abstract
Department of Psychology, Michigan State University

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Diane Elizabeth Johnson

The effects of nine months of participation in an interaction-oriented psychotherapy group on measures of intra- and interpersonal behavior were explored in this study. The thirteen group members included nine doctoral program students in psychology, three graduate students in educationally related areas, and the group leader or "therapist." Several instruments focusing on relevant behaviors were administered at various points of this group's existence. As soon as possible all of these data were fed back into the group so that this information might enrich the interaction. Among these instruments were several new measures, including the Group Behavior Ratings (GBR) developed by Harrison and Oshry (1967), a provisional measure of Interpersonal Style, and the Encounter

Arena. The Hurley Self-Disclosure Rating (HSDR) Scale (Hurley & Hurley, 1969) was administered at three month intervals.

The ratings generated by these instruments formed the base for two unobtrusive measures. Conceptualized as a measure of "manifest adequacy," and derived from the total number of discriminations expressed in numerical ratings by each group member on the several rating scales, was the "discrimination index." In accord with research findings related to the concept of cognitive complexity, it was assumed that fewer such discriminations would be made by members who felt relatively inadequate within this group than by those who felt more adequate. A second indirect measure, based upon the squared difference between the self-rating of each member and the mean rating which he received from others, was labeled the "discrepancy index." It was assumed that the more distorted by defensive operations the member's self-perception was, the greater this discrepancy would be.

Self-disclosure, as assessed by the HSDR, was found to be the most central and powerful variable. It consistently correlated positively with "effectiveness" measures from the GBR and with the major constructive components of interpersonal style. Due to the apparent operation of a "drifting standard," however, the participants' ratings on self-disclosure tended to decrease, although not

to a statistically significant degree, over the life of this group. Retrospectively, the group members attributed this "drift" to more "insightful" ratings of self-disclosure later in this experience than they had made earlier due to increased knowledge. Individual gains in self-disclosure correlated highly (r = .75) with increments in ratings of "increased effectiveness" over this nine month period. Early self-disclosure ratings also correlated highly with gains on the "discrimination index." This latter variable also proved to be quite stable and much support was found for its construct validity. The "discrepancy index" showed very restricted stability and the evidence for its construct validity was quite limited.

Analyses of a 33 × 33 intercorrelational matrix generated from the various measures revealed three principal clusters: (1) a "manifest behavioral adequacy" component of ten measures all relating to behaviors directly accessible to observation by either self or others; (2) a six measure cluster, labeled "interpersonal defensiveness," representing behaviors which were only observed by others and of which the subject was presumably largely unaware; and (3) eight measures linking discrepancies between the perceptions of self and others, a negative view of the self, and constricted discrimination between the members of the group--these were summarized as representing an "internal blocking of reality."

The hypothesis that congruence between self-ratings and others' ratings would increase over the course of this group experience was partially supported. These gains achieved statistical significance on both the ten-item GBR ratings and on the HSDR scale, although not on any other of the more simple rating scales. The conservative Scheffé method for testing post hoc comparisons between before and after treatment scores was applied and revealed that "discrimination index" scores increased significantly. Thus, the group members apparently made more discriminations in rating their fellow members with increasing amounts of interactional experience.

The findings generally supported the view that gains in interpersonal communication skills would be stimulated by the self-disclosure and interpersonal encounter goals emphasized in this group. The unobtrusive "discrimination index" proved quite fruitful and a redefinition of the "discrepancy index" was suggested. The "drifting standard" phenomenon poses a serious problem for studies which are based exclusively upon ratings provided by group members who are in a process of change. Ratings by trained judges of video-tapes taken at various points during the course of a group could solve this problem. While the atypical nature of the present sample restricts the generalizability of these findings, the results

demonstrate how even one group can generate much useful research information. Refinements of this design and suggestions for further research, including a very provocative linkage between ratings of interpersonal style and discrepancies between self-ratings and the perceptions by other group members, were proposed.

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Thesis Committee: John R. Hurley (Chairman), David Jordan, and Dozier W. Thornton

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By

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I am especially grateful for John's patience and the generally straightforward and nonthreatening way in which he guided my thinking and efforts to express myself on paper. I found his suggestions very useful in organizing my own perceptions of what was important, and what priorities to observe in approaching the task.

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I remember the group members fondly, and respect them for the work they did with each other and for themselves. I also appreciate the time and energy they spent filling out the data forms, in an effort to add their authentic contribution to the research on group therapy.

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To the group, which helped me very much . . .

"One who knows others is wise; one who knows himself is wisest. One who conquers others is strong; one who conquers himself is strongest."

"To be content is to be wealthy; to be dedicated is to be strong; to be genuine is to endure; to die and be remembered is to have immortality."

Sutra 22
Tao Teh Ching

INTRODUCTION

> Psychotherapy is changing. Instead of the study of mental disorder, therapy is becoming the study of human living, and human living is done in groups--family groups, play groups, school groups, social groups, religious groups, work groups. We are rarely alone. If when we are alone we have problems with ourselves, these problems usually stem not from ourselves but from what happened to us in our formative group, the family. And human problems that begin in groups appear to be most readily re-created, exhibited, studied, and perhaps even solved in groups.
>
> (Ruitenbeek, 1970)

Group psychotherapy has become increasingly popular in the last decade or two among practicing clinicians, making the study of its impact on the individuals who participate in such groups correspondingly important. Some of the many theoretical formulations which have been proposed with regard to the value of group treatment for individuals' problems follow.

Bradford (1964) attempted to define some aspects of the problems in living faced by the individual when he wrote:

> Each person exists in a network of human interrelationships and a mixture of cultural forces which place conflicting strains on his ability to adjust, to utilize his potential resources, and to grow. As a result, people adjust only partially to their worlds. They allow abilities to atrophy. They secure less than adequate understanding of themselves.

Jourard (1964) sees such partial adjustment to one's world as a self-protecting response to one's fear of the pain associated with being and being known. He sees individuals creating facades, roles, and camouflages that will satisfy the demands, rather than risking failure at times when one's real self is inadequate to the demands made. He stated that

> the price we pay for safety from the penalties of being and being known is steep. It includes loneliness; it includes growing self-alienation, or loss of contact and awareness of our real selves; it includes proneness to mental and physical disease. It includes emptiness and meaninglessness in existence.

Mowrer (1964) elaborated on the concept of mental health and the process essential to it in his comment:

> . . . the crucial element in "mental health" is the degree of "openness" and "communion" which a person has with his fellow men. This, more than anything else, determines whether we, as persons, will prosper or perish. Man was "made" for fellowship, i.e., he is a social being; and when he violates his human connectedness, he "dies."

And Gibb (1964) proposed that "a person learns to grow through his increasing acceptance of himself and others."*

---

*Italics mine.

Re-creating the bonds of connectedness essential to health cannot occur in a vacuum; Ruitenbeek (1970) suggested that groups may provide the most valid framework in which to recover mental health through revealing our selves to others and attempting to broaden our contact with and understanding of ourselves thereby.

The proliferation of group therapies and group approaches to individual treatment as well as to treatment of the major social conflicts of the day seem to lend empirical support to Ruitenbeek's statements. Sensitivity groups and T-groups have become part of the American scene, pervading the structures of management within our large corporations, in school systems, in colleges, in churches, and in all levels of government. These institutions seem to be attempting to provide within their own framework the means for their members to learn effective communication in their dealings with each other (Bradford, Gibb, and Benne, 1964; Schutz, 1967; Mowrer, 1964).

The growth and effectiveness of Synanon (Yablonski, 1965), Alcoholics Anonymous, Recovery, Inc., and other such grass-roots self-help groups as TOPS (Take Off Pounds Sensibly), underscores the importance of meaningful groups in helping people understand and improve their behaviors and resulting satisfactions with living (Mowrer, 1964, p. iv).

The development and increasing acceptance of family therapies indicates another major trend toward treating human dysfunctioning as it occurs, in groups, and in this case, in the "formative" group, where it presumably originates (Satir, 1964; Boszormenyi-Nagy and Framo, 1965).

This research was devoted to studying the effects of participation in one particular kind of group, a long-term psychotherapy group, on the interpersonal behavior, orientations, and intrapsychic processes of the individuals who participated in it. It was considered desirable to test, or at least explore, the assumptions implicit in the growing endorsement of group procedures and stress on self-revelation as a means of recovering "mental health." The areas studied included interpersonal communications skills, interpersonal styles, feelings toward self and others, internal defensive processes, and group behavior and effectiveness. A longitudinal picture of change in group members was possible because of the duration of the group; it met for a total of nine months. Before the design of this study is presented, some of its underlying assumptions will be stated, and the research relevant to its central variables and concepts will be reviewed.

Assumptions

The following assumptions regarding personal growth and mental health seem to be implicit in the foregoing discussion:

1. That people become healthier ("grow") by becoming known to others, or re-establishing a "sense of community" (Mowrer, 1964), and
2. that this is accomplished via disclosures one makes about oneself to others (Mowrer, 1964; Jourard, 1964).
3. That people become healthier by becoming more aware of themselves and their impact on others, and
4. that this is accomplished through observing themselves and receiving or obtaining feedback from others, which may be integrated into the body of information one has about oneself and used as desired to promote change.
5. That mental health has as one component interpersonal competence, or the ability to work and interact functionally with others, and
6. that mental health requires a basic acceptance of oneself and others.
7. That mental health implies spontaneity, a lack of defensiveness about oneself, a readiness to live and experience and act with a minimum of self-consciousness or inhibition.

The following paragraphs elucidate the nature of the variables used in this study to explore these assumptions.

Definition of Variables, Review of Relevant Literature

The variables of concern were self-disclosure, seeking and use of feedback, adequacy (on several levels), orientation toward self and others, and congruence between how individuals saw themselves and how others saw them (discrepancy).

Self-Disclosure (SD). --Self-disclosure, as used by Sidney Jourard (1964), refers to

> the ability to express or describe to others one's own feelings of anger, affection, fear, doubts, or any emotions being experienced in interpersonal interactions. . . . It depends on the ability to be aware of [one's own] emotional reactions. (Hurley, 1967)

The expression of insights into origins of one's behavior may or may not be SD--they may frequently be used to defend oneself verbally against the necessity of expressing emotional reactions being currently experienced in the interaction.

Jourard (1964) believes that

> man is sick . . . because he hides his real self in transactions with others. He relates impersonally to others and to himself. He equates his roles in the social system with his identity . . . the aim of psychotherapy is to . . . [eliminate] . . . contrived interpersonal behavior . . . manipulating oneself in order to appear what one is not. (pp. 60-61)

Mowrer (1964), Bach (1969), Culbert (1968), and May (1965) agree in principle with Jourard. All stress the current practice in American society toward self-concealment and social duplicity which lead to alienation from others, as opposed to honest and meaningful self-disclosure, which they see as essential in the return to a "well" condition in which truly intimate and rewarding interpersonal relationships play an important part. Jourard, in addition, stresses that those who would help others to achieve such a well condition must be particularly capable of such intimate and open interactions if they are to be truly helpful to those they serve.

Studies employing the Jourard Self-Disclosure Scale (JSD) have shown SD to be significantly correlated with interpersonal openness, effectiveness, flexibility, and adaptibility (Halverson and Shore, 1969), popularity in the group (Yalom, 1966), attraction to the group (Query, 1964), "successful" group (Peres, 1947) and individual (Braaten, 1958) treatment effects, and competence in social interaction situations (Frankfurt, 1965). Jourard and Lasakow (1958) and Jourard (1959) found that the degree of someone's liking another person is correlated with the amount of SD he has directed toward that person, while Jourard and Landsman (1960) and Jourard and Richman (1963) indicated that receiving SD inputs from someone leads to greater SD toward that person. Jourard (1962) also found that nursing

students who scored high on an SD questionnaire tended to be rated high a year later in the "ability to establish and maintain a communicative relationship with patients"; they were also rated high in openness with the nursing faculty. Halverson and Shore (1969) conclude that "presumably persons who are socially open to others are seen as more interpersonally competent than individuals who are guarded and closed in their personal affairs."

Studies using a more recent measure of SD, the Hurley Self-Disclosure Scale (HSDR: Hurley, 1967; Hurley and Hurley, 1968) also indicated that individuals increased in SD as a result of T-group training (Force, 1969), and that individuals high on SD were more valued and popular in their groups than individuals low on SD (Hurley, 1967). Graff's (1969) results using HSDR showed that high SD was a concomitant of successful individual therapy, but not of group therapy.

Adequacy. --The concept of "adequacy" was thought to be relevant to the ability of individual group members to maintain an aura of "openness" or nondefensiveness in their verbal and nonverbal group behavior. Rollo May (1965) is helpful in defining this concept. He states, as a hypothetical but clinically induced principle, that ". . . his (the person's) [neurotic] symptoms are ways of shrinking the range of his world in order that the centeredness of his existence

may be protected from threat; a way of blocking off aspects of the environment that he may then be adequate to the remainder." This definition implies that the "adequate" individual does not reject or ignore data about himself, others, and situations as they exist, and can probably accept new data readily. He will probably be able to recognize and accept the broad differences which exist between people without shrinking the range of his experience of them. He will not need to distort his perceptions of himself in social relations; he therefore may be expected to be more effective in his social behavior than the person who is "neurotic" and who needs to "shrink" his world.

The operational definition for one important aspect of May's principle follows: "adequacy" is the result of the defensive process whereby the individual either does or does not demonstrate a truncated range of perceived diversity in the environment. In this study, "adequacy" is manifested in his ratings of other group members based on his perceptions of their behaviors and intentions. This will be elaborated upon later.

At the level of observation of actual interpersonal behavior in the group, it is also clear that the individual may be seen and may see himself as more or less effective in his interpersonal behaviors in the group. This can be used as another measure and/or definition

of "adequacy," which will be called "group effectiveness." Group effectiveness is dependent on the person's perceived ability to be open, confronting, supportive, nonconforming, in the sense of not always giving in to group pressure, able to influence others, involved, risk-taking, innovative, and able to conceptualize adequately the process of the group, all within the context of the interpersonal relationships which make up the group.

A study by Harrison and Oshry (1967), using the dimensions of "group effectiveness" as defined, found that

> active and productive involvement in the T-group is associated with increases in Consideration [for others and others' viewpoints] and Emotional Expressiveness. . . . [The] data also suggest that Verbal Dominance may decrease as a function of active involvement in the training.

Those managers who were seen as most involved, comprehending, and receptive to feedback in training were the ones who were reported as most changed in the organization on the Consideration scale. They also concluded that whether changes toward concern, openness, and authenticity were maintained depended on organizational support for such changes.

Self-Distortion, or Discrepancy. --It was also thought that the degree of openness and ability to give feedback, as well as involvement and effectiveness in the group, would be affected by the individual's defensiveness about himself. This was defined as the

degree to which he sees himself differently than others see him. Gibb (1964) states:

> the healthy person is able to behave with spontaneity. . . . there is low disparity between his inner thoughts and his verbalized speech. . . . There is high congruity between the self-image and the image others have of him.

Smith, Jaffe, and Livingston (1955) did a study using the construct "consonance." Consonance refers to the extent to which a member is "in tune" with the way the group as a whole looks at its members; it was measured in their study by comparing an individual's judgments with the averaged group judgment. Their results indicated that the most consonant members were seen as the most effective (productive) by outside observers, and as most powerful in determining what went on in the group by other members, but were not necessarily seen as most valuable.

One finding of a study by Burke and Bennis (1961) suggests that the way people see themselves and the way in which they are seen by others become more similar over time. This finding was confirmed by a similar finding of Force (1969), that self-scores tended to drop by the end of a laboratory training period, while group scores tended to increase, thereby increasing the congruence of the two sets of scores. Graff's (1969) data also confirm this for the variable of self-disclosure, but not for other variables. However,

Graff's "others" were intimates chosen by the Ss, not other group members.

Thus, the limited evidence available suggests that effectiveness and control in the group are related to the consonance of perceptions of the individual with the perceptions of others, and that this consonance may be expected to increase over time.

Worth or Value of Self and Others. --The Summary of Interpersonal Styles (Hurley, 1968), following a model on "positions" put forth by Berne (1966), seems to provide fairly direct data on the way the individual perceives himself and others. This instrument measures two dimensions. The first dimension is that of the individual's perception of his own value, or worth, and is based on the polarity of "I am okay (OK)"--"I am no good (NG)." The individual's evaluation of others' worth is represented on the second dimension, and is based on the polarity "You (they) are OK"--"You (they) are NG." These dimensions, according to Berne (1966), can be used to predict the behavior of the individual in an interpersonal situation. The person who characteristically occupies the position "I am OK"--"You are NG" tends to be somewhat paranoid and suspicious in his behavior. The position "I am NG"--"You are OK" produces depressive or hysterical, self-punitive behavior, while "I am OK"--"You are OK" results in productive, interdependent,

and competent behavior. Any but the "I am OK"--"You are OK" position implies that the individual is ignoring some important emotional and factual data about either himself or others, depending on who is seen as NG. Gibb (1967) relates these dimensions to growth, or mental health, in the following way: "The primary block to continuing personal growth lies in the defense level--in the lack of acceptance by the person of himself and of other persons."

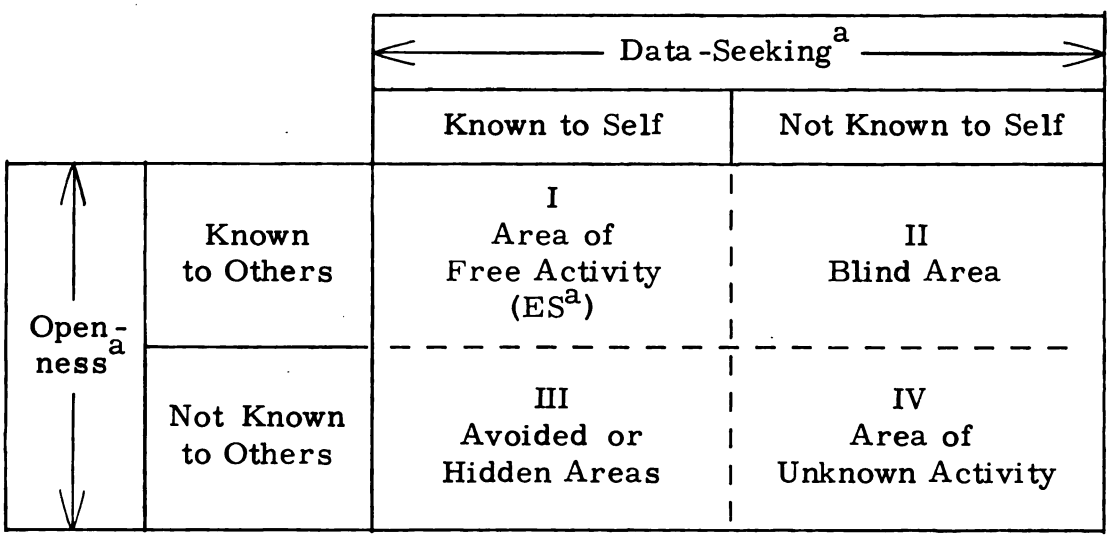
Graff (1969) reported data which showed high initial self-ratings on orientation toward self (ORS: "I am OK" or "I am NG") to be significantly related to high self-ratings on openness and self-disclosure (SD). No post-treatment data were presented. Self-reported positive orientation toward others (ORO) was significantly negatively related to self-evaluation of SD. There were no significant treatment effects on these variables in his study.

Force (1969) reported that individuals became significantly more positive in their attitudes toward self and others as rated by fellow laboratory members and themselves as a result of participation in an eight-day laboratory training situation. These findings were confirmed by the five-month follow-up data. Colleagues of the participants reported significant negative changes in orientation toward self at the five-month follow-up. All other results regarding orientation toward self or others (rated by intimates and other group

members) were nonsignificant. The changes observed were accompanied by growth on other dimensions of interpersonal competence and communications skills as rated by self, others in T-group, and external observers. Orientation toward others was generally more significantly positively correlated with feedback (FB) and self-disclosure (SD) than orientation toward self. High positive orientation toward self (ORS) at the beginning of the laboratory experience was related to low openness (O) and high data-giving (DG), but was unrelated to data-seeking (DS), while high positive orientation toward others (ORO) at the beginning of the laboratory was related to high openness and low data-seeking but unrelated to data-giving. Both orientations correlated significantly and positively with all three variables, O, DS, and DG, at the end of the laboratory training sessions. It appears that some people may begin a laboratory with a paranoid attitude (high ORS, low ORO), being unwilling to be open about themselves (O) but willing to expose others (DG), and that others may begin a laboratory feeling quite defensive, in the depressive or hysterical mode (low ORS, high ORO), being willing to expose data about themselves (O) but unwilling to have their impressions about themselves confirmed (DS). Both patterns appear to change toward the end of the group toward the constructive, competent mode.

It must be noted that these two studies (Force, 1969; Graff, 1969) are inconsistent regarding the relationships found between the two orientation variables and the variables O, DG, DS, and SD.

Openness, Data-Seeking, and Encounter Space. --These variables were developed by Hurley (1968) as an adaptation of Johari's Window (Luft, 1963). The Johari Window is useful in illustrating the relationships between own and others' personal data --who knows what about an individual. It is composed of four quadrants as illustrated in Figure 1.



[a]Hurley's (1968) adaptations.

Figure 1. --The Johari Window (Luft, 1963).

Quadrant I refers to behavior known to self and known to others, the area of free activity.

Quadrant II, the blind area, represents things others can see in us of which we are unaware (e.g., a muscle twitch of the face).

Quadrant III, the avoided or hidden area, represents things we perhaps know, but do not reveal to others (e.g., a "hidden agenda," or matters of which we are ashamed).

Quadrant IV refers to behavior or motives of which neither the individual nor others are aware, and is the area of unknown activity. That is, behavior may be occurring (unconscious fantasies or thoughts are examples), but no one is aware of them.

Hurley's modifications* result in two variables: an individual can be rated on data-seeking (DS), the extent to which he seeks to find out from others what his impact on them is, via new information they may have and he may not have (Quadrant II data). An individual can also be rated on openness (O), or the extent to which he is willing to share with others information about himself to which they may not have access (Quadrant III data). The Encounter Space (ES) is represented by the product of the individual's ratings

---

*Personal communication, 1968.

on the two dimensions, O and DS. This product is assumed to represent the amount of space (Quadrant I) that the individual has available for open, two-way, interpersonal communication and relationships. The remaining areas represent those aspects of his behavior or feelings which he hides, represses, or of which he is otherwise unaware or cannot know about himself, and therefore cannot or does not use for enhancing interpersonal encounter and intimacy.

Force (1969) found that the O and DS scales correlated highly with other measures of self-disclosure (HSDR) and motivation to get and use feedback (FB), and that individuals' scores on O and DS increased as a result of participation in an eight-day training laboratory. Increases were associated with increases in ratings of attitudes about self and others and other change variables. Graff (1969) reported substantially the same relationships as Force; only those relationships between DS and SD as rated by others and self were significant, however. None of Graff's treatment conditions (group therapy, individual therapy, and no therapy) showed significant changes on O or DS.

Statement of the Problem

The purpose of this study was to examine the nature of changes in individuals' interpersonal behaviors, styles, and

orientations as they occurred in the context of their interactions with others in one particular therapy group.

Hypotheses

1. The person who perceives others with liking and positive expectations is more likely to disclose himself freely to them than is the person who generally sees others as untrustworthy, incompetent, as adversaries, or otherwise negatively.
2. The person who perceives himself with liking and positive feelings is more willing to disclose himself to others than is a person who perceives himself negatively and with hostility.
3. The person who perceptually restricts and distorts the range of variability present in his environment in order to feel adequate is probably less likely to disclose himself freely to others, as such a restriction implies deeper feelings of inadequacy than may be apparent from conscious self-evaluation (as in hypothesis 2).
4. The individual who is free to disclose himself to the group is perceived as a more effective group member than is the individual who is not self-disclosing.

5. Members who increase in ability to be self-disclosing also show increased adequacy scores (both ability to make wider and more clear-cut discriminations between people in the environment, and more effective group behavior).
6. Persons who see themselves and their own interpersonal behavior considerably differently than others see them: (a) distort their perceptions of others, and (b) are not interested in or open to the feedback others might give them about such discrepancies.
7. The effectiveness of the group "treatment" in achieving its goals for its members is shown by a decrease in discrepancy between self- and other-reports from the beginning to the end of the group.

Limitations of the Study

The small number of persons and the highly select nature of the sample tended to attenuate the range or variability of many of the variables in such a way as to minimize the size of the relationships which were obtained. Thus some important relationships were minimally exhibited and perhaps underestimated. It therefore seemed appropriate to set the alpha level required for a judgment of "statistical significance" for a finding at $\alpha = .10$. The effect of

such attenuation does have the advantage of making any relationships passing a smaller alpha somewhat more meaningful, however.

METHOD

Subjects

The psychotherapy group studied consisted of five males and seven females who were enrolled in a graduate course on group psychotherapy, Psychology 984, with Dr. John R. Hurley. Five group members were married, seven were single. The group was composed of eight graduate students in clinical psychology, one graduate student in psychology of personality, one minister, one University Extension Service professional, and one graduate student in educational psychology. All subjects had had some previous experience with therapy or sensitivity (personal growth) groups.

The group included this author as one of its members; however, she was not at that time involved in any way different from other group members in the planning or collecting of data. Her decision to become involved in this study was made about a year after the termination of the group. The effects of this fact on the data analysis will be discussed later.

Procedure

The group met weekly for three terms, from Fall, 1967, through Spring, 1968, for two to three hours each week. A 30-hour marathon was held in May, 1968, only a few weeks before the group terminated. The class was conducted as an actual therapy group, and had as its goals increasing the members' awareness of how they perceived themselves, how they were perceived by others, and increasing their ability to bring these two sets of perceptions into consonance, either by altering their behavior or by using the data they got from others to alter their self-perceptions in a more realistic and useful direction. The methods used to achieve these goals were primarily the encouragement of the members' attempts to be open and revealing about themselves and their attempts to "confront" others with their honest perceptions of them and their behavior. Another important facilitative method was the presentation and discussion of feedback via the results of the various scales administered. Feedback and discussion of such results seemed especially useful when an individual's perceptions were highly discrepant from the general perceptions of the rest of the group.

All academic discussions and lectures were conducted during separate class sessions during the winter term. The university-required course grades had initially been announced as

dependent upon behavior in the group, or the extent to which members lived up to "contracts" (see Appendix F, p. 102) which they had signed at the beginning of the group. In these contracts they were asked to rate the extent of their expected commitment to and participation in the various activities, research, academic, and interpersonal, that would take place during the life of the group. In fact, however, group behavior had little to do with final grading, as group members assigned themselves grades based wholly on their evaluation of their own work in the academic part of the course.

Description of Leader Qualifications

The group leader has a Ph.D. and Diplomate status in clinical psychology. He has a background of extensive experience in both individual and group psychotherapy. In addition, he has supervised graduate students and conducted considerable research in these areas. During the time period in which this study was being made, his official role was professor of clinical psychology at Michigan State University.

Measurement

The scales administered included: the Hurley Self-Disclosure Rating (HSDR: Hurley, 1967), a rating scale of group behaviors

(GBR: Harrison and Oshry, 1967), Openness (O) and Data-Seeking (DS) ratings, which were combined to give an overall rating called the Encounter Arena (ES: Hurley, 1967), and the Summary of Interpersonal Styles (IPS: Hurley, 1968). Figure 2 presents the tally of instrument administration, indicating the point in the group's life at which each instrument was administered.

Instrument	Beginning (November)	Middle (February)	End (May)
HSDR	X		X
GBR	X		X
IPS		X	
ES			X
Questionnaire			X

Figure 2. -- Tally of instrument administration.

These scales were used to assemble data about the members' behaviors and their perceptions of their own and others' openness, or ability to be self-disclosing, their adequacy, perceived self-worth, perceived worth of others to them, data-seeking (asking for feedback) and effectiveness as a group member. Both self and other

ratings were obtained for all instruments. The instruments are described as follows:

Hurley Self-Disclosure Rating (HSDR). --The HSDR is a relatively new measure of self-disclosure, used in only three previous studies (Hurley, 1967; Force, 1969; and Graff, 1969). It was developed by Hurley (1967) to alleviate some of the difficulties of the self-report method used in Jourard's (1964) SD research. Each group member was requested to rate which behavior out of eight offered descriptive categories best approximated the within-group behavior of each other group member, and himself. Four of the categories are in the direction of self-concealment, from passive to active, and four are in the direction of self-revealment, from passive to active. For the situations in which these ratings are intended to be used, the assumption of a continuum from least valuable on the active self-concealing end to most valuable on the active self-disclosing end seems justified (Hurley, 1967).

Evidence based on administering the HSDR to several small counseling groups suggests that individuals tend to rate themselves high on this scale (Hurley, 1967). There was a negative correlation between self-ratings and group ratings when the group ratings were in the direction of self-concealment which indicates an unwillingness of individuals to rate themselves as self-concealing, when in fact

they are. HSDR ratings made by group members other than the target individual also have yielded negative correlations with the self-reported ratings on the Jourard Self-Disclosure Scale. HSDR correlated positively with all other measures of self-disclosure used in Hurley's (1967) initial study. Hurley and Hurley (1969) concluded that the value of the JSD self-report SD index was dubious, but that the HSDR had both concurrent and predictive validity.

Hurley (1967) reported post-treatment reliabilities on the HSDR between .49 and .72 for average agreement with which all members rated all other group members, and from .90 to .96 for agreement on how each individual member was perceived by other members of his group.

Group Behavior Rating (GBR). --The GBR, a rather newly developed instrument (Harrison and Oshry, 1967), was used to measure the effectiveness of each group member in the context of group interaction. Each group member was requested to make a rating from 1 to 9 on ten behavioral dimensions relating to the individual's group participation and functioning for each other group member and for himself. The dimensions rated included involvement, risk-taking, clarification and understanding of group process, ability to learn from feedback, influence, support of others, disagreement, submission or conformity, contribution to group

progress, and increase in effectiveness. In all cases except conformity, a rating of 9 was in the "effective" or desired direction, and a rating of 1, in the ineffective direction. For conformity, this valuation was reversed. No data with regard to reliability were available.

Summary of Interpersonal Styles (IPS). -- The IPS was used for the first time in this study. It was developed by Hurley (1967) as an adaptation and quantification of Eric Berne's (1966) model on "positions," and yields measurements of how the individual perceives and values himself and others. The point representing these two values on a two-way grid can be used to predict the "style" of the interpersonal interactions of the individual. For example, points in the "I am NG"--"You are NG" quadrant suggest withdrawn, schizoid behavior; in the "I am NG"--"You are OK" quadrant, depressive behavior; in the "I am OK"--"You are NG" quadrant, paranoid behavior; and in the "I am OK"--"You are OK" quadrant, essentially normal, productive behavior.

Each group member was requested to evaluate and rate each other member and himself on two 9-point dimensions, evaluation and worth of self, and evaluation and worth of others. These dimensions were illustrated by a graduated sequence of overt behavior categories

(Appendix D, p. 100). A (1, 1) indicates "I'm NG"--"You're NG," while a (9, 9) indicates "I'm OK"--"You're OK": the first number in each pair represents orientation toward self (ORS), the second, orientation toward others (ORO).

No prior validity or reliability studies of the IPS had been completed.

Encounter Arena (ES). --This was also a new instrument, developed by Hurley (1967; Appendix E, p. 101). It measures individuals on two dimensions, "openness" (O) and "data-seeking" (DS), and the product of these two scores represents the extent to which the individual seems capable of entering into open, two-way interpersonal communication, the "area of free activity" described by Johari's Window (see p. 15). Each group member was asked to rate himself and every other group member on both dimensions, using a rating scale from 1 to 9. The product "1," stemming from the rating pair (1, 1), where the first number represents O, the second, DS, indicates an individual who is concealing and distrustful to a high degree, and who has minimal energy for or interest in interacting intimately with others. The product "81," on the other hand, which results from the pair (9, 9), represents an individual who is self-disclosing to a high degree, and who actively seeks and is open to feedback from others in order to know himself better.

Obviously, most people fall between these two extremes, and yet, there appeared to be wide variations among persons in the group in this study.

No previous validity or reliability studies had been done.

Operational Definition of Adequacy. --The measure used to represent "adequacy" was called the "discrimination index" (DI). Each individual rated twelve others from 1 to 9 on the ten GBR categories. The variance of his twelve ratings within each category was calculated. These ten variances were summed to compute that individual's DI. DI's taken from the ES and the IPS used the same procedure, but only two categories were available for each of these instruments.

The DI thus circumscribed the following features related to the concept of adequacy:

1. breadth of range used in representing the variance of the population rated (1-9 was the maximum range; 3-6 would thus be a restricted range, as would 5-7, or 7-9, for these scales);
2. amount of discrimination or distance between ratings, indicating whether the ratings were clustered around some one value, or whether each number in the scale was used. (A person could, for example, use a wide range, say 1-9,

and still rate ten of the twelve people "6," showing little overall ability to discriminate.)

Thus both breadth and distance contribute to the size of the variance. The larger the value of DI, the more adequate the person was in his ability to discriminate freely between others and perceive the entire dimension of others' behavior. "Accuracy" of an individual's ratings was not taken into account in this measure of adequacy.

Operational Definition of Discrepancy (d^2). -- The measure used to represent discrepancy, or self-distortion, was called the "discrepancy index" (d^2). It was obtained by first subtracting the individual's rating of himself from the averaged group ratings of him on each GBR or ES category. These differences were squared, and summed over all GBR or ES categories for that individual. The data on direction of difference, which may also have been interesting, were sacrificed by the squaring procedure for the benefit of emphasizing the size of discrepancies. The larger the value of d^2, then the greater the discrepancy between the self-image and the image others have of one.

Data Inventory

Figure 3 describes the number of group participants who completed each measure at the three data collection periods.

Returns were 100% except for the final administration of the GBR, for which 11/13 group members completed the ratings (85%). For the final post-group questionnaire, there were 8/13 returns, or 62%.

Instrument	Beginning (November)	Middle (February)	End (May)
HSDR	100		100
GBR	100		85
IPS		100	
ES			100
Questionnaire			62

Figure 3. --Percentages of group members completing measures.

Data Analysis

Table 1 illustrates the relationship of the variables and their sources to the hypotheses. The "source" of a variable was the instrument designed to measure it, and descriptions of the instruments have been given in the immediately preceding paragraphs. For those variables (d^2 and DI) which were derived from data obtained with a particular instrument, that instrument is listed as the "source"

Table 1. --Relationship of variables and measures to hypotheses.

Hypothesis	Independent Variable		Dependent Variable		Expected Relationship
	Variable Name	Source	Variable Name	Source	
1	ORO	IPS	SD	HSDR	$\underline{r} > 0$
2	ORO	IPS	SD	HSDR	$\underline{r} > 0$
3	DI	GBR	SD	HSDR	$\underline{r} > 0$
4	SD	HSDR	GBR	GBR	$\underline{r} > 0$
5	SD - change	HSDR	a) DI - change b) GBR - change	GBR GBR	$\underline{r} > 0$ $\underline{r} > 0$
6	d^2	GBR	a) DI b) DS Use of feedback	GBR ES GBR, item 4	$\underline{r} < 0$ $\underline{r} < 0$ $\underline{r} < 0$
7[a]	a) SD - initial b) GBR - initial	HSDR	SD - terminal GBR - terminal	HSDR GBR	$\underline{r}_t > \underline{r}_i$ $\underline{r}_t > \underline{r}_i$

[a]For this hypothesis, there are neither "dependent" nor "independent" variables.

even though it was not originally designed to measure these "derived" variables.

Table 2 illustrates the relationship of the variables and their sources to the constructs under investigation in this study.

Table 2. --Relationship of variables and measures to constructs.

Construct	Variable of Interest	Measure, or Source
Self-disclosure	SD O DS GBR4	HSDR ES ES GBR
Data-seeking	DS GBR4	ES GBR
Adequacy	DI ORS GBR	GBR IPS GBR

Correlational methods were used throughout to test the hypotheses and examine the variables for construct validity.

The fact that this author was a member of the group had both advantages and disadvantages for the data analysis. On the one hand, she had an awareness of the qualitative experiences of herself

and other group members which aided her understanding of critical experiential aspects ("meaning") of the variables and members' change. However, she also found it difficult at times to divorce her need to "prove" a hypothesis from her appreciation of the data as they existed in fact.

RESULTS

Pearson product-moment correlations were computed for the thirty-three variables of the study, producing a 33 × 33 correlation matrix (see Appendix A, p. 91). First examined within this matrix were the individual correlations specific to the original hypotheses. These are presented in the following paragraphs:

Tests of Hypotheses

1. The correlation coefficient between the terminal ratings of "orientation toward others" (ORO) and initial ratings given by others on self-disclosure (HSDR) was $r = .51$ ($p < .10$), while the correlation coefficient between ORO and terminal ratings given by others on HSDR was $r = .35$ ($p > .10$). Early in the group other-reported self-disclosure is thus positively related to perceived positive feelings toward and expectations of others later in the group. These results provide moderately strong support for hypothesis 1.
2. The correlation coefficient between terminal ratings on "orientation toward self" (ORS) and HSDR initial ratings

given by others was $r = .30$, while that for ORS and others' terminal ratings on HSDR was $r = .19$. While leaning in the expected direction, neither of these correlations was statistically significant ($p > .10$). These data suggest that other-reported self-disclosure was not importantly related to this measure of one's view of and evaluation of self-worth.

3. The intercorrelations between the Discrimination Index (DI) measures, initial and terminal, and the HSDR measures, initial and terminal, as rated by both self and others, are given in Table 3.

Table 3. --Relationships between SD and DI measures.

DI	HSDR			
	Self-report		Other-report	
	Initial	Terminal	Initial	Terminal
Initial	.43	.41	.19	.35
Terminal	.79[a]	.70[a]	.44	.78[a]

[a] $p < .01$

The relationship between terminal measures, both for self and other ratings, strongly supported the third hypothesis

($\underline{r}$ = .70, and $\underline{r}$ = .78; both $\underline{p}$'s < .01). Although leaning in the same direction, the correlations between initial self- and other-reported HSDR and DI only weakly supported this hypothesis (respective $\underline{r}$'s = .43 and = .19; both $\underline{p}$'s > .10).

Initial HSDR ratings, particularly self-ratings, were predictive of later DI scores, but the converse was not true; that is, initial DI scores did not predict terminal HSDR ratings. Especially at the end of the group, there appears to be a strong tendency for persons regarded by others as self-disclosing to also be "adequate" in his perceptions of differences between others in his environment. Initial HSDR self-ratings tend to be predictive of those final DI scores.

4. The correlation coefficients relating the Group Behavior Rating (GBR) measures, initial and terminal, as rated by both self and others, to the HSDR measures, initial and terminal, as rated by self and others, are given in Table 4. The relationships between terminal measures in all cases strongly supported hypothesis 4 ($\underline{r}$ = .76, $\underline{r}$ = .72, $\underline{r}$ = .79, and $\underline{r}$ = .94; all $\underline{p}$ < .01). In addition, the hypothesis was supported by the relationships between initial measures, though not quite so strongly ($\underline{r}$ = .75, $\underline{r}$ = .76: both

p's < .01; r = .58: p < .05; and r = .43: p > .10). There was no clear pattern of correlations which would lead to statements about which of the variables has highest predictive value for the others. However, these data show that self-disclosing individuals tend to be consistently rated by themselves and others as more effective and adequate group members than are the less self-disclosing.

Table 4. --Relationships between SD and GBR measures.

GBR (sum of ratings)		HSDR			
		Self-report		Other-report	
		Initial	Terminal	Initial	Terminal
Self-report	Initial	.75[c]	.66[b]	.58[b]	.69[c]
	Terminal	.61[b]	.76[c]	.38	.72[c]
Other-report	Initial	.76[c]	.55[b]	.43	.53[a]
	Terminal	.72[b]	.79[c]	.57[b]	.94[c]

[a] p < .10

[b] p < .05

[c] p < .01

5. The correlation coefficients obtained between HSDR change (as rated by others) and DI change (r = .52, p < .10), and

between HSDR change and GBR change, both as rated by others ($r = .75$, $p < .01$) gave firm support for hypothesis 5. That is, individuals who show changes in their ability to be self-disclosing over time tend to show similar increments of change in their ability to discriminate adequately the differences between others in their environments, and in the adequacy of their interpersonal behavior in the group.

6. This hypothesis was tested in two ways. The first test concerned the correlation coefficients between the initial and terminal scores on discrepancy (d^2) and DI. These data lend little support to the hypothesis ($r_{initial} = .28$, and $r_{terminal} = .13$; both p's $> .10$). Thus, there seems to be no clear relationship between the congruence of a person's self-perception with the perceptions others have of him and his ability to discriminate "adequately" the differences which exist between those other persons.

The second test of the hypothesis examined the intercorrelations between d^2 and both openness to feedback (GBR4) and data-seeking (DS), for both initial and terminal administrations of the instruments (DS was administered at the end of the group only). These results were not significant ($r_{d_i^2}$ vs $DS_t = -.29$, $r_{d_t^2}$ vs $DS_t = .11$,

$r_{d_i^2}$ vs $GBR4_i$ = -.47, and $r_{d_t^2}$ vs $GBR4_t$ = .11; all $p > .10$). However, these findings suggest that, at least initially, high DS and high responsivity to feedback are related to low discrepancy.

7. Hypothesis 7 was tested by comparing the correlations of self- with other-ratings on both GBR and HSDR for initial and terminal administrations, using the Fisher r-to-Z transformation (Hayes, 1963), and testing the hypothesis that $r_{initial} = r_{terminal}$ for each instrument (Olkin, 1967). These data are presented in Table 5.

Table 5. --Changes in congruence between self- and other-perceptions over time.

Time	HSDR, Self vs. Other	GBR, Self vs. Other
Initial	.60[a]	.60[a]
Terminal	.87[b]	.83[b]
Z	-1.76[c]	-1.24

[a] $p < .05$

[b] $p < .01$

[c] $p < .10$, for two-tailed $Z_{\nu=12}$, a liberal test with regard to degrees of freedom allowed.

Clearly there are marked changes in the direction of greater congruence between self- and other-ratings over time on both instruments, HSDR and GBR, although this trend attained statistical significance only for the HSDR data ($p < .10$).

Construct Validity

Self-disclosure. --Self-disclosure was found to be highly positively associated with openness ($p < .01$) for all combinations of self and other ratings except initial other-ratings on HSDR with self-ratings on O (see Table 6).

Table 6. --Relationships between SD, O, DS, and use of feedback.

HSDR		Openness		Data-Seeking		GBR #4	
		Self	Other	Self	Other	Initial	Terminal
Self-report	Initial	.76[c]	.73[c]	.79[c]	.50[a]	.15	.26
	Terminal	.87[c]	.77[c]	.86[c]	.66[b]	.49[a]	.61[b]
Other-report	Initial	.38	.70[c]	.61[b]	.62[b]	.33	.24
	Terminal	.88[c]	.93[c]	.91[c]	.83[c]	.49[a]	.72[c]

[a] $p < .10$

[b] $p < .05$

[c] $p < .01$

The evidence indicated that these two variables, though defined somewhat differently, did indeed tap similar behaviors in the individual. These behaviors were also somewhat similar to the kind of openness required to seek and use feedback from others, although there were much greater discrepancies in these latter findings. Initial ratings on use of feedback (GBR4) were predictive of later SD, but SD did not predict ratings for use of feedback. A change in perception regarding openness may have occurred within the group; data-seeking behaviors seemed to become highly consonant with the definition of openness for the terminal administrations of the HSDR. Both the GBR4 and the DS measures showed this relationship, although the DS was only given at the termination of the group.

Data-seeking. --Data-seeking as measured by DS was defined similarly to acceptance and use of feedback as measured by GBR4. Therefore, DS and GBR4 were expected to show rather high positive correlations. The data are presented in Table 7. According to this criterion, the expected relationship generally obtained, except for initial GBR4 ratings with self-ratings on DS. As noted above under "Self-disclosure," data-seeking behavior was not notably discriminable from openness in general for this sample, and therefore it may not make sense to consider it as a separate construct.

Table 7. --Relationships between data-seeking and use of feedback.

GBR4	Data-Seeking	
	Self	Other
Initial	.33	.63[a]
Terminal	.69[b]	.79[b]

[a] $\underline{p} < .05$

[b] $\underline{p} < .01$

Adequacy. -- There were three measures of adequacy, defined to tap different psychological and behavioral facets of this construct: (a) DI supposedly measured the ability of the individual to adequately differentiate between the people in his environment, and describes an internal defensive process which presumably is a facet of preconscious or unconscious functioning; (b) GBR measured the extent to which the individual participated in adequate ways in the group process; and (c) ORS measured the extent to which he consciously reports himself to be an adequate and/or acceptable person. Tables 8 and 9 give the correlation coefficients which demonstrate the relationships between these variables.

Table 8. --Relationships between GBR and DI measures.

DI	GBR - others'	
	Initial	Terminal
Initial	.36	.58[a]
Terminal	.31	.79[b]

[a] $p < .05$

[b] $p < .01$

Table 9. --Relationships between ORS and the GBR and DI measures.

	DI		GBR	
	Initial	Terminal	Initial	Terminal
ORS	-.05	.31	.36	.34

DI, GBR, and ORS were not highly correlated, except that the scores from the terminal administration of the GBR as rated by others correlated significantly with both initial and terminal DI measures ($r = .58$, $p < .05$; $r = .79$, $p < .01$). These results indicated that the two variables were, at least initially, not measuring the

same thing, although there was an increasing convergence as time went on.

Stability of the Discrimination Index. --The correlation matrix presented in Figure 4 was examined for evidence regarding the stability of the DI variable. It can be seen that initial DI and middle DI both correlated positively (initial DI significantly) with both terminal measures of DI ($r = .62$, $p < .05$; $r = .40$, $p > .10$; $r = .85$, $p < .01$; and $r = .21$, $p > .10$, respectively). The two terminal measures were significantly positively correlated ($r = .66$, $p < .05$). Initial and middle measures of DI were essentially uncorrelated, however ($r = .09$), and the middle DI was not significantly correlated with any of the other DI measures. These results indicate a generally maintained and fairly high stability in individuals' ability to discriminate differences between others from the beginning of the group until the end. However, there was a tendency for this stability to deteriorate during the middle of the group's life. There are also questions about the adequacy of the measures themselves, which will be explored in the Discussion section.

Amounts of change on the DI measures were not significantly correlated except for the amount of change from beginning to middle with change from beginning to end, with terminal DI measured by GBRDI ($r = .63$, $p < .05$). For the reasons cited in the previous

Instrument:	GBRDI, initial [a]	IPSDI, middle	ESDI, terminal	GBRDI, terminal	ESDI, change	IPSDI, change	GBRDI, change
Variable #	2	24	9	23	16	21	20
2		.09	.62[c]	.85[d]	.13	.64[c]	-.86[d]
24			.47	.21	.53[b]	.70[c]	.04
9				.66[c]	.86[d]	-.09	-.43
23					.25	-.50[b]	-.46
16						.31	.06
21							.63[c]

[a]GBRDI-initial and ESDI-terminal were the measures used in Tables 8 and 9 as the measures of initial and terminal DI.

[b]$\underline{p} < .10$

[c]$\underline{p} < .05$

[d]$\underline{p} < .01$

Figure 4. --Intercorrelations of the various DI measures and DI-change measures.

consideration of the measures in general, this may be a spurious and unimportant relationship. Generally, however, a positive change in ability to discriminate effectively over the first segment of the group was associated with a positive change over the entire time period.

Stability of the Discrepancy Index. --Table 10 presents the relationships between the various d^2 measures.

Table 10. --Intercorrelations between the various d^2 (discrepancy index) measures.

Variable	d_1^2	d_2^2	d_C^2	d_{ES}^2
d_1^2		.21	-.23	-.35
d_2^2			.90[b]	.41
d_C^2				.56[a]

[a] $\underline{p} < .05$

[b] $\underline{p} < .01$

This measure was not very stable, as the correlation between initial and terminal d^2 was $\underline{r} = .21$, and between the two terminal measures from different sources, $\underline{r} = .41$. D^2 was calculated from the ES instrument to try to account for the effect of the change in

instructions for the final administration of the GBR on GBR-d^2; however, initial d^2 and d^2_{ES} correlated -.35, showing less stability than the GBR-based d^2's. However, it is important to note that d^2 correlated consistently negatively, though not often significantly, with every other measure in those clusters in which it was important (see Figure 5, p. 50), indicating that it performed in ways consistent with its definition.

Additional Post Hoc Analyses

The tests for specific hypotheses and construct validity as reviewed in the preceding section only partially covered the information given in the 33 × 33 correlation matrix. Three additional post hoc analyses were made: first, an elementary factor analysis of the correlation matrix; second, an analysis of variance for repeated measures to assess the significance of the various components of change, along with the particular t tests (for correlated data, and by the Scheffé method) for assessing the significance of specific differences; and third, a questionnaire to group members asking for feedback regarding the unanticipated result of negative change in the SD variable.

Elementary Factor Analysis. --The intercorrelations among all 33 variables employed were subjected to an elementary factor analysis (McQuitty, 1969) which disclosed the following five main factors:

1. Factor I appeared to be primarily composed of ten variables measuring "manifest behavioral adequacy." It included self-disclosure, data-seeking, and other specific behaviors, from behavioral data readily available for observation by both members themselves and by other group members. The initial variables GBR (as rated by self and others), HSDR (self and other ratings), O, DS, and ES (all self ratings) were included. Observations on behaviors at both the beginning and the end of the group were represented (see Figure 5). GBR, HSDR, O, DS, and ES were all positively interrelated, and they showed a marked tendency to change in the same direction over time.
2. Factor II was composed of six variables which appeared to be generally related to "interpersonal defensiveness" (Figure 5). This factor includes the initial variables d^2, GBR4, and HSDR (as rated by others), and the terminal variables O, DS, and ES (all as rated by others). All of the behaviors underlying this factor seem to have been

Factor:	I. "manifest adequacy"											II. "defensiveness"							III. "internal blocking"									
Variable Name:	GBR-I	GBR-I	HSDR-I	GBR-T	GBR-T	HSDR-T	HSDR-T	O	DS	ES		d^2-I	GBR4-I	HSDR-I	O	DS	ES		d^2-T	d^2-C	d^2, ES	IPS: DI-C	IPS: DI	ORO	ORS	IPS	
Rated By:	S	O	S	S	O	S	O	S	S	S			O	O	O	O	O							O	O	O	
Variable #	3	4	6	10	11	13	14	28	29	30	#	1	5	7	25	26	27	#	8	15	22	21	24	32	31	33	
3		60	75	67	77	66	69	73	77	75	1		47	45	20	29	17	8		90	41	84	53	83	60	76	
4			76	72	70	55	53	63	68	73	5			33	48	63	64	15			56	77	53	61	58	64	
6				61	72	65	64	76	79	81	7				70	62	61	22				18	27	12	04	09	
10					83	76	72	73	75	71	25					93	95	21					70	43	48	51	
11						79	94	87	90	91	26						96	24						30	58	51	
13							87	87	86	81	27							32							50	83	
14								88	91	90								31								89	
28									93	95								33									
29										97																	
30																											

Note: In the variable names, I = initial, T = terminal, and C = change. Negative correlations are underscored.

Figure 5. --Intercorrelation matrices for Factors I, II, and III.

observable by others, or to have occurred on a level of which the individual was presumably unaware (d^2); this factor is completely void of any variables based on self-observation. An initial tendency to discrepancy in self-perception was associated negatively with initial data-seeking and SD, and with others' final estimates of openness, data-seeking, and willingness to encounter others.

3. Factor III consisted of eight variables: d^2-terminal, d^2-change, d^2 based on ES ratings, DI based on IPS ratings, DI-change based on IPS ratings, ORO, ORS, and IPS (see Figure 5). All of these variables were measured during the middle or terminal phases of the group's life. A tendency toward discrepant self-perception in the middle and end of the group was negatively related to internal adequacy (DI), and negatively related to one's orientations toward self and others. That is, the more discrepancy in self-perception, the less positively one viewed oneself or others, and the less able one was to discriminate between others. These characteristics of Factor III seem best summarized as an "internal blocking of reality" with affective components.

4. Factor IV was composed of only two variables, GBR-change and HSDR-change, both as rated by others, which were highly positively correlated ($r = .75$, $p < .01$). Apparent gains in self-disclosure were accompanied by similar increments in effectiveness of interpersonal or "group" behavior for this sample. Factor IV thus appears to be a "change" factor, indicating an overall openness of the personality to change or growth.
5. Factor V was composed of three variables, DI-initial, GBRDI-terminal, and GBRDI-change. This factor seems to reflect on "awareness of others" or nondefensiveness toward the realities of differences between other people, and to represent a largely unconscious facet of personality.
6. The remaining four variables distributed themselves into two factors, each consisting of a change variable and one of its components. These factors did not lend themselves readily to interpretation. They were: GBR4-terminal and GBR4-change; and ESDI-terminal and ESDI-change.
7. A rather large sub-cluster of variables could be empirically assigned to either Factor I or Factor II. It consisted of the four terminal variables GBR, as rated by self and others, and HSDR, as rated by self and others. These variables

were mixed with regard to who rated them (self or others) and to what was measured (self-disclosure or group effectiveness), and generally resembled the pattern of variables in the rest of Factor I more closely than the patter of variables in Factor II. Factor II, the "defensiveness" factor, consisted mainly of items relating to openness and data-seeking, which are somewhat parallel to the items in Factor I on self-disclosure. However, the strict emphasis on other-ratings in Factor II indicates that there may be a significant discrepancy between what the individual will admit to perceiving and what others observe in his behavior; this has been interpreted as defensiveness. Therefore, this sub-cluster of variables was placed in Factor I. The existence of this common group suggests that the two factors may be closely related, however, and that Factors I and II may represent a continuum from defensive to open, adequate behavior, rather than independent dimensions.

Analysis of Variance and t tests. --Of the second set of post hoc analyses, one concerned an analysis of variance for repeated measures (see Table 11) with subsequent testing for specific differences of means using the Scheffé method for post hoc comparisons

(Hays, 1963; see Table 12). The second consisted of post hoc *t* tests of significance for correlated data on the change variables (see Table 13).

The pretest-posttest analysis of variance, which tested the hypothesis "there is no difference between pretest and posttest scores on several repeated measures for the experimental group," is reported in Table 11.

Table 11. --Analysis of variance for repeated measures.

Source	SS	df	MS	F	*p*
Pre-post	.649	1	.649	.566	NS
Measures	.026	6	.004	.006	NS
Subjects	72.671	12	6.056		
Pre-post × Measures	20.069	6	3.345	9.292	< .05
Pre-post × Subjects	13.764	12	1.147		
Measures × Subjects	50.232	72	.698		
Pre-post × Measures × Subjects	25.918	72	.360		
Total	183.330	181	1.013		

The *F*-ratio for pretest-posttest effects failed to reject the null hypothesis for the pretest-posttest main effect (*F* = .57). There were also no significant effects due to measures (*F* = .01).

However, there was a significant interaction effect between the pretest-posttest condition and measures ($F = 9.29$, $p < .05$). Comparisons for specific measures contributing to this interaction effect were made by the Scheffé method, and are reported next.

The pretest-posttest Scheffé comparisons, based on a very conservative test which guarantees that all significant results are actually significant at the specified level, here $p < .05$, indicated that only DI showed significant change (see Table 12). By this conservative test, changes on d^2 and GBR failed to reach significance, even though the t tests for correlated data made for differences between the initial and terminal d^2 and GBR variables were significant. Thus, the only change which can be reported with very high confidence is that on the DI variable; members did apparently become more adequate, on the whole, in differentiating among the members of this group.

The results of the t tests of correlated data for the change variables (Hays, 1963), a less conservative test of significance, indicate that the group showed significant movement on three variables, GBR (as rated by others), DI, and d^2 ($p < .05$, $p < .001$, and $p < .05$, respectively, for two-tailed tests of differences; see Table 13). Change on d^2 was in the positive direction, indicating that members became more discrepant in rating themselves as

Table 12. --Scheffé comparisons between pretest and posttest scores.

	d^2	DI	GBR-S	GBR-O	GBR4	HSDR-S	HSDR-O	Total
Pretest[a]	-.407	-.718	.090	.181	.228	.034	.136	-.065
Posttest	.397	.718	-.159	-.181	-.228	-.034	-.136	.054
Total	-.005	.000	-.035	.000	.000	.000	.000	-.011
$\hat{\psi}$ = Post-Pre	.804	1.436	-.249	-.362	-.456	-.068	-.272	.119
$\underline{p}$ (ψ = 0)	NSD	.05	NSD	NSD	NSD	NSD	NSD	NSD

[a]All variables were transformed to standard scores for the analysis of variance in Table 11.

Table 13. --t tests for correlated data on the change scores of five repeated-measures variables.

N = 13	$\sum D$	$\bar{D}$	$SD_{\bar{D}}$	t	Two-tailed Probability
d^2-change	157.8	12.138	5.077	2.390	.05
DI-change	27.9	2.146	.410	5.234	.001
GBR-O-change	- 75.0	- 5.769	2.451	-2.353	.05
GBR4-change	- 7.4	- .569	1.200	- .474	NSD
HSDR-O-change	- 4.7	- .361	1.068	- .338	NSD

compared to the ways others rated them. DI also changed in the positive direction: members became more able to differentiate between others within their group. Change on GBR was negative, indicating that members were rated by others as less effective in their interpersonal behavior over time. Negative change on GBR4, though not significant, suggests that members were less willing to listen to and utilize feedback from others at the end of the group than they had been at the beginning. Likewise, negative change on HSDR indicates that they were also less self-disclosing, at least as rated by others, at the termination of the group than they had been after only two months of interaction (beginning of the group).

Questionnaire. --Eight of the thirteen group members responded to the questionnaire sent out after the close of the group

regarding their perceptions of why the group may have decreased on SD over time. Of the three hypotheses proposed as explanations of this unexpected result, Hypothesis C, which suggested that an increased awareness of each other's behavior generated increased validity of the later ratings, was ranked an average of 1.125. Hypothesis B, which suggested that the HSDR measure might be meaningless, and Hypothesis A, suggesting that the group had actually become less self-disclosing, each received average rankings of 2.5. According to the experience and reflection of the group members, it was their consensus that the most likely explanation for negative change in SD was increased familiarity with each other resulting in more valid ratings and judgments later in the group.

DISCUSSION

Specific Hypotheses

1. The hypothesis that amount of SD is highly correlated with an individual's perception of the worth or value of others received moderately strong support from these data. While high SD early in the group was significantly related to positive attitudes toward others later in the group, terminal SD was not significantly related to terminal attitudes toward others. These findings suggest that SD depends on the individual's expectation or perception that others will receive information about him in a favorable, helpful, and nonpunitive way. However, no measure of perception of, or orientation toward, others was taken during the initial stages of the group, so it is difficult to determine whether positive orientation toward others is a prerequisite of SD level (i.e., the individual needs to feel "safe" before SD is possible) or a consequent of having disclosed personal data (i.e., through a process of cognitive dissonance reduction, one may need to see others to whom he has made himself vulnerable as safe and benign, regardless of the reality of the situation).

SD has been found related to the degree of positive regard from other group members (Yalom, 1966; Hurley, 1967), and to the amount of SD received from the "other" (Jourard and Landsman, 1960). These findings could be interpreted as evidence that others' apparent and/or real good will and trust toward one lead to SD by that individual. Force's (1969) data are also consistent with this interpretation--she found ORO to be significantly and positively correlated with openness, which is similar to SD, at both the beginning and end of a laboratory training experience for her sample.

SD has also previously been shown related to the degree of liking for the other person (Jourard and Lasakow, 1958; Jourard, 1959), and degree of liking for the group (Query, 1964). These findings are equivocal with respect to supporting either of the proposed relationships, but suggest that when an individual does disclose himself, it is under conditions in which he perceives others as friendly, which is consistent with the finding of this research.

The McQuitty elementary factor analysis results indicate that SD and ORO may function independently at any given time for this sample, as was also suggested by the nonsignificant relationship between final measures on SD and ORO. This supports the dissonance reduction interpretation. The absence of initial ORO measures in this study precludes any firm explanation for these findings.

2. The hypothesis that SD is highly correlated with an individual's own sense of worth was not convincingly supported. Both initial and terminal SD were positively, but nonsignificantly, related to terminal ORS. Thus, other-rated SD was not importantly related to self-worth ratings. These findings were inconsistent, however, with the results of related studies by both Force (1969) and Graff (1969). Graff found that initial SD correlated significantly and positively with initial ORS, while Force found them initially unrelated, but significantly positively correlated by the end of the lab experience. Other data from the present sample also suggest that SD and ORS function independently; they appear in different clusters on the factor analysis, as well as intercorrelating at only a low level. This finding may well be idiosyncratic to the present study, as the number of participants was considerably smaller than that employed by Force (1969). Certainly the present finding is open to questions of validity and generalizability. Force's data seem to support the hypothesized relationships between these variables made by this experimenter. In view of such mixed evidence, this hypothesis should not be hastily discarded.

3. These data strongly supported the hypothesis that a person who restricts and distorts his perceptions of the external world in order to remain adequate is less likely to disclose himself freely to

others than is one who does not need to distort his perceptions. This support came primarily from the relationship between terminal measures on HSDR and DI; the initial measures were related positively, but nonsignificantly. These data speak directly to two of the initial assumptions underlying this research, in that people who show the most capacity for revealing themselves to others through SD, and thus becoming more known to others as time goes on, also seem to grow in their acceptance of those others. They seem more able to accept differences between others via recognition and discrimination, rather than minimizing them. Initial SD seemed a better predictor of terminal DI than vice versa, which implies that SD may be the process through which DI is achieved, although it is unclear why SD and DI showed so little initial relationship. To more fully trace this process would require data for more than two points in time. It may be that persons who restrict their perceptions of external reality are nevertheless capable of SD, and will do so under conditions which they define as "safe" and in which SD is a socially approved and highly valued behavior. It does appear that those who risk SD benefit by greater adequacy over time in recognizing and dealing with their external social reality. The inconsistent support for this hypothesis might also be explained, in part, by limitations of this operational definition of "adequacy" and by certain methodological problems of this study which will be identified later.

The results of the factor analysis indicate that DI-initial and DI-terminal belong to different factors, which implies that they may not have been measuring the same thing. They correlate positively and significantly with each other, evidence of some minimal reliability, but not as highly as each correlated with other measures unrelated by definition to this concept of adequacy. DI-terminal fits into the factor called "internal blocking," which is consistent with the interpretation of the results offered above, but DI-initial doesn't fit into any of the major factors. Thus, the meaning of the DI-initial measure remains unclear, and comparisons involving it may not be meaningful.

4. All relevant data strongly supported the hypothesis that SD is positively related to effectiveness as a group member. These findings are also in agreement with the previous research (Halverson and Shore, 1969; Frankfurt, 1965; Force, 1969; and to some extent, Hurley, 1967). These results were as expected; the constructs involved were the most adequately researched and defined of those used in this study. However, the high correlations and the tendency toward even greater congruence over time between these two variables raises some question as to whether they are separate constructs, or whether they reflect different facets of a single variable. They certainly form a tight, fairly exclusive cluster in

the factor analysis (Factor I), evidence for a single underlying construct.

There is also the problem of group values and halo effects. SD came to be viewed as a very valuable group behavior, due to the effects of the assigned course readings, feedback in the group, etc. It is also possible that the very high terminal correlations represent halo effect phenomena. That is, group members may well have felt that someone high on SD could hardly be an ineffective group member, and vice versa. It is clear that the two variables are positively and significantly related initially, suggesting that they may go together in healthy persons. The fact that those correlations are not particularly outstanding implies that the two concepts are not necessarily identical. The increase in congruence between the two scores may, as hypothesized, result from a shift in group values with respect to these behaviors. A way to test for this will be subsequently considered in "Implications for Future Research."

5. The findings strongly supported the hypothesis that individuals' changes over time with regard to SD are correlated with changes in the individuals' effectiveness in the group. The results gave moderate support to the hypothesis that changes in SD are also correlated significantly with increasing discrimination among others in the group. These findings generally imply that those persons who

grow in ability to be self-disclosing and who allow themselves to become known to others are also those who grow in openness to others (have less need to close off information about others) and in effectiveness of their interpersonal behavior. The converse is also true, according to these data. That is, those who become less effective in group behavior and less self-disclosing (more defensive) grew less in relation to adequacy with which they fully discriminate between others. The change data, to be discussed later, show that all persons increased in adequacy of discrimination (DI) in this study, but those who decreased in group effectiveness (GBR) and self-disclosure (SD) showed considerably smaller gains on DI than those who increased in GBR and SD scores.

6. It was found that scores on the discrimination index (DI) and discrepancy ratings (d^2) were not significantly correlated. Thus the null hypothesis was not rejected, and it was concluded that the congruence of a person's self-perception with the perceptions that others have of him is unrelated to his ability to discriminate "adequately" between others. The results of the factor analysis indicated that neither initial or terminal d^2 nor initial or terminal DI "mean" the same thing, as they appear in four separate factors. Construct validity is thus weak for both the DI and d^2 measures, which may explain the lack of support for the hypothesis from these

data. In addition, the small N does not lend itself to an adequate study of these two new variables; it cannot be known from this select sample what their distributions would be in a larger or more diverse population of persons.

The relationships between discrepancy ratings (d^2) and data-seeking (DS) and openness to feedback (GBR4) were not statistically significant. It was concluded that discrepancy between self and other perceptions was unrelated to interest in or the use of feedback. However, the initial d^2 and GBR4 correlation approached significance in the negative direction, and the factor analysis indicated that all of these variables appear in the same factor, labeled "interpersonal defensiveness." These findings tend to support the hypothesis, and to indicate that, at least initially, d^2 was measuring what it was intended to measure. It seems reasonable that individuals who tend to agree with others' perceptions of them show low needs to defend themselves and find it easier to listen to what others have to say about them. It must be kept in mind that these results may not be widely generalizable to other populations due to doubts about the validity of the d^2 variable, and inadequate testing of the relationships due to the small N.

7. It was found that correlations between self and other ratings increased over time on the instruments HSDR and GBR, but that only

the HSDR change reached statistical significance, and that on a very liberal test of significance. It is possible that the high initial correlations had a "ceiling" effect on the amount of change possible. These results imply that persons tend to view themselves more in congruence with the way others view them as a result of spending time together and participating in the group therapy experience, where self-disclosure and feedback are highly valued activities. However, as discussed in the following section, re-examination of these data by another method indicates that, although order effects were heightened over time, the magnitude of differences between self and other ratings was much greater for the terminal measure of GBR than for the initial GBR measure, and only slightly less for the terminal HSDR, indicating greater or equal rather than less discrepancy between the two sources of data. Thus, this hypothesis requires re-evaluation. The correlation coefficients do not seem to have been the most adequate statistics to use in evaluating the hypothesis. The change data with regard to d^2 also imply that discrepancy between self and other perceptions increased for this sample over time (see Overall Change), underscoring the tentative character of the support.

Overall Change

The analysis of variance for pretest-posttest treatment effects and the *t* test for change on individual measures indicated that the group as a whole showed negative change on three measures (GBR, HSDR, and GBR4), and positive change on d^2 and DI measures. These findings indicate that group members rated each other as becoming less effective in their interpersonal behavior, less self-disclosing, less willing to seek and use feedback from others, and less congruent in their self-perceptions as compared to the way others saw them. They did, however, appear to become more able to discriminate a wider range of behaviors on the part of other group members. This latter result was the only change which was significant according to the most conservative, and therefore the most reliable, statistic used, the Scheffé comparisons.

There is an apparent incongruity in these outcomes which may be accounted for by a "floating baseline" hypothesis; that is, group standards for openness and effectiveness, among other variables, may have changed at a faster rate than the actual behavioral change of the group members. This hypothesis might be tested by means of videotapes of early and late sessions to be rated by observers whose standards would presumably remain constant over ratings. This will be discussed in more detail later.

These results were, except for DI, opposite to the predicted positive change for GBR, HSDR, GBR4, and DI, and negative change for d^2. There are several possible explanations for these failures in prediction, and some other findings which seem contradictory.

The findings concerning hypothesis 5, as discussed earlier, were that HSDR change scores correlated significantly and positively with DI change scores. At first glance these findings seem contrary to the above results that the group as a whole became less self-disclosing and more "discriminating." Examination of the raw data for HSDR change and DI change revealed, however, that even though overall changes for the group were negative for HSDR and positive for DI, order effects were observed. That is, although every group member's score increased on the DI measure, those whose scores also increased on HSDR showed considerably greater positive change on DI than those whose HSDR score decreased, with one exception. The correlation coefficients alone appear inadequate to explain the results, as they do not sufficiently identify the nature of these data. It would seem reasonable to conclude that group membership leads to greater discrimination between others, in general, and that these gains are enhanced in those persons who grow both in ability to be self-disclosing and to behave effectively in the group.

According to these findings, group movement on the variables of member effectiveness (GBR) and self-disclosure (SD) was

in the negative direction over time These results are contrary to the previous research dealing with changes over time for similar variables (Harrison and Oshry, 1967; Jourard, 1961) except for Force's (1969) data on SD. The majority of anecdotal accounts of changes resulting from group participation also report gains, generally, rather than losses. The polling of group members revealed their consensus that the most likely explanation for this decrease, from their experience and reflection, was the increased familiarity with each other over time. They agreed that more valid ratings and judgments occurred later in the group due to increased awareness of each other's defensiveness. This explanation rests on the assumption that people tend to say nice things about themselves initially, to present a good front. They also tend to say nice things about others, presumably not to offend them; it was known that the ratings would be made public and discussed openly in the group. It seems likely that members would want to avoid creating conflicts initially, particularly those members who were already most defensive and least able to confront others or to be open. It is also possible that the changes of instruction for both instruments for the final administration may have caused sufficiently greater use of the lower ratings to account for the overall lowering of the group's functioning on the GBR and HSDR over time (see Limitations).

One set of results, the comparisons of correlations between self and other ratings on GBR and HSDR from beginning to end of the group, indicated that group members did tend to see themselves more in congruence with the way others saw them over time (see hypothesis 7, Discussion). This finding was consistent with the finding of Burke and Bennis (1960). However, the results of the analysis of variance for pretest-posttest effects concerning the d^2 variable indicate that members became more discrepant in rating themselves as compared to the ways others rated them over time, although these findings were both of borderline significance. The present method of computing the discrepancy index may have obscured effects due to direction of discrepancy. On the other hand, the correlations between self and other ratings take only order into account, and not the size of the existing differences. Both of these variable characteristics may be important, but were not tested.

Several alternative methods for computing discrepancies between self and other observations on the d^2 raw data were explored: namely, instead of squaring individual cell differences, and then summing, as was done originally, the cell differences themselves were summed for each person, taking differences of sign within cells into account. An average discrepancy for the group was found for initial and terminal conditions taking differences in sign

for individuals' totals into account. Averages were also found for the group for initial and terminal conditions taking only magnitude of overall difference for each individual into account. In each case, the discrepancy for the group between self and other ratings was greater at the end of therapy than at the beginning, thus confirming the post hoc analysis of variance results (see Table 14).

Table 14. --Differences between self and averaged other ratings for GBR, HSDR, and d^2.

Time	Discrepancy$_1$[a]	Discrepancy$_2$[b]	GBR	HSDR
Initial	6.6	11.0	4.7	0.80
Terminal	7.4	13.8	6.7	0.75

[a]Direction of difference within individual cells taken into account.

[b]Only magnitude of differences in each cell accounted for.

The raw data for GBR and HSDR change were also re-examined. When differences between self and other ratings were summed and averaged for the initial and terminal conditions, taking only magnitude into account, GBR showed a fairly substantial increase in the size of the average difference over time while HSDR showed a negligible decrease (see Table 14). Remember that the correlations for both showed greater correspondence at termination than at the

beginning, again indicating that the correlation technique probably did not provide the most meaningful analysis of the change data possible. In fact, all reasonable measures of discrepancy showed an increase in difference between self and other ratings, except for HSDR, and that variable showed essentially no change.

The major reasons the predictions for change failed to be confirmed seem to have to do with inadequate measurement and limitations of sample size. The only change which was successfully predicted was also the only change which can reliably be reported significant, and that was on DI, a variable whose operational definition may have been inadequate. No solid conclusions can be made from these data regarding the overall effects of group therapy on its participants. It may be tentatively concluded that, for this sample, increased ability to discriminate between others, leading to an increase of the social information base out of which one chooses interpersonal behaviors appropriate to the situation, was the primary outcome of the group therapy experience.

Construct Validity

There was a lack of divergent evidence in this study which would have been useful in highlighting the limits of the constructs employed. As Cronbach and Meehl (1955) have pointed out, convergent

evidence alone does not lead to adequate or useful statements about construct validity. Since all of the evidence presently cited was of a convergent nature, it is open to question whether the variables used were in fact representative of different constructs, or only one construct in several forms.

The findings indicated that HSDR (self-ratings), GBR (self- and other-ratings), and GBR4 are highly intercorrelated and, except for GBR4, appear in the same cluster in the factor analysis, Factor I. DS, GBR4, and HSDR as rated by others also appear in the same cluster, Factor II. These findings raise questions about the assumption that SD, group effectiveness, and data-seeking are separate constructs. Counterbalancing these questions are two observations: that none of these variables were as highly correlated at the beginning of the group as at the end, and that previous research (Halverson and Shore, 1969; Hurley, 1967) has indicated that those who are seen as high on SD come to be seen as effective group members by the rest of their group as time goes on. This latter finding implies that effectiveness may be dependent on, but not equivalent to, SD, or, alternately, that SD comes to be seen by the group as a valuable facet of effectiveness but not totally equivalent to it.

Doubts about the validity of the construct of adequacy are raised by the lack of generally high intercorrelations among the

several components. However, as discussed under "Limitations," there were some measurement problems which may explain the lack of stability of the DI measure, in that the instructions for the GBR, on which the DI was based, were different for the final administration than they were for the initial administration. In addition, ORS was only given once, which makes initial comparisons between it and other variables impossible.

The variables DI, GBR, and ORS do not link up in the same cluster as would be expected if they measured exactly the same underlying construct. However, this is not at all inconsistent with the original definitions of the variables. They were defined as measuring different levels of adequacy. Originally DI was thought to be a measure of adequacy in perceiving and discriminating differences between others, a kind of negative of defensiveness, which theoretically would be a prerequisite of adequate interpersonal behavior. The several DI measures did "hang together" pretty well in one factor, Factor V. Consistent with its original definition, GBR by and large fell into Factor I, interpreted as "manifest behavioral adequacy." Along with two of the more shaky DI measures, ORS appeared in Factor III, which seemed to represent "internal blocking." Initially it was assumed that ORS tapped the person's conscious feelings of adequacy, and there does seem to

be some element of awareness of self with affective components in the variables of Factor III.

Thus it may be reasonable that these three variables do not show high intercorrelations as was expected on the ground that they all measured "adequacy." The definitions themselves indicate that it is more likely that they represent quite different levels of functioning, although they relate to the same central theme. Indicating that they related in accord with the underlying principle of "adequacy," their intercorrelations were generally positive.

The fact that the initial and terminal variables for both d^2 and DI measures rarely appeared in the same cluster on the factor analysis underscores their limited stability. This finding indicated that the initial and terminal measures of these variables were probably not measuring the same things, except for DI_{GBR}, initial and terminal. The validity of both $DI_{GBR\text{-terminal}}$ and $d^2_{terminal}$ was questionable due to changed instructions for the GBR's terminal administration. These changes plainly influenced the DI and d^2 distributions (see Limitations). The DI_{ES}, DI_{IPS}, and d^2_{ES} were also of questionable validity because of the small number of rating dimensions used to derive them (two for each), even though the rating instructions on those instruments (ES and IPS) were consistent with the original rating instructions for GBR. Research using

consistent rating instructions and perhaps also some alternate definitions of adequacy seem required in order to more conclusively explore the reliability and validity of these measures.

This investigator believes that the operational definition of the discrimination index (DI) is in keeping with its theoretical definition and needs no modification. However, the operational definition of the discrepancy index (d^2) seems to be overly complex. A simple sum of magnitude of differences between self and other scores may be more appropriate. To identify possible curvilinear relationships among d^2 and such variables as the IPS' ORO and ORS (see Suggestions for Future Research), it may be necessary to maintain sign for individuals, while using magnitude alone for the group average. Taking sign into account poses additional problems, even for individual scores, since in this sample individuals rarely consistently rated themselves either higher or lower than others rated them across all dimensions. Thus, one would have to decide whether the effect of cancellations of magnitude due to summing both positive and negative differences was more important than overall absolute magnitude of discrepancies in perception.

Methodological Problems and Limitations of the Study

Self- vs. Other-report. --Hurley (1967) raised the issue of the validity of self-report ratings on the Jourard Self-disclosure

instrument, pointing out that the JSD correlated negatively with all other measures of SD and openness employed in her study. Graff (1969) essentially confirmed these results. Hurley (1967) concluded that self-reported SD was not a valid indicator of actual SD behavior in the group. The present study does not confirm the negative relationship between self and other ratings on the HSDR which was found by Hurley (1967) and Graff (1969). Initial differences between self and other ratings were greater than terminal differences on HSDR, but the correlations between self and other ratings were generally statistically significant. This observation is more in accord with the findings of Force (1969) concerning the HSDR. In the present study, other-ratings on SD tended toward superiority over self-ratings as a predictor of the outcomes on other variables. Self-ratings were also significant predictors, but generally with somewhat less efficiency, than were ratings by others.

An important distinction between the present sample and those used by Hurley (1967), Graff (1969), and Force (1969) is that it was considerably smaller and more psychologically sophisticated. Since the prior findings are based on expanded N's and upon groups which seem to be somewhat more representative of the general population, they must be given more weight as evidence on this issue than the present findings. The issue remains confused, however, due to the mixed nature of the evidence available.

It is this investigator's hypothesis that the two report sources represent different kinds of information. That is, self-ratings may differ from other-ratings for the same dimension because: (a) the individual has access to some information unavailable to others (e.g., the extent to which he hides or fails to express thoughts, feelings, motives, etc. of which he is aware), and (b) the person lacks access to some information available to others (i.e., because of defenses against self-awareness, or unavailability of nonverbal behaviors). The hypothesis is consistent with the theoretical formulations of Culbert (1968) regarding SD and the nature of knowledge about an individual ("It takes two to see one"). When the two kinds of information are highly correlated, there is high consensus in the group, which may stem from several sources. It might be due to a population or sample in which individuals' defensiveness is particularly low. On the other hand, "up-tight" groups may express high consensus out of perceived external threats or fear of confrontation. When self-other correlations are low, group consensus is low. This may indicate a group of highly defended, isolated, or antagonistic individuals. Thus, differences between the samples in the researches cited above may be a result of variations in such other variables as defensiveness. None of the research to date has attempted to account for such possibilities systematically.

Instruments and Experimental Design. --The nonsimultaneous administration of several instruments made relationships between the variables difficult to interpret. For example, the relationship between SD and orientation toward both self and others was obscured by the administration of the HSDR at the beginning and end of the group, while the IPS was administered only in the middle of the group. The single administration of the IPS precluded study of changes on that variable. Additional unknowns include whether the orientation scores obtained on that administration were representative of those persons in general and whether or not they were specific to that particular period in the group life. It would have improved the information available if all instruments had been administered similtaneously at the various measurement points in the group life.

Instruments and Instructions. --Another problem occurred in the administration of the instruments. The instructions differed on the initial and final administration of both the HSDR and the GBR. For the first ratings, group members were simply instructed to assign a rating from 1 to 7 (or 9) for each individual in the group. For the final ratings, it was emphasized that the entire range should be used, and, as much as possible, each rating in the range should be assigned to at least one group member. As one member pointed out on the post-group questionnaire, this change in instructions

resulted in more of a ranking than a rating procedure. This comment seemed especially relevant, considering the size of the group.

The discrimination index (DI) was defined to be the sum of the variances of the individual's ratings of other group members on the ten GBR items; obviously the instructional change discussed above radically influenced resultant DI scores. If each individual had faithfully followed the new instructions, there should have been essentially no differences in the sums of the variances between individuals. This was about what happened, although it is interesting to note that small differences remained, and that order effects were preserved (the correlation between GBRDI-initial and GBRDI-terminal equalled .85, with $p < .01$). The distribution of discrepancy index scores was also affected, as it was highly dependent on the GBR ratings, but it is less clear in what ways it may have changed.

One attempted solution to the problem of these alterations in DI and d^2 due to the change in instructions was to calculate alternate values for these variables using ratings from other instruments administered at the same time, but whose instructions were similar to the original GBR and HSDR instructions. These alternate measures were less reliable than desired because only two ratings were made on these two instruments (IPS and ES).

Experimental Design, External Criteria.--Fairweather (1967) and Campbell and Dunnette (1968) stressed the importance of making some kind of external evaluations of behavior in other situations, such as within the person's family, on the job, with his intimate friends, etc., in addition to the measures of changes internal to the group, as important sources of validation for the existence of change. Such criteria were not used in this study, and consequently, the study cannot report authentic interpersonal change and growth of the person as he appears and behaves in areas other than the rather special world of the therapy group. Given that the goal of such therapy is to cause interpersonal learning and growth that will enhance all of the individual's interpersonal experience, this lack of evidence bearing on the success or failure of the method to meet such a goal is a serious limitation of this study.

Sample Size. --Another limitation restricting the range of inference to other populations for all of the findings was, of course, the limited sample size. Although an N of 13 is adequate to satisfy the underlying assumptions of most of the parametric statistics used, the select nature of the present sample probably led to a condition in which the distributions of most of the population variables were considerably truncated. This reduces the likelihood of obtaining maximum efficiency by the correlational methods employed here.

And, although the conclusions may be applicable to similar samples of graduate students and professionals involved in the mental health services, it is unlikely that they could be extended to the general population, or even to populations comprising the average therapy group composed of patients or clients diagnosed as "mentally ill" in one form or another.

Implications for Further Research

The increased congruence between HSDR and GBR scores over time and the difficulty of separating them as constructs mentioned earlier raises the issues of levels of observation and the "binding" effects of the situation. Participants had little insight into other members at the beginning of the group, and therefore made ratings primarily on the basis of observable behaviors, whereas later, they knew a good deal more about the internal motivations, feelings, etc. of the others, and had been exposed to their self-perceptions for several months. This information might have been difficult to divorce from perceptions based solely on observables. One design that might be used to overcome these effects would be to have raters who are independent of the group and group process observe the sessions for which the ratings are to be made via videotapes. Such raters may well be able to approach each set of data, i.e., member's behaviors, with a fresher eye and less biased

expectations. Halo effects might also be minimized in this way by having different raters rate each of the behavior variables of importance. The raters should also not be told which sessions are early and which late in the group's life.

It was suggested earlier that discrepancy between self and other ratings as measured by the discrimination index (d^2) as it was used in this study might miss important curvilinear relationships between discrepancy and other variables such as the IPS' ORO and ORS. An alternative method of calculating discrepancy was proposed which would take the direction of the individual's discrepancy from the group's averaged rating of him into account.

One relationship which this investigator would like to see explored is that between such a new measure of discrepancy and ORO and ORS. I hypothesize that an individual who consistently underrates himself (S < O) will be classified as low ORS, high ORO (depressive mode of adjustment); individuals who typically overrate themselves (S > O) will be low ORO, high ORS (paranoid mode of adjustment); while individuals who show few discrepancies will presumably be high ORO, high ORS (confident, productive, "healthy" mode of adjustment). A look at the data for this sample, using admittedly shaky decision rules regarding personality style trends, and a d^2 measure of somewhat questionable validity, resulted in

Table 15. --Predictions of discrepancy between self and other ratings from interpersonal style.

ORS	ORO	Interpersonal Style	Predicted Discrepancy	Actual Discrepancy	Success or Failure
7.3	6.2	adequate	0	- 4.4	F
6.6	5.9	adequate	0	0.0	S
4.3	5.2	depressed	-	-16.3	S
6.9	6.6	adequate	0	-10.4	F
7.4	7.2	adequate	0	.7	S
4.6	5.0	schizoid	--	-23.8	S
7.8	6.3	paranoid	+	6.9	S
6.2	4.8	paranoid	+	not available	-
5.9	6.8	adequate	0	1.2	S
5.4	6.3	depressed	-	- 7.2	S
6.1	6.4	adequate	0	-10.0	F
6.1	7.4	adequate	0	- .3	S
6.1	6.4	adequate	0	not available	-

[a]The decision rule used was: depressed, S < 5, O > 5; paranoid, S > 5, O < 5; adequate, S > 5, O > 5; schizoid, S < 5, O < 5. When S - O > approx. 1.5, a trend toward depressed or paranoid was noted, even if the ratings fell in the adequate range.

[b]The decision rule here for success when d(predicted) = 0 was -2 < d(actual) < +2; for d(predicted) > 0, d(actual) > 2; and for d(predicted) < 0, d(actual) < -2.

eight of the eleven predictions being in the appropriate direction (see Table 15). A sample comprised of a broader range of interpersonal styles, including actual patients and normals, perhaps, and a better discrepancy measure, might yield very interesting results.

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APPENDICES

APPENDIX A

Intercorrelation Matrix

and

Table of Significant Values of $\underline{r}$

Intercorrelation matrix of the thirty-three variables employed.[a,b]

	Initial							Terminal							Change (T-I)							Miscellaneous Others												
	d^2	DI	GBR-S	GBR-O	GBR-#4	HSDR-S	HSDR-O	d^2	DI	GBR-S	GBR-O	GBR-#4	HSDR-S	HSDR-O	d^2	DI	GBR-O	GBR-#4	HSDR-O	GBR-DI	IPS-DI	ES-d^2	GBR-DI	IPS-DI	Open-O	DS-O	ES-O	Open-S	DS-S	ES-S	ORO	ORS	IPS
Variable #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
1		28	14[c]	02	47	25	45	21	06	24	07	05	15	02	23	11	16	23	43	44	23	35	09	05	20	29	17	03	07	04	04	25	16
2			16	36	07	43	19	56	62	26	31	07	41	35	46	13	15	03	24	86	64	05	85	09	30	14	21	48	47	51	06	26	18
3				60	16	75	58	09	62	67	77	48	66	69	17	68	71	48	30	17	15	18	06	34	75	63	61	60	73	77	75	44	25	43
4					19	76	43	22	58	72	70	39	55	53	24	50	48	33	24	27	04	22	33	39	63	53	61	63	68	73	36	11	18
5						15	33	01	23	57	46	47	49	49	22	34	33	09	28	32	34	04	25	38	48	63	64	34	33	32	28	05	15
6							60	02	79	61	72	26	65	64	12	72	53	20	21	36	12	00	48	56	73	50	59	76	79	81	51	08	39
7								21	44	38	57	24	60	62	07	43	35	06	22	05	23	15	14	48	70	62	61	38	61	54	30	51	45
8									13	34	02	11	12	01	90	23	02	13	17	57	84	41	39	53	04	11	05	18	15	18	60	83	76
9										64	79	30	70	78	13	86	72	20	54	43	09	22	66	47	69	50	60	79	74	78	31	17	32
10											83	73	76	72	45	64	72	55	48	16	08	22	29	17	71	74	70	73	75	71	02	18	03
11												73	79	94	09	79	90	54	61	11	17	01	34	51	94	88	91	87	90	91	34	31	39
12													61	72	16	43	79	83	66	20	09	05	00	05	73	79	76	63	69	83	11	14	01
13														87	22	61	66	39	50	21	00	28	44	39	77	66	71	87	86	81	05	08	10
14															05	76	89	50	64	11	16	25	39	52	93	83	90	88	91	90	19	35	32
15																16	01	05	01	37	77	56	43	53	17	29	16	16	21	11	58	61	64
16																	81	27	32	06	31	24	25	53	68	54	63	68	63	66	42	40	32
17																		89	75	03	15	16	11	34	82	76	79	77	78	79	21	32	32
18																			57	03	11	08	17	18	52	50	46	50	58	51	06	13	10
19																				09	02	45	46	19	47	43	52	71	53	59	06	07	06
20																					03	06	31	04	10	11	05	32	34	38	00	61	37
21																						18	46	70	18	16	25	03	00	05	41	43	51
22																							50	27	04	23	03	26	09	09	04	12	09
23																							15	21	35	25	34	53	45	48	06	25	15
24																									51	34	52	48	44	54	58	30	51
25																										93	95	83	94	92	25	34	34
26																											96	67	79	77	06	34	22
27																												76	84	85	12	30	23
28																													93	95	23	00	17
29																														97	24	12	23
30																															28	08	23
31																																50	89
32																																	83
33																																	

[a] Levels of significance and their corresponding values of r appear on the following page.

[b] N = 13 for all variables except terminal d^2 and GBR self-ratings, d^2-change, terminal GBRDI, and GBRDI-change. For these variables, N = 11.

[c] Negative correlations are underscored.

Table 16. --Significance values of r.

df	p	r
11	.10	.48
	.05	.55
	.01	.68
9	.10	.52
	.05	.60
	.01	.74

APPENDIX B

Hurley Self-Disclosure Ratings

SELF-DISCLOSURE RATINGS

Shirley J. Hurley and John R. Hurley
Michigan State University

The concept of Self-Disclosure with which this scale is concerned is described by Sidney Jourard in The Transparent Self (1964). How self-disclosing a person should be rated depends more upon the direction of his perceived motivation and intent than it does upon the number of self-references, amount of verbalization, level of insight, or the appropriateness of the self-conception. The person's general behavior, affect, apparent degree of honesty, and sincerity must all be taken into account.

For example, a person who constantly talks about himself in the group may not be a real self-discloser when carefully observed but may be wearing a mask of transparency or playing a "game" of "See how open and honest I am." Glibness and pseudo self-revealing statements may be nearly as defensive or as self-concealing as complete refusal to talk about feelings. Psychology, social work, and counseling students are very often found playing at this game of "dig my great insights."

An individual may be generally quiet and say practically nothing about himself but make a single statement with great feelings, such as, "I realize how much I have always tried to please people by presenting myself as just being a nice person, but I'm really afraid of people," or "I'm beginning to realize that I have never been close to anyone." Even if this is the only remark a person utters in an hour but it was very meaningful to him, the individual should be rated in the self-disclosing direction.

Difficult to rate accurately is the individual who seems to think a lot about himself but who often arrives at very erroneous or naive conclusions about himself. Even if it is obvious that the individual is a long way from knowing or being completely honest with himself, but appears genuinely motivated to move toward further self-discovery, he should be rated in the self-disclosing direction.

Obviously no individual is completely transparent and openly self-disclosing in all situations, but there are some who seem deeply motivated to move in this direction and are almost always

willing to examine their thinking or behavior. An important feature of this rating scale is the attempt to assess motivation toward "openness" or movement away from it.

The intent of this scale is to differentiate people on their motivation and style of communication with others in the absence of any concern with their psychopathology or psychiatric status. One puzzling aspect of working with people has been the small relationship of the extent of "sickness" or "wellness," or "life adjustment" to individuals' ability to communicate in psychotherapeutic situations. Some clients with histories of depression or neurotic behaviors may progress faster in group counseling than some so-called "normals." Psychiatric classifications may be less important with respect to the individual's growth potential than the organization of their self-system in terms of its rigidity or fluidity which is manifested by their degree of self-disclosure in interpersonal communication.

Instructions for Administering the
Hurley Self-Disclosure Ratings

1. Give the scale while you are present. Give participants some time (about 10 minutes) to read it.

2. Tell them that these ratings will not be shared with anyone unless they wish to personally discuss a rating with an individual in the group at some later time. The ratings will not have any detrimental effect upon anyone so they need not be concerned with giving positive ratings. Tell them about the tendency to rate people in the middle of scales and to try to avoid the usual sets etc. Be sure to emphasize that they are to concentrate on rating the behavior observed within the group. If they know the person outside the group, try to think only about within-group behavior.

3. Tell them to look at the sheet. Read #1 as it appears. Then say "Many of you have probably encountered and may be encountering within the group individuals who talk and relate to you or others but seem to not hear you or others about arguments, opinions, feelings, or whatever. These people react as though they have definite sets about their opinions, values, etc. which are hardly modified for appropriate situations. You can often predict what this type of individual will say on most occasions after getting acquainted with their set. This type is usually quite opinionated etc."

   Read #2. Then say "This type of individual is very similar to #1 and the major difference is more of degree or sophistication. This type person often seems to hear others and seems more receptive to others' views but over a period of time it becomes obvious that they have found new ways to present essentially the same themes either about others or themselves. A feeling of superiority, greater intelligence or self-righteousness is sometimes apparent although partially concealed by a pleasant facade."

   Read #3 and #4. "These are more obvious categories as these people are very quiet and participate very little in the group interaction on a comparative basis. The main difference is in terms of observed feelings. #3 seems more sulky, bored, indifferent or angry. #4 is the quiet person who rarely speaks

but judging from facial expressions seems interested and involved but hindered by anxiety or habit from fuller involvement."

Read #5. "This is often a pleasant, congenial, talkative group member who seems involved but avoids more personal or intimate expressions either of his own or in others. May respond to another's problems with sympathy but shifts the problem to make it lighter or ordinary or in some way less threatening to discuss."

Read #6. "This individual is more interested in talking about personal feelings and problems than #5 but always about someone else's problems rather than his own."

Read #7 and #8. "These categories seem fairly obvious. They are similar but vary in degree. #7 really shares feelings and problems with the group but doesn't seem as comfortable in doing this or does it much less than #8. Probably few people are like #8 much of the time."

4. Now rate all members including yourself on the form. Rate by number. Feel free to ask questions.

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Hurley, J. R. & Hurley, S. J. Toward authenticity in measuring self-disclosure. Manuscript submitted to Journal of Personality and Social Psychology.

Jourard, S. M. The Transparent Self. Princeton: Van Nostrand, 1964.

SELF-DISCLOSURE SCALE

1. Makes an obvious effort to project some desired self-image. Seems to continually rationalize or make defensive type statements. Personality structure seems very rigid. Confrontation doesn't penetrate. Person seems not to "hear or receive" others.

2. Has a less obvious need to project a desired self-image but generally seems to be playing a role. Resists confrontation by defensive maneuvers. Seems to "hear and receive" others momentarily, but quickly establishes a new defensive position in further support of a desired image.

5. Plays the role of a conventionally friendly person but rarely reveals self. May be outgoing but is limited by conformity to a social code which restricts conversation largely to ideas rather than feelings. Seems more "inhibited" than defensive in emotional expression.

6. Often participates in social communication and seems genuinely involved and concerned for others' feelings and problems but rarely reveals own personal feelings. The person who frequently "plays counselor" but hardly ever "plays client" epitomizes this type.

OVERTLY SELF-CONCEALING ← 3 ← 4 → INVOLVED CONVENTIONAL → 7 → 8

1 ← 2 COVERTLY SELF-CONCEALING 5 → 6 SELF-DISCLOSING

3. Seems withdrawn from social interaction and uses passivity as a defense against involvement with others. Resists efforts to elicit social participation. An underlying hostility sometimes seems present in this apparent indifference.

4. Seems withdrawn from social interaction and uses passivity as a defense against the exposure of anxiety and fear. Conveys an attitude of wishing to communicate with others but of not "knowing how" or of being afraid to try.

7. Seems in "good contact" with own feelings and reveals them to selected others from time to time. Seems to be genuinely motivated toward a self-honesty which can be shared with others, but sometimes appears uncomfortable with this goal.

8. Is actively involved in sharing real thoughts and feelings in many interpersonal relationships. Although not always "transparent," the person seems to be highly motivated toward being self-disclosing and seldom appears uncomfortable about this goal.

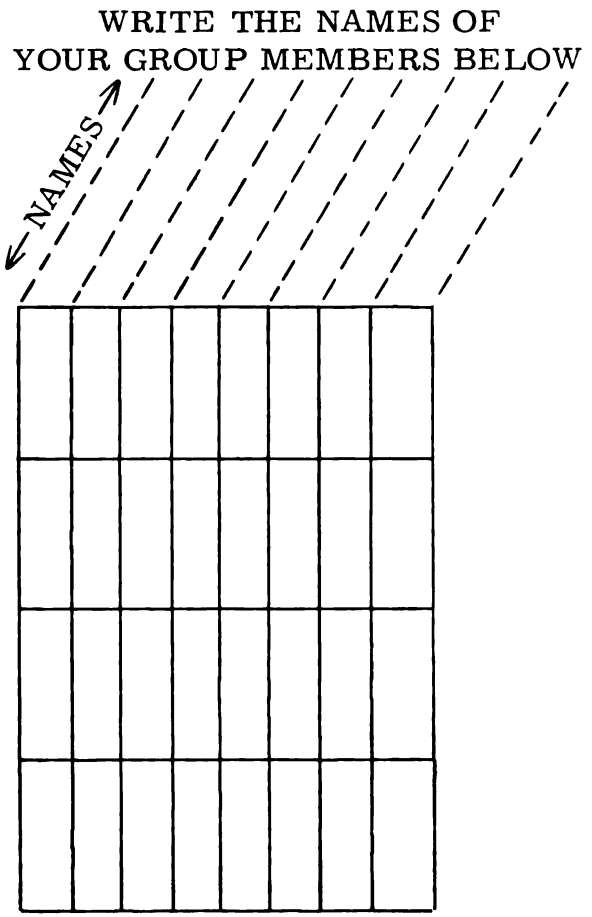
APPENDIX C

Group Behavior Ratings

GROUP BEHAVIOR RATINGS*

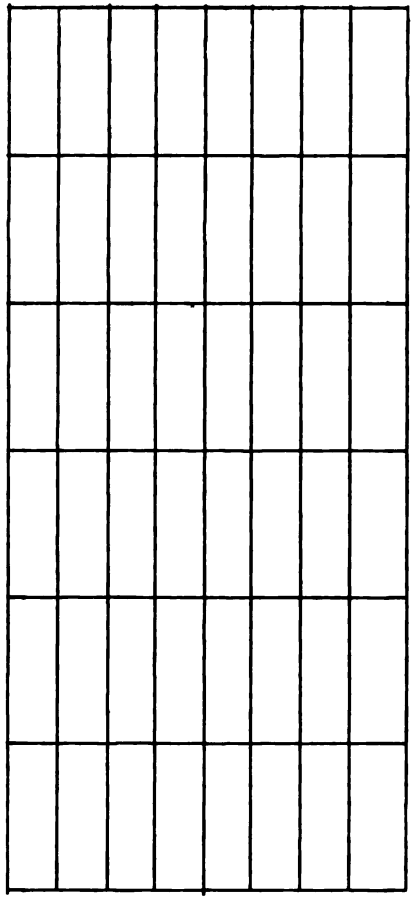
Ratings of Group Behavior

Instructions: Rate each member of your group on each of the variables described below. Use a 9-point scale, where "1" is the lowest amount of the relevant variable, "5" is the midpoint, and "9" represents the highest point. Please rate all members of your group on each dimension before proceeding to the next.



Has seemed interested and involved in the group's activities.	INVOLVEMENT
Has been willing to consider and try out new ways of doing things.	EXPERIMENTATION
Has helped to clarify and to make more understandable the events and processes in our group.	UNDERSTANDING
Has seemed to understand and learn from the reactions of others to his ideas and actions in the group.	RECEPTIVITY TO FEEDBACK

Has worked hard to influence others toward his point of view.	CONTROL	
Has been warm and supportive toward other group members.	SUPPORTIVE	
Has been willing to disagree with or to criticize others' ideas or actions.	FIGHT	
Has usually been willing to go along with what others want to do.	DEPENDENCE	
His overall effectiveness as a member has contributed significantly to the group's progress.	EFFECTIVENESS	
As time has gone on, his overall effectiveness as a group member has increased.	INCREASED EFFECTIVENESS	



Source: Harrison, R., & Oshry, B. I. The impact of laboratory training upon organizational behavior: methodology and results. Unpublished manuscript, National Training Labs, Washington, D.C., 1967.

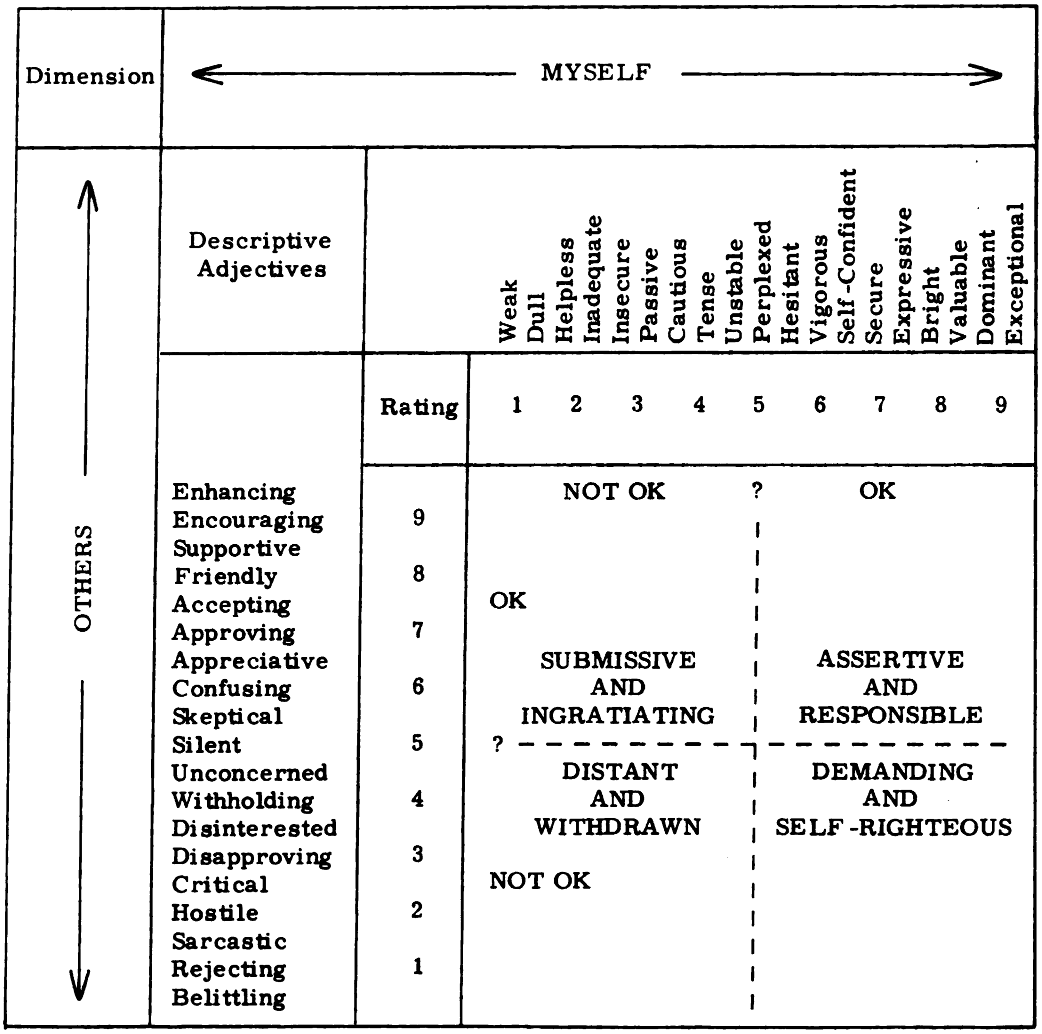
*The initial version. Added to the instructions for the terminal version was the sentence: "Try to use ratings from 1-9 on each variable; the ratings apply only to behavior in the group."

APPENDIX D

Summary of Interpersonal Styles

SUMMARY OF INTERPERSONAL STYLES

Overt Behaviors--Interpersonal Styles and Underlying Assumptions
John R. Hurley--Michigan State University



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APPENDIX E

Encounter Arena: Openness and Data-Seeking

ENCOUNTER ARENA: OPENNESS AND DATA-SEEKING

Ratings of OPENNESS and DATA-SEEKING

GENERAL INSTRUCTIONS: You are asked to rate all members of your group, including yourself, on the dimensions of OPENNESS and DATA-SEEKING, using the definitions given below. In making these ratings you are asked to focus exclusively upon behaviors of these persons within this group. Please separate-out your other impressions of each individual outside of this group, including casual contacts in other circumstances or your impressions of how they act "back home." It is important that you attempt to use the full range of possible scores in making each rating. Make as many distinctions between individuals as you possibly can. The average or mean rating should be assigned to the individual or persons who you view as closest to the average of your group, even if your group seems quite different than other groups. Now, write in the names of all members of your group in the spaces given below:

_____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____

(Self)

OPENNESS: In making this rating you are asked to focus upon how fully each person has shared, within this group, his personal reactions, thoughts, and feelings toward the other group members. The emphasis is upon "here and now" interactions, such as how he felt when confronted or challenged by others in this group; "back home" experiences or "childhood traumas" are largely irrelevant except when they related directly to "here and now" interactions. Persons who have offered disguised or "phoney" presentations of themselves to the group should generally be rated low on OPENNESS, while persons who have fully and authentically shared themselves should be rated higher. Using the OPENNESS scale given below, enter a number in the space given below for each person identified above, starting with yourself.

1 2 3 4 5 6 7 8 9

(minimally open) (average) (maximally open)

_____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____

DATA-SEEKING: For this rating you are asked to reflect upon how fully each person in your group has sought to obtain authentic reactions and information about how the other group members have perceived them. One of the goals of this group experience has been to supply additional and fresh information concerning how each one relates to others. How fully has each person sought to comprehend, clarify, and to digest the responses which others have offered? Some people tend to evade such data by keeping in the background; probably they should be rated below average. Again, the focus is upon the "here and now," so consider only how fully each person has sought to obtain a better grasp of how he or she relates to others within this group. Enter these ratings in the appropriate spaces given below.

1 2 3 4 5 6 7 8 9

(minimal data-seeking) (average) (sought maximal data)

_____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____

J. Hurley 5/15/68

APPENDIX F

Initial Member "Contracts"

PROPOSED CONTRACT WITH STUDENTS INTERESTED IN GROUP PSYCHOTHERAPY COURSE, PSY. 984

The instructor will regard this statement as an expression of your depth of commitment to the various aspects of this course. The degree to which you live up to your expression of commitment to various goals of this course, by encircling the alternative responses to the items described below, may partially determine your grade for this course.

	LOW		MODERATE		HIGH
1. Willingness to fully engage in depth interactions with other group members.	1	2	3	4	5
2. Willingness to work at becoming a more self-disclosing and authentic person during the group therapy sessions.	1	2	3	4	5
3. Willingness to read and discuss assigned readings or textbooks.	1	2	3	4	5
4. Willingness to participate in nonverbal communications exercises or experiments.	1	2	3	4	5
5. Willingness to keep a dated diary record briefly staging your reactions to each group session and to make this available to the instructor on request.	1	2	3	4	5

	LOW		MODERATE		HIGH
6. Your commitment to expressing yourself candidly and as fully as possible within the participation sessions.	1	2	3	4	5
7. Your willingness to express angry or rejecting feelings toward other group members in addition to more positive feelings.	1	2	3	4	5
8. Your willingness to participate in a "marathon" session of about 36 hours duration without interruptions.	1	2	3	4	5
9. Your willingness to be free of self-restricting or "protective" subcontracts with other group members which might adversely influence your honesty or self-disclosure.	1	2	3	4	5
10. Your willingness to maintain ethical responsibilities by not communicating confidences revealed during group sessions to nongroup members.	1	2	3	4	5
11. Your willingness to report back to the group on conversations held with group members outside of the group sessions which pertain to the group's life.	1	2	3	4	5

	LOW		MODERATE		HIGH
12. Willingness to cooperate with the instructor by participating in brief research exercises.	1	2	3	4	5

Signed: _____

J. Hurley
5/67mc

APPENDIX G

Terminal Questionnaire

June 11, 1968

Dear :

In reviewing the partially complete data from the second administration of the Hurley Self-Disclosure Ratings (HSDR) for our Psy 984 group, I have noted an intriguing and substantial shift in HSDR scores since that measure was previously given to this group in November 1967. A substantial downward shift has occurred; our group members are rating each other as less self-disclosing in May 1968 than we did in November 1967.

The following are among some obvious possible interpretations of this finding:

a) We actually shifted toward becoming less self-disclosing over this seven month period;

b) This change is meaningless due to intrinsic limitations of the HSDR measure;

c) Our increased awareness of our own defenses and those of others gained over this interval resulted in the recent ratings being more valid than the November ratings.

Obviously these selected hypotheses do not exhaust the list of plausible alternatives. Your thoughts about this finding interest me and I hope that you will share them by writing at least a brief comment about this phenomenon. Also, I would appreciate it if you would express your own relative confidence in the relevance of the three hypotheses given above by assigning ranks 1 through 3 to them, with rank 1 identifying your view of the most relevant interpretation, etc.

I will provide you with a full report of final HSDR scores and also the recent "ratings of group behavior" as soon as I receive complete data from all group members.

Sincerely,