THESIS

This is to certify that the

thesis entitled

Participant and Observer Perspectives on the Interpersonal Climate of Small Groups

presented by

Lori J. Slough

has been accepted towards fulfillment
of the requirements for

Master's degree in Psychology

Major professor

Date 5/15/86

PARTICIPANT AND OBSERVER PERSPECTIVES ON THE INTERPERSONAL CLIMATE OF SMALL GROUPS

By

Lori J. Slough

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

MASTER OF ARTS

Department of Psychology

1985

ABSTRACT

PARTICIPANT AND OBSERVER PERSPECTIVES ON THE INTERPERSONAL CLIMATE OF SMALL GROUPS

by

Lori J. Slough

Derived from diverse theories and empirical studies, hypotheses concerning developmental shifts of interpersonal climate within small groups were formulated for exploration. Data were collected through routine end-of-session administrations of MacKenzie's (1978) 12-item Group Climate Questionnaire to nonparticipating observers and all 82 members of 11 groups that convened about 20 times for nearly 50-hours over nine weeks. Interitem correlations were computed independently for groups' early, middle, and late sessions, separately for members and observers. Analyses of these six matrices identified a progressively clearer bipolar cluster, designated Affiliative (items Cared, Confronted, Participated, Reasoned, & Revealed) versus Disaffiliative (items Angry, Anxious, Avoided, Distanced, & Rejected), that overshadowed initially hypothesized shifts on individual items. Despite bottoming near midgroup, Affiliative total ratings generally strengthened with more group experience. Largely complementary, Disaffiliative ratings peaked at midgroup. Members' ratings were much more favorable and less dispersed than were observers', although each source's data supported these patterns.

ACKNOWLEDGMENTS

I would like to extend great thanks to the members of my committee, John Hurley, Bob Caldwell, and Dozier Thornton for their assistance with this project and for guiding my development as a researcher. Particular thanks goes to John Hurley whose enduring support and direction made this study possible.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

INTRODUCTION

Small groups connect people to society and when individuals are cut off from significant groups they usually feel alienated and confused (Durkheim [1894], 1951). Small groups have been classified into two general types, primary groups and task groups (Ridgeway, 1983). Cooley (1909) used the word primary to describe groups having significant emotional attachments, relative permanence, and a nonspecific purpose. The nonspecific purpose of these groups occurs because emotional relationships are the focus. Dunphy (1972) divided primary groups into four types:

1. Families
2. Free-association peer groups of childhood, adolescence, and adulthood; delinquent gangs and some small cohesive political elites (cabals); most close friendship groups
3. Informal groups existing in organizational settings such as classroom groups, factory work groups, small military units
4. Resocialization groups such as therapy groups, rehabilitation groups, and self-analytic groups (Ridgeway, 1983, p. 16).

Ridgeway (1983) has said "Primary groups are the one place a person can go to be responded to as a whole person" (p. 14). Dunphy believes it is within these groups that people learn the rules and restraints of society. Task groups exist to accomplish specific goals that range from making a policy decision, solving a complex problem, producing a product, to playing in a symphony, or moving a piano.

The boundaries between primary and task groups are not always clear but their predominant functions are the usual basis of classification. This study focuses on the small interpersonal skills group, a subvariety of the self-analytic or resocialization group. More specifically, this work will explore the development of interpersonal skills groups over time. According to Schutz (1955) the interpersonal perspective, central to this study, is relevant to a wide variety of groups because the efficiency of interpersonal interaction determines the amount of energy which will be available for task fulfillment functions.

Although therapy, rehabilitation, and self-analytic groups have different purposes and orientations, theories and studies based on one type of resocialization group are often generalized to the others. Two primary viewpoints are currently used to understand the development of interpersonal skill enhancement groups. Most widely supported is the view that such groups progress through identifiable stages (Bennis, 1964; Tuckman, 1965; Yalom, 1975; Lacoursiere, 1980). The substantiating evidence is largely anecdotal and unverified (Cissna, 1984), however, and empirical studies have not generally supported any consistent patterns of group development (Lakin & Carson, 1964; Lubin & Zuckerman, 1967). Gibb (1964) has presented evidence that these groups move through major developmental phases much less systematically and maintained that focal issues salient to all groups recur intermittently. This perspective is rem-

iniscent of Bion (1959), whose group culture studies were influenced by Freud's efforts to integrate ego and group psychology of large groups or "masses." The present study proposes to explore group development by systematically assessing interpersonal climate. Exploring group climate, this study will attempt to link developmental patterns found in the present interpersonal groups to existing divergent theories of group evolution.

LITERATURE REVIEW

Theories of Group Development

The term "group development" has been used to describe aspects of group functioning ranging from specific changes in relationships (intermember and leader-member) to general trends across the life of a group, such as shifts in anxiety and cohesion (Lacoursiere, 1980). In the present work group development refers to a sequence of behavioral norms that evolve from the interactions of group members (MacKenzie, 1978). Group development has also been described in terms of stages, phases, trends, and cycles. Stages and phases commonly refer to predictable sequences of events which occur at particular points of a group's existence (Lubin & Zuckerman, 1967). According to the dictionary of psychological terms (English & English, 1958), as noted by Lacoursiere (1980), stages are discrete divisions, phases are states in a series of changes, and trends are dynamic tendencies. Schutz (1964) defined group cycle as a recurring process by which change occurs.

Attention to the prepotent features of group interaction is necessary to any comprehensive understanding of group functioning. Lacoursiere (1980) contended that social-emotional behaviors and the level of task fulfillment are the most salient features of any group. Moos (1974) has presented evidence that "environments" can be adequately char-

acterized by the three general factors: relationship, personal development, and system maintenance. Relationship factors refer to involvement, support, and expressiveness. Personal development factors concern the specific tasks addressed by a group, while system maintenance consists of organization, clarity of expectation, and control within the environment. Group climate, as defined by Moos, appears to be a meaningful conceptual approach to the development of interpersonal groups because it addresses both the task and social-emotional aspects of such groups, described as important by Lacoursiere (1980). MacKenzie (1978) developed a measure of group climate which assesses the relationship, personal, and system maintenance aspects of an interpersonal group. Because this measure was sensitive to the predominant aspects of interpersonal group interaction it appeared to be a reasonable measure of group development.

As with many areas of clinical psychology, Freud was a pioneer examiner of the dynamics of group interaction. In Group Psychology and Analysis of the Ego, Freud (1922) commented that "each member is bound by libidinal ties on one hand to the leader . . . and on the other hand to the other members of the group" (p. 45). Freud believed that the projection of ego ideals onto the leader created unity and a reduction of ego and superego functioning among group members (Kernberg, 1984). Although Freud's ideas about group processes originated in concerns for large organizations, such as the church and the army, the issues of authority,

intimacy, and introjected self-concept addressed by Freud have consistently been identified with the interpersonal dynamics of small groups. While Bennis and Sheppard (1956) and Bion (1959) seemed most directly influenced by Freud's group theories, the primary issues that concerned Freud were reflected in most subsequent conceptualizations of group development.

Providing another early theoretical approach to group dynamics, Bion's (1959) central idea was that two abstract processes undergird every functional group: the "work group" and the "basic assumption" group. According to Bion, the work group functions emerge from the group's task and parallel the ego functions of an individual. "Basic assumptions" refer to behaviors and thoughts manifested in groups that are usually beyond the awareness of individual members. The three basic assumptions hypothesized by Bion are: dependency, pairing, fight-flight. Dependency refers to the group members' reliance on the leader for psychological nurturance and/or material rewards. Pairing is the mental state active in the group's aspirations to produce a Messiah to solve all possible problems. The third basic assumption, fight-flight, is that the group exists either to fight or to flee something. Bion held that all assumptive behavior was instinctual and that neither the work group nor the basic assumption group exists as a pure culture. "What one sees in reality is a work group which is suffused by, intruded into, and supported by the assumption groups" (Rioch, 1970, p. 62).

Further building on the ideas of Bion and Freud, Bennis and Sheppard (1956) formed a theory of group development emphasizing the concepts of dependence (authority relations) and interdependence (personal relations). They hypothesized two primary phases, each composed of three subphases. Phase one, Dependence, is composed of dependence-flight, counterdependence-flight, and resolution-catharsis. During dependence-flight group members were thought to turn towards group leaders for direction and, if allowed, would discuss issues existing outside of the group. Counterdependence was characterized by "fighting" among group members, distrust and ambivalence towards leaders, and division into allying subgroups. Intense involvement in the group task was thought to occur during resolution. There would be discussion about the trainer's role, the group would unify, and develop an internal authority system. Phase two, Interdependence, included enchantment-flight, disenchantment-flight, and consensual validation. During enchantment the group "becomes a respected icon beyond further analysis" (Tavistock Institute, 1956). Spirits were thought to be high and laughter to abound. Disenchantment followed and during this period members questioned the goals of the group and their own commitment to those goals. During the phase of consensual validation acceptance and understanding were hypothesized to be prevalent and assessment of participation to occur. Qualifying this, Bennis wrote:

> . . . in this attempt to generalize into a systematic theory the sequential relations of group

> life, there has been a tendency to force into categories behaviors and actions which are more indeterminate and overlapping than the theory implies (p. 269).

Of six groups Bennis tested this theory on, only one followed all of the predicted stages.

Separate from the psychodynamic perspective of Bennis and Sheppard, Tuckman (1967) suggested that most theories of group development fit one model. He reviewed fifty articles related to stages of group development. These articles were based on studies of therapy groups, T-groups, natural and laboratory groups. In his discussion of group development Tuckman considered task groups and interpersonal groups separately.

The model of group development derived from this analysis of interpersonal groups contained the stages: Testing-Dependence, Conflict, Cohesion, and Functional Role Relatedness. The term Testing-Dependence was based on the attempt of group members to understand what behaviors are appropriate in the group based on the reactions of the trainer or therapist. During the phase labeled Conflict group members were thought to become hostile toward each other and the trainer in an effort to resist conformity to group structure. The third phase, Cohesion, was characterized by acceptance of the group and the idiosyncracies of other group members. During Functional Role-Relatedness, Tuckman's final phase, group member roles were thought to be well established and the group turns to task related issues.

The stages Tuckman labeled Testing-Dependence, Conflict, and Cohesion were identified in the majority of therapy and T-groups. The only noteable deviation from these groups was the lesser tendency of Conflict to appear in therapy groups (13 of 26). In reference to the final stage of T-groups, Tuckman did not report how many identified what he termed Functional Role-Relatedness. He stated:

> There is some tendency for T-groupers, as there was for therapy groupers, to emphasize the task aspects of the final stage, namely the emergence of insight into the interpersonal process (Tuckman, 1956, p. 393).

He proposed that a group's increased ability to focus on the interpersonal task was due to support and opportunity for experimentation provided by the group. Tuckman aptly dubbed the four stages of group development which he identified by his review as forming, storming, norming, and performing.

Analyzing therapy groups, training groups, classes, families, teams, and committees, Gibb (1964) also articulated what he considered the four basic concerns of personal growth in groups. According to Gibb, as groups move toward actualization, they struggle with the focal concerns of acceptance, data flow, goal-formation, and control. Gibb believed that acceptance of self and others, and consequent reduction of fear of self and others, was vital to increased confidence and trust. Data flow referred to the behavioral norms influencing the degree of spontaneity versus caution acceptable in the group. Goal-formation was the reevaluation of personal and group motives, and the conversion of this

knowledge into action. Concerns of Control referred to the desire of group members to manipulate their behavior and the behavior of others. Gibb claimed Control was strongly related to Acceptance and Data Flow. He also reported that defensive personal needs (punishment, distance, persuasion, and control) declined in constructive groups while growth needs (love, intimacy, realization, freedom) increased. Although he regarded acceptance to be the catalyst for movement on the three remaining factors, he stated that "what seems most likely is that group growth is gradualistic and global, in which themes and subthemes may intertwine but in which the dramatic quality is wholeness, or the Gestalt" (Gibb, 1964, p. 289).

Yalom (1975) articulated three general phases of group development characterized by (a) orientation, hesitance, and search for meaning; (b) conflict, dominance, and rebellion; and (c) cohesiveness. Additionally, Yalom noted that group interaction was not rigidly tied to these stages. Making no explicit reference to phases, Yalom, like Gibb, contended that issues intermittently arose, receded, and resurfaced to be dealt with more thoroughly. Yalom has cited D. A. Hamberg (personal communication, 1968) as referring to the reemergence of these common issues as "cyclotherapy."

Following a thorough review of empirical and theoretical documents concerning group development, Lacoursiere (1980) recently introduced a theory centered on stages of Orientation, Dissatisfaction, Resolution, Production, and Termination. Lacoursiere's theory is similar to Tuckman's

except for his attention to termination. The present author found no other theory of group development that included the period of loss and mourning which group members often experience at groups' end. According to Lacoursiere, although these primary characteristics are particularly visible within their respective stages, considerable overlap and "hints of most stages can often be found during each of the other stages" (p. 28). Lacoursiere's hypotheses compromised elements of stage and simultaneous-process theories.

Bennis (1964), Tuckman (1965), Yalom (1975), and Lacoursiere (1980) seem to agree that interpersonal groups are characterized by an initial orientation or dependence phase, followed by a period of increased conflict, which in turn leads to cohesion or resolution. Bennis's conceptualization differs from the others in that it has two periods of both conflict and resolution. These authors seem to agree that the final phase of group interactions contains high levels of acceptance and cohesion but Tuckman and Lacoursiere additionally claim that this is also a period of increased productivity. Bennis, Yalom, and Lacoursiere all noted that the theories they put forward represented general, but not rigid, behavioral trends. The theories of Bion (1959) and Gibb (1964) were largely divergent from the previously mentioned authors.

Empirical Studies of Group Development

Although Philip and Dunphy (1959) and Bales and Strodtbeck (1951) were able to empirically derive a pattern of development common to problem-solving groups, studies of interpersonal group development have rarely yielded equally clear patterns. Two works appear representative of the disparity between empirical investigation and theory in this area. Studying four interpersonal training groups that met for 12 sessions during a single week, Lubin and Zuckerman (1967) collected data using the Multiple Affect Adjective Check List (MAACL) and five perceptual-cognitive task aspects of these groups. The MAACL yielded scores of anxiety, depression, and hostility, and the other five scales addressed worth of session, activity level, sharing of feelings, amount of conflict, and cogency of group content.

> Analysis of variance indicated significant session meeting differences on all eight variables. Some similarity of group trends over sessions, therefore, is present. However, group by session interactions were significant for six of the eight variables, which implies some degree of dissimilarity of the group trends over sessions (for the different groups). Thus the hypothesis of consistency of trends from one group to another is not supported (Lubin & Zuckerman, 1967, p. 365).

In spite of these findings Lubin and Zuckerman (1967) noted that all of the variables measured peaked during session six of eight sessions and that as feelings were shared more openly, anxiety, hostility, and depression declined. While the present study does not address differences between groups, the work of Lubin and Zuckerman (1967) is important

because it is one of the few systematic studies of interpersonal group development.

Similar findings emerged from Lakin and Carson's (1964) investigations of the extent to which participants of interpersonal training groups perceived developmental changes. They collected data from four groups attending a 16-session, two-week training program at a state mental health agency. Participants' ratings of each session on 11 variables displayed considerable intergroup variability.

Because there is currently no singly accepted theory of group development, and because the purposes and duration of such groups vary greatly, little empirical work has been conducted on the length of group stages. Bales and Strodtbeck (1951) reported that common stages were evident in single sessions, but Psathas (1960) found no evidence of sequence conformity. While considerable anecdotal material supports the existence of uniform developmental patterns, regardless of group duration, empirical evidence has not led to a single model of interpersonal group development.

Group Climate

The usefulness of group climate as a measure of interpersonal group development has previously been discussed. Following a thorough survey of the relevant literature, MacKenzie (1978) found no reliable measure of group climate. MacKenzie (1979) subsequently developed the Group Climate Questionnaire (GCQ) with concern for the importance of

describing "not what should, might, or could occur in . . . a group, but what actually does happen" (p. 473).

MacKenzie's (1978) original GCQ had 32 items. Factor analysis of these items revealed the following clusters: engagement, support, practicality, disclosure, cognition, challenge, conflict, and control. A shortened version of the Group Climate Questionnaire (GCQ-S), contains 12 items derived from those clusters. Based on their predominant emphasis these 12 items will be referred to as: Revealed, Participated, Reasoned, Confronted, Cared, Normative, Angry, Depended, Avoided, Anxious, Distanced, and Rejected. GCQ-S clusters are represented by either one or two items. This accounts for the discrepancy between the original number of clusters and the number of items appearing on the shortened Group Climate Questionnaire. A subsequent GCQ-S factor analysis yielded (MacKenzie, 1983) scales labeled Engaged, Avoiding, and Conflict. In the 1983 American Group Psychotherapy Monograph Series, MacKenzie reported that the GCQ was a clinically useful measure of group progression. He asserted that the dominance of particular group behaviors surface with the GCQ because raters consider the behavior of all group participants for an entire session. He viewed GCQ-S as particularly useful for understanding blocked interactions noting that the ratings of "stuck" groups often reflected

> difficulty identifying the relationship between positive bonds and interpersonal work; they do not conceptualize the idea of avoidance of personal initiative; and friction is seen only in relationship to meeting group expectations (p. 168).

Although MacKenzie (1983) administered the GCQ-S to members of 12 psychotherapy groups that met for approximately 35 sessions, he only analyzed data from the first 14 sessions. MacKenzie (1983) identified sessions from 1 through 4 as featuring Engagement, sessions 5 through 6 as featuring Avoidance, sessions 7 through 10 as featuring rising Conflict and decreasing Avoidance, and sessions 8 through 14 with increasing Engagement.

Divergent Perspectives of Observers and Group Members

Related to empirical considerations of group development, it appears important to consider the source of group development ratings. Studies of group development often rely on data collected from observers (Bales & Strodtbeck, 1951; Lieberman, Yalom, & Miles, 1973; Psathas, 1960; Stock & Thelen, 1958) in addition to participants. Notable differences in how events are perceived by active participants (actors) versus others (observers) have been documented by Nisbett and Jones (1971). Actors consistently attribute their own behavior to situational factors, while observers tend to attribute actors' behavior to actors' stable dispositional factors. Additionally, Cunningham, Starr, and Kanouse (1979) reported that passive observers attributed negative interactions to actors more often than the actors attributed negative dispositions to themselves. In their classic study of encounter groups, Lieberman, Yalom, and Miles (1973) also found that detached observers rated the

behavior of leaders less favorably than did participating group members. Due to the frequent use of observers' data and the well-documented divergent perspectives of participants versus observers, it is important that data be assembled from each source. While not a direct study of attribution, significantly lower ratings of group climate by nonparticipant observers versus group members would be generally supportive of the work of Nisbett and Jones (1971) and specifically consistent with the findings of Cunningham et al. (1979).

Group Climate and the Principal Dimensions of Interpersonal Behavior

As mentioned earlier, in addition to the differing perspectives held by group members versus observers, large discrepancies have been reported (Lakin & Carson, 1964; Lubin & Zuckerman, 1967) in the perceptions of groups participating in programatically similar experiences. It is conceivable that such differences have also been a function of unique personality constellations that formed the culture of these groups (Schutz, 1955).

Wholly independent of this information about group climate and person perception, agreement has apparently been reached (Hurley, 1980; Kiesler, 1983; Wiggins, 1982) within the broader domain of interpersonal literature that only two principal bipolar dimensions, often labelled affiliation and dominance (Wiggins, 1982), undergird a wide variety of

empirical findings. Hurley (1976, 1980) articulated the primacy of these two dimensions in diverse theories of personality and psychopathology including those of Benjamin (1974; Berne (1966); Foa (1961); Leary (1957); Lorr, Bishop & McNair (1965); and Symonds (1939). Many other authorities have also recognized the centrality of these two dimensions to various theories of personality (Adams, 1964; Carson, 1969; Freedman, Leary, Ossorio, & Coffey, 1951; Kiesler, 1983; Schaefer, 1961). Hurley's (1976, 1984) group-oriented measures of Acceptance versus Rejection of Others (ARO) and Acceptance versus Rejection of Self (ARS) appear to assess affiliation (ARO) and dominance (ARS) with reasonable adequacy.

These ratings have also been positively linked to group outcome (Hurley, 1978), as the mean ARS and ARO ratings of individuals by all other group members appeared to correlate positively with the interpersonal gains of clients within a 50-hour psychotherapy group. ARS and ARO ratings also correlated highly (median r = .71) with the interpersonal effectiveness of paraprofessional child workers as judged separately by self, patients, co-workers, and professional mental health supervisors (Small & Hurley, 1978). Additionally, among mental health professionals attending annual institutes of the American Group Psychotherapy Association, ratings of leaders' ARS and ARO behaviors by members of interpersonal groups have been found to link consistently

and positively with group members' mean ARS and ARO gains (Hurley & Rosenthal, 1978a, 1978b; Hurley, 1984).

Separate from these findings, Lieberman, Yalom, and Miles (1973) linked the climate of interpersonal groups to the benefits realized by group members. Their study, reported in Encounter Groups: First Facts, provided the single most comprehensive exploration of interpersonally-oriented groups. They found that elements of group climate correlated positively with their multifaceted and elaborate measure of "group yield" or outcome. Their group observers completed a questionnaire consisting of 12 semantic differential items (tense/relaxed, fast/slow, angry/harmonious, etc.) after each group session. Factor analyses of these ratings identified dimensions labeled "involvement intensity" and "harmony/anger" as primary. Late in the experience of their 18 30-hour long groups, "group yield" was found to correlate positively with both "involvement intensity" (.56) and "harmony" (.52). The studies of Hurley (1978, 1984) and Hurley and Rosenthal (1978a & 1978b) indicated that the ARS and ARO measures were useful in predicting group outcome. Lieberman, Yalom, and Miles (1973) have linked group outcome to group climate. In light of these relationships it appears reasonable to expect that groups' mean ratings on the ARS and ARO measures will link directly to features of their emotional climate.

Hypotheses

The literature reflects considerable divergence between theoretical and empirical works supporting the ideas that groups evolve through stages that are discrete, overlapping, or cyclic. Based on the works of Bennis (1964), Tuckman (1965), Yalom (1975), and Lacoursiere (1980) the hypotheses reflect the expectation that the initial stages of group interaction will be characterized by higher levels of Dependence, Normative behavior, Anxiety, and Reasoning, while the middle sessions will contain higher levels of conflict or Anger, Confrontation, and Rejection. Based on Gibbs' (1964) assertions that acceptance, data flow, goal formation, and control would fluctuate throughout group sessions it was hypothesized that levels of Avoidance, Care, Participation, Distance, and Disclosure would not vary significantly from early, to middle, to late group sessions of group climate. Well-known differences in how situations were perceived by participants versus observers suggested that including both perspectives might illuminate these issues. Due to the availability of data related to the two principal dimensions of interpersonal behavior an exploration of the possible relationships of these data to group climate was conducted. Hypotheses relating Acceptance versus Rejection of Self and Acceptance versus Rejection of Others to group climate were originally made because the ARS and ARO measures appeared to assess aspects of behavior that would likely be reflected in particular components of group climate. Because it later

appeared important to look at the relationship of GCQ-S items and item clusters, the ARS and ARO measures were correlated with existing clusters instead of particular group climate items specified in the following hypotheses.

Hypothesis 1: The mean ratings of the GCQ-S's Depended, Normative, Anxious, and Reasoned, as separately perceived by members and observers, will be significantly higher during early sessions than for late sessions.

Hypothesis 2: Members' and observers' mean GCQ-S ratings for Confronted, Angry, and Rejected will be significantly higher during middle sessions than for either early or late sessions.

Hypothesis 3: Members' and observers' mean GCQ-S ratings for Avoided, Cared, Participated, Distant, and Revealed elements will not vary significantly from early to middle to late sessions.

Hypothesis 4: Groups' mean ARS ratings, representing interpersonal behavior's dominance dimension, will correlate positively with members' GCQ-S ratings of Confronted, Disclosed, and Participated, but negatively with Anxious, Depended, Normative, and Avoided.

Hypothesis 5: Groups' mean ARO ratings, representing interpersonal behavior's affiliative dimension, will correlate positively with members' GCQ-S

ratings of caring, but negatively with Anger, Rejected, and Distanced.

Hypothesis 6: When matched for sessions and groups, observers' mean ratings of group climate will be significantly less favorable than members'.

METHOD

Participants

The participants in this study were junior and senior level undergraduates enrolled in a regular course in psychology at Michigan State University (PSY 400: Small Experiential Groups for Interpersonal Learning or SEGIL). In this course students interact informally in small groups with the aim of developing interpersonal and intrapersonal skills through feedback, disclosure, empathy, and confrontation. These groups typically contain five to seven members and are solo- or co-led by undergraduates with prior SEGIL experience and who also subsequently prepared for their leadership role by observing these groups for a term. SEGIL groups meet for a total of about 50 hours over a 10-week period. Two 90-minute sessions are held weekly along with 12-hour marathon sessions occurring near the term's third and seventh weekends.

Students may subsequently enroll in PSY 400 as observers to enhance their understanding of interpersonal groups and as possible preparation for later leading SEGIL groups. Their responsibilities typically include directly observing two groups per week, giving immediate postsession feedback to group leaders, keeping a journal of their observations, participating in their own experiential group, attending weekly didactic and supervisory meetings, completing GCQ's,

and writing a term paper. Space and other considerations make it undesirable to have more than two observers present for any single SEGIL session. Selected largely because they had received more GCQ-S reports from observers than other groups throughout each term, a total of 11 groups (69% of the total available groups) from the Fall, Winter, and Spring terms of 1983 and 1984 were studied. While these groups had accumulated a greater number of observations than non-selected groups, no other notable observational biases were expected. Observer attendance at group meetings was primarily determined by the academic schedules of observers. Selecting groups that had received greater cumulative observer attendance also diminished the considerable imbalance between the number of GCQ-S reports available from members versus observers.

Measures

Group Climate Questionnaire--Short Form

As previously mentioned, MacKenzie's Group Climate Questionnaire (GCQ) has long (32 items) and short (12 items) forms. Because it was to be administered repeatedly at the end of each group session, the longer version appeared unduly burdensome in the present circumstances. The GCQ-S is a Likert-type scale with seven response alternatives for each item ranging from "not at all" to "extremely." In that it provided a space for additional comments and one less item ("Everything considered, I gained something of value

from today's session"), the observers' GCQ-S form differed slightly from that used by group members. Copies of observers' and members' GCQ-S are given in Appendices A-1 and A-2. The GCQ-S takes less than five minutes (only about two minutes after several prior administrations) to complete and contained seven single or dual-item elements: "engagement, disclosure, support, conflict, challenge, cognition, and control." As previously noted the elements were represented by 12 items that are presently referred to as: Revealed, Participated, Reasoned, Confronted, Cared, Normative, Angry, Depended, Avoided, Anxious, Distanced, and Rejected.

Acceptance versus Rejection of Self and Acceptance versus Rejection of Others

Hurley's ARS and ARO measures, representing the two principal interpersonal dimensions of affiliation and dominance (Wiggins, 1982), are each composed of four bipolar subscales. A Liked-Disliked scale was positioned before all others in an effort to diminish confounding perceptions (Smith, 1979). The ARS subscales are: Shows Feelings-Hides Feelings, Expressive-Guarded, Active-Passive, and Dominant-Submissive. The ARO subscales include: Warm-Cold, Helps Others-Harms Others, Gentle-Harsh, and Accepts Others-Rejects Others.

GCQ data were divided into early, middle, and late segments for analysis, with the early time segment consist-

ing of sessions 2 through 6, the middle segment, sessions 7 through 12, and the late segment, sessions 14 through 18.

For each set of five groups data was consistently received from 82 members. This produced 410 reports of group climate for each time period. There were respectively 48, 32, and 29 observations made in early, middle, and late time periods. The observations produced 240, 160, and 145 group climate reports. For each time period the means of members' and observers' ratings of each group were used to compare group climate information.

Data supporting the ability of the ARS and ARO measures to consistently reflect interpersonal behavior style has previously been cited (Hurley, 1978; Hurley, 1984; Small & Hurley, 1978). The construct validity of the ARS and ARO scales has been supported by their substantial and differential correlations with prototypical measures (Wiggins, 1982) of affiliation and dominance. Thus, Gerstenhaber (1974) found that LaForge and Suczek's (1955) LOV factor (affiliation) correlated .55 ($p < .001$) with ARO, but .00 with ARS, while ARS correlated .70 ($p < .001$) with their DOM factor (dominance), which correlated minimally (.18) with ARO. Additionally, the ARS and ARO measures have been found (Hurley, 1983) to correlate significantly with relevant features of Lorr and McNair's (1965) Interpersonal Behavior Inventory (IBI). Administration of the IBI near groups' end to 47 undergraduate members of six small experiential groups who had earlier made ARS and ARO ratings after both 22- and

45-hours of group interaction yielded peers' mean ARS ratings which correlated positively (.41 & .63) with the IBI's five-scale Dominance factor, but negatively (-.39 & -.44) with its Intropunitive factor. As also expected, the ARO scale correlated strongly (.73 & .74) with the IBI's six-scale Affiliation factor, but nonsignificantly with the IBI's Dominance and Intropunitive factors.

Procedure

GCQ-S, ARS, and ARO ratings are routinely collected from all members of Psychology 400 SEGIL groups. SEGIL observers also regularly complete and return the GCQ-S within 12 hours after observing each group session. Group members complete the GCQ-S immediately after each regular 90-minute session. An appointed group member routinely assembles and collates these data.

Including two 12-hour marathon sessions, SEGIL groups average about 20 meetings (range = 18 to 21) per term. To control for the likely inflation of GCQ ratings at the close of 12-hour sessions, marathon GCQ-S ratings are, instead, collected from members at the start of the first post-marathon meeting, usually after totals of about 20- and 40-hours of group interaction. Due to their 12-hour length, marathon sessions are not attended by observers, nor do they normally attend either the first or final meeting of SEGIL groups. Consequently, all GCQ data from these atypical sessions were excluded from all comparative analyses. ARS and

ARO ratings are collected from members following the close of each group's first postmarathon session to reduce undue attention to behaviors occurring within the atypical marathon sessions, and also as a precaution against inflated rating.

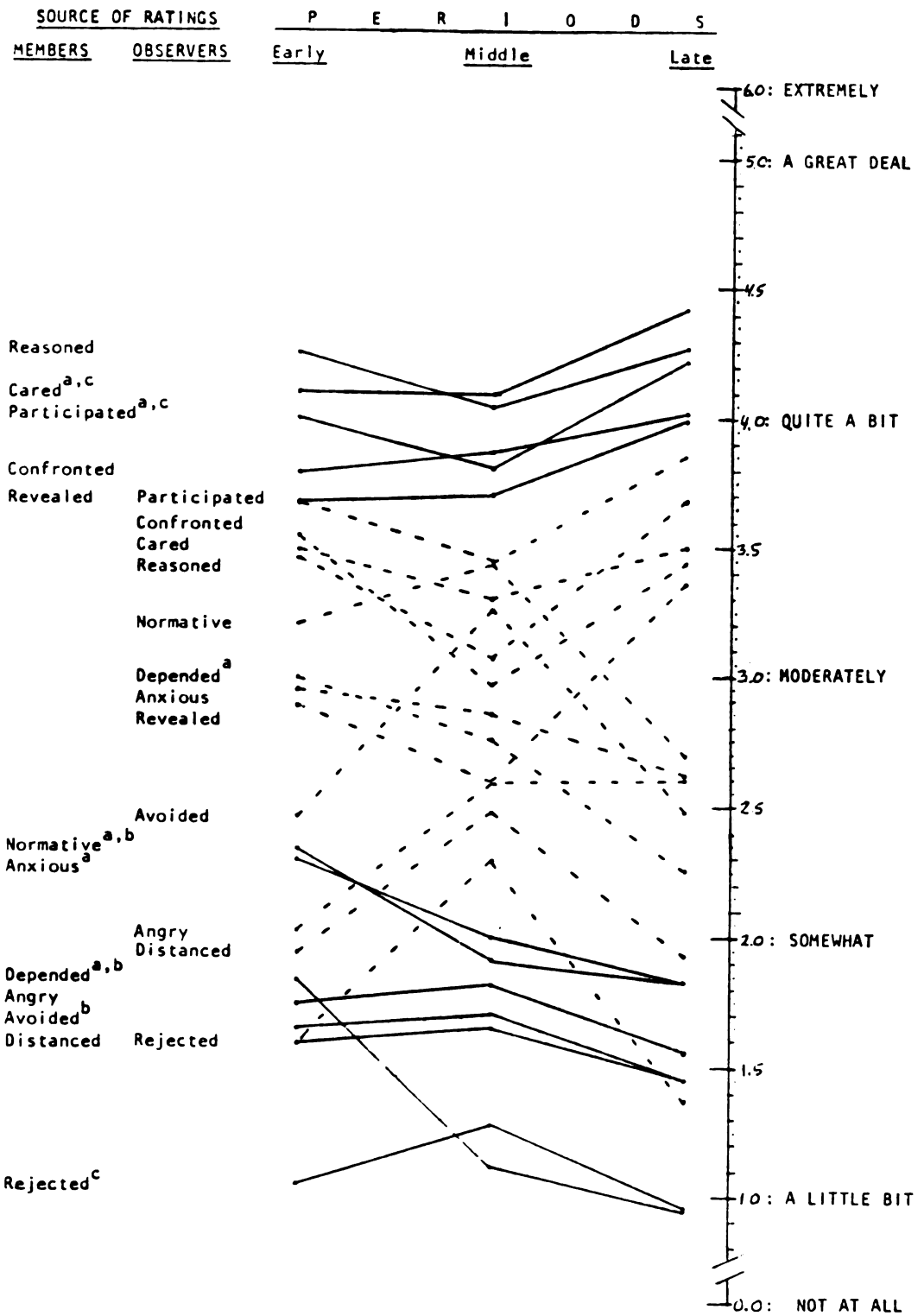
FINDINGS

Interperiod Shifts

An overview of members' and observers' separate mean ratings of each group climate item for the early, middle, and late periods, plus all interperiod shifts (as assessed by *t*-test), is given in Figure 1 and more fully reported in Appendices B-1 and B-2. Confidence in these member-based ratings exceeds that of the observer-based data because the period means of members typically represented 410 (82 persons X 5 sessions) ratings versus an average of 182 ([240 + 160 + 145]/3) ratings that undergirded the parallel observer means. Members and observers generally agreed on the relative intensity ("not at all" to "extremely") of these ratings on each occasion. Thus, both sources rated behaviors associated with five items (Cared, Reasoned, Participated, Confronted, and Revealed) as much more common than those reflected by the seven trailing items (Normative, Anxious, Angry, Avoided, Distanced, Depended, and Rejected). The product-moment correlation between members' and observers' all-period mean ratings of these 12 items was high ($r = .85$, $p < .01$). Beyond this broad intersource agreement, however, members differentiated between behaviors associated with these two subsets of items much more sharply (towards either "extremely" or "not at all") than did

Figure 1

Group Climate Mean Shifts of Members and Observers for Early, Middle, and Late Time Periods



[a] Shifted significantly from early to late.
[b] " early to middle.
[c] " middle to late.

observers. Observers' mean ratings were typically (in 31 of 36 instances) nearer this seven-point scale's midpoint ("moderately"), between the upper quintet and lower septet of members' ratings. Another notable difference was that members' interperiod shifts attained statistical significance ($p < .05$, 2-tailed) much more often (11 vs. 1) than did observers'.

An overall MANOVA contrasted members' and observers' ratings of the early, middle, and late phases. The dependent variables were each group's cumulative mean rating of each item for each period. Fully reported in Appendix C, MANOVA revealed an expected main effect indicating that members generally rated the climate of these groups more favorably ($p < .04$) than did observers. No significant interactions between members' and observers' ratings were found. All univariate contrasts between these ratings of members and observers were statistically significant, except for Participated. Due to item phrasing, a more favorable view was indicated by higher numeric scores on all five items of the upper quintet (labeled Affiliative), but by lower scores on the seven (Nonaffiliative) items. Examination of Figure 1 and Appendices B-1 and B-2 reveals that members rated each item more favorably than did observers.

Three separate MANOVA's were used to assess the hypotheses concerning interperiod shifts (upward, downward, and unchanged) in group climate items. The results of these

MANOVA's appear in Appendix D. No significant interactions between period (early, middle, late) and source of rating (member vs. observer) were found. As predicted, however, the MANOVA for items Depended, Normative, Anxious, and Reasoned was significant from early to late sessions ($F = 6.32$, $p < .003$). An examination of the mean group climate ratings (Figure 1) illustrates that scores on these items decreased over time. A large amount of the variance in this four-item multivariate series was attributable to Depended ($F = 26.95$, $p < .000$). Contrary to hypotheses, Confrontation, Anger, and Rejection were not significantly higher during middle than in early and late sessions. As predicted, mean ratings on Avoidance, Cared, Participated, Distanced, and Revealed did not shift significantly from early to middle to late sessions.

Overshadowing these MANOVA outcomes were the marked discrepancies between members' and observers' ratings of group climate, and the smaller observer sample size, both discussed earlier. Additionally the greater variability of observers' ratings must be noted when considering MANOVA results. The standard deviations of observers' mean ratings of individual items (median SD = 1.00) was often twice or more that of members (median SD = .445). This greater variance probably reflects observers' less consistent attendance at sessions and their lesser emotional involvement in group interaction.

T-tests, summarized in Figure 1, and Appendices B-1 and B-2, were used to clarify these MANOVA's. From the perspective of members, Depended (on leader) and Normative Behavior declined significantly from both early to middle (p's <.01) and early to late (p's<.001) while Anxious declined from early to late (p<.04). Reasoned did not change significantly. While Anger, Confronted, and Rejected were not significantly higher during middle sessions, Rejected declined significantly from middle to late sessions (p<.03). Of the five items expected to remain stable, only Revealed and Distanced did, while Avoided declined significantly from middle to late sessions (p<.02) but Cared and Participated increased from both early to middle (p's<.03 and .01) and from middle to late (p's<.05) sessions.

The only significant interperiod shift in observers' ratings was Depended's early to late decline. The sparcity of significant changes in observers' data seems generally attributable to their notably greater variance.

Correlational and Cluster Analyses

The changes in group climate reflected by the t-tests were further clarified through correlations of all group climate items. Separately for the data of members' and observers', mean ratings of the 12 group climate items were correlated for each time period and item clusters were identified. Based upon McQuitty's (1961) elementary factor

analysis, an illustrative cluster analysis of later member-based mean group climate ratings is shown in Table 1. Two clusters of positively intracorrelated, but negatively intercorrelated, items are evident. These consist of a quintet, labeled Affiliative to denote their common theme, and a septet--labeled Nonaffiliative--to recognize the remaining seven items' content communality as well as their bipolarity to the Affiliative quintet. Also shown in Table 1 is each item's contribution to the total covariance (r^2) of each cluster and also to the total matrix. All statistically significant linkages among these items are diagrammed in Figure 2's lower-right corner with solid lines denoting positive correlations and broken lines denoting negative correlations. The breadth of these lines shows each connection's relative strength (r^2).

Figure 2's five remaining diagrams ilustrate the outcome of parallel intercorrelational matrices (fully given in Appendices E-1 and E-2) for item clusters of members' mean ratings of group climate at early and midgroup and also the observers' three comparable data sets. The pattern of linkages was similar for each source, although members' data generated nearly twice the total number of significant linkages (95 vs. 53) as did observers' data. Of 108 intercluster linkages provided by members' ratings, merely 3 were positive and statistically significant versus a total of 28 negative and significant linkages. The observers' inter-

Table 1. Intercorrelations Among 12 Climate Items for Member-Based Ratings of Eleven Groups During Late Group Sessions

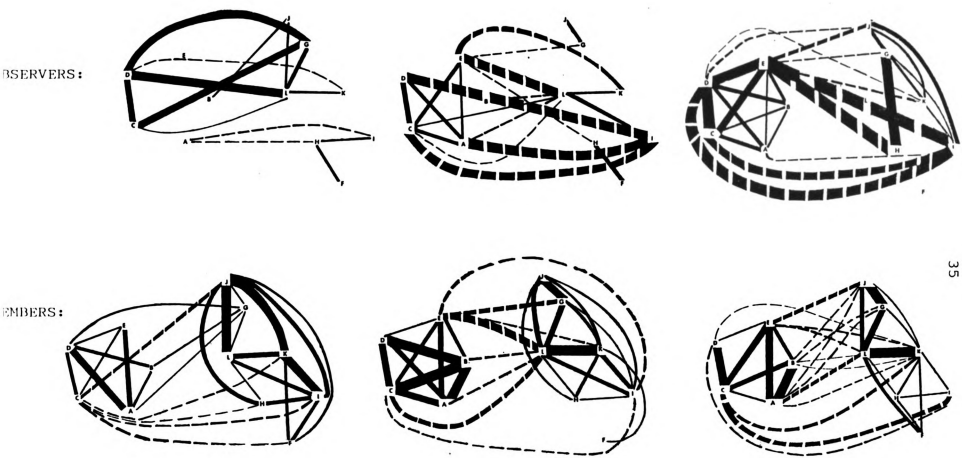
		A	B	C	D	E	F	G	H	I	J	K	L
A. Revealed			92[a]	60[c]	22	76[b]	-48	-58[c]	-20	-39	-52[c]	-57[c]	-66[c]
B. Participated		92[a]	.	75[b]	43	82[a]	-33	-55[c]	-11	-31	-53[c]	-63[c]	-64[c]
C. Reasoned		60[c]	75[b]	.	84[a]	79[b]	-8	-22	-31	-77[b]	-32	-70[b]	-49
D. Confronted		22	43	84[a]	.	56[c]	17	14	-12	-64[c]	-8	-51	-23
E. Cared		76[b]	82[a]	79[b]	56[c]	.	-16	-60	-11	-31	-67[b]	-63[c]	-63[c]
Affiliative r^2	1.83	2.27	2.25	1.25	2.19	.04	1.07	1.74	1.35	1.11	1.87	1.54	
F. Normative		-48	-33	-8	17	-16	.	39	64[c]	18	28	60	68[b]
G. Angry		-58[c]	-55[c]	-22	14	-60[c]	39	.	24	-8	79[b]	57[c]	73[b]
H. Depended		-20	-11	-31	-12	-11	64[c]	24	.	61[c]	34	64[c]	58[c]
I. Avoided		-39	-31	-77[b]	-64[c]	-31	18	-8	61[c]	.	5	58[c]	36
J. Anxious		-52[c]	-53[c]	-32	-8	-67[b]	28	79[b]	34	5	.	53[c]	69
K. Distanced		-57[c]	-63[c]	-70[b]	-51	-63[c]	60[c]	57[c]	64[c]	58[c]	53[c]	.	91[a]
L. Rejected		-66[b]	-64[c]	-49	-23	-63[c]	68[b]	73[b]	58[c]	36	69[b]	91[a]	.
Nonaffiliative r^2		1.79	1.61	1.58	.79	2.13	1.49	1.70	1.70	.88	1.58	2.54	2.77
Matrix totals		3.62	3.88	3.83	2.04	4.32	1.89	2.77	3.44	2.13	2.69	4.41	4.31

[a] $p < .001$ by the 2-tailed test.
[b] $p < .01$ by the 2-tailed test.
[c] $p < .05$ by the 2-tailed test.

Note. All decimals omitted; multiply by 1/100 for r.

Figure 2

Intercorrelational Linkages of 12 Group Climate Items at Three Periods



Solid lines show positive bonds; broken lines identify negative correlations; line width indicates relative strength. A: Revealed; B: Participated; C: Reasoned; D: Confrontated; E: Cared; F: Normative; G: Angry; H: Depended; I: Avoided; J: Anxious; K: Distanced; & L: Rejected.

cluster bonds were similar, yielding a total of five (of 53) significant positive intercluster linkages, all for early data, but 23 significant negative associations. Members' late ratings, when familiarity with the GCQ-s instrument and the situation were greatest and comfort was likely highest, provided the clearest perspective on the structure of these Figure 2 intercorrelations. Especially clear for members' ratings were the significant positive connections among the five Affiliative items (A, B, C, D, & E) and also among the seven Nonaffiliative items (F, G, H, I, J, K, & L), while all significant intercluster bonds were negative during middle and late sessions in data from both members and observers. Earlier, however, Affiliative's Confronted (D) linked positively to Nonaffiliative's Anger (G) as rated by both members and observers in addition to Anger's significant early bonds to Revealed (A) and Participated (B) for members and to Reasoned (C) for observers.

As shown by their overall contributions to the total covariance of members' ratings in Appendix E-1, items Revealed and Participated were most central to the cluster, closely followed by Reasoned, Confronted, and Cared. Similarly, the Nonaffiliative cluster was anchored by Rejected, Distanced, and Anxious, trailed respectively, by Avoided, Depended, Angry, and Normative. For members, Cared's 21 statistically significant negative linkages to the Nonaffiliative septet's items (see Appendix E-1) best bridged these

subclusters. Rejected, the core Nonaffiliative item, was a strong secondary bridge with its seven significant negative correlations to members of the Affiliative quintet.

The differentiation of these 12 group climate items into Affiliative and Nonaffiliative clusters fully paralleled the relative intensity with which these items had been endorsed to characterize the present groups in Figure 1. As shown there, Affiliative behaviors predominated over Nonaffiliative behaviors within these groups at each period and Affiliative behaviors also generally increased from early to late, while Nonaffiliative behaviors generally declined.

Distinct from the statistical significance of group climate item shifts, a noteworthy feature of these findings, clearer in observers' than in members' ratings, was the general "V" or EARLY-middle-LATE (EmL) pattern of interperiod means that characterized ratings of items of the Affiliative quintet in Figure 1. Holding for all five items in observers' ratings and for three (Cared, Reasoned, and Participated) items in members' ratings, it contrasted sharply with the obverse "Λ" or early-MIDDLE-late (eMl) pattern that prevailed for mean ratings of the Nonaffiliative septet. Also clearest in observers' data (Rejected, Distanced, Avoided, and Normative), the eMl pattern was sustained by members' ratings on Rejected, Distanced, Avoided, and Angry. The Nonaffiliative Depended and Anxious ratings departed from eMl by steadily declining according to both

sources. Contrarily, members' Affiliative Confronted and Revealed ratings showed a modest but sustained rise, while members' Normative ratings dropped consistently.

The negative correlations that characterized the linkages of items across the Affiliative and Nonaffiliative clusters appear fully complementary to these opposite EmL and eMl patterns. Overall, all items moved towards increased Affiliativeness and toward decreased Nonaffiliativeness, aside from the observed-based minor rises on Avoided and Angry and trivial decline on Confronted. Nonaffiliativeness apparently peaked in the middle phase.

Linkage to the Central Dimensions of Interpersonal Behavior

Because data for these groups were available on measures related to interpersonal behavior's prepotent Affiliation and Dominance dimensions, represented by self and peers' ratings on Acceptance versus Rejection of Others (ARO) and Self (ARS), respectively, an exploration was also made of group climate's possible linkages to these measures of broader systematic importance. Although it had been hypothesized that the ARS and ARO measures would link both positively and negatively to particular group climate items, those hypotheses appeared inappropriate in light of subsequent clustering among the GCQ-S items. In view of the bipolar nature of the Affiliative and Nonaffiliative subclusters, it seemed reasonable to expect them to link

oppositely to members' mean ratings of these groups on the Affiliation (ARO) interpersonal measure, positively with the Affiliative cluster and negatively to the Nonaffiliative one. Given ARO and ARS's theoretical independence, there seemed no compelling grounds for anticipating that ARS would associate substantially with either cluster. A comprehensive overview of these correlations for both self- and peer-based interpersonal ratings after both about 20- and 40-hours of group interaction is given in Table 2. Logic suggested, however, that the later interpersonal and group climate data would be more stable and valid due to its much firmer experiential base.

ARO consistently correlated positively with the Affiliative subcluster, as anticipated, although merely one of these 12 correlations reached statistical significance. Late ARO always (6 of 6 instances) correlated more positively with the Affiliative than with the Nonaffiliative subcluster. Substantial covariance (21%) was represented by the median .455 correlation between late ARO and the Affiliative subcluster, although the very few degrees (9) of freedom required these correlations be large to achieve statistical significance. Because they linked data sets separated by several weeks, these ARO-Affiliative bonds appear robust, as group climate ratings were made at near each group session's close, while the ARO and ARS ratings were based upon extended periods of group interaction.

Table 2.

Product-Moment Correlations of Members' Mean ARS and ARO Ratings of Group Units After About 20- and 40-Hours by Self and by Peers with Their Rating on the Subclusters of *Affiliative* and *Defensive* Items at Three Periods

	ARS				ARO			
	20-Hours		40-Hours		20-Hours		40-Hours	
	Self	Peers	Self	Peers	Self	Peers	Self	Peers
Affiliative								
Early	-20	-12	58^{+}	54^{+}	10	18	45	56^{+}
Middle	27	19	30	32	63*	43	35	26
Late	4	3	21	58^{+}	35	36	46	50
Defensive								
Early	44	48	24	-28	61*	35	2	-23
Middle	-17	-12	-13	15	19	18	24	7
Late	28	27	3	4	31	16	-28	1

Note. All decimals omitted; multiply by 1/100 for r.

$^{*}p < .05$, two-tailed.

$^{+}p < .10$, two-tailed.

Of Table 2's total of eight negative correlations, six concerned the Nonaffiliative cluster and four of these involved ARS, although none approached statistical significance. Thus, ARS or self-acceptance was less clearly associated with group climate in these data, although late ARS ratings by both self and peers closely approached significance with Affiliative climate in several instances. The overall pattern of these Table 2 associations suggests that acceptance of both self and others tends to correlate with a favorable (Affiliative minus Nonaffiliative) group climate.

DISCUSSION

This study explored developmental patterns of small groups as separately perceived by group members and non-participant observers. It had been hypothesized that some features of group climate (Anxious, Defended, Reasoned, and Normative) would peak in groups' early sessions, while others (Confronted, Anger, and Rejection) would be highest during their middle phase, and still others (Cared, Avoided, Participated, Distanced, and Revealed) would remain stable. Another expectation was that members' ratings of group climate would generally be more favorable than those of observers, although broadly similar perceptions of group climate were expected from each source. Lastly, although specific group climate items had been hypothesized to correlate with the two central dimensions of interpersonal behavior, as measured by ARS (Acceptance versus Rejection of Self) and ARO (Acceptance versus Rejection of Others), these hypotheses were rendered dysfunctional by complex interlinkages among the 12 group climate items employed here. These items interlinked in a bipolar structure featuring clusters that seemed appropriately labeled Affiliative (Cared, Reasoned, Participated, Confronted, and Revealed) and Nonaffiliative (Normative, Rejected, Depended, Anxious, Angry, Avoided, and Distanced). These Affiliative and Non-

affiliative clusters were subsequently correlated with ARS and ARO.

The Affiliative and Nonaffiliative clusters became increasingly distinct from groups' early to later phases. Positive intracluster bonds became stronger near groups' end than during earlier sessions and the negative intercluster bonds also increased in number and strength over time. Additionally, Affiliative item ratings generally increased over time, while Nonaffiliative items tended to decline. Members' mean ratings shifted significantly ($p < .05$) on seven items (Cared, Participated, Normative, Anxious, Depended, Avoided, and Rejected), always toward increased Affiliativeness or decreased Nonaffiliativeness, while observers' ratings shifted significantly only on Depended (downward).

The MANOVA's yielded a mixture of support and disconfirmation of the hypothesized shifts in group climate. Cumulatively, items Depended, Normative Behavior, Anxiety, and Reasoned declined as expected while items Rejected, Confronted, and Anger did not show the hypothesized midgroup rise. The set of Participated, Avoided, Distanced, Revealed, and Cared items did not shift significantly over time. Regarding only members' ratings for individual group climate items, Depended, Normative Behavior, and Anxious declined while Reasoned remained stable. Although Anger and Rejected failed to peak as hypothesized at midgroup, Rejected declined significantly from middle to late sessions. Of five items

expected to remain stable, only Revealed and Distanced did, while Avoided declined significantly from early to late sessions, but Cared and Participated generally climbed from early to late sessions. Anger, Confronted, Revealed, and Distanced all remained essentially stable over time.

The meaning of individual items' shifts was overshadowed by the broader trends reflected in the clusters' complimentary "V" (Affiliative) and "Λ" (Nonaffiliative) patterns. These highlighted a general move toward increased constructiveness that included a temporarily more turbulent middle phase, evidenced by increased Nonaffiliativeness and decreased Affiliativeness, within a broader movement toward either increased Affiliation or decreased Nonaffiliativeness from early to late sessions reported by members on all 12 items, and by observers on 9 of these.

The midgroup peak in Nonaffiliativeness may have occurred because members felt more comfortable experimenting with potentially threatening expressive behaviors following their safe passage through the anxiety-laden beginning phase and before they were confronted with the desire of ending on a pleasanter note. An independent set of data supported these broad patterns. MacKenzie (1983) administered the GCQ-S to 75 outpatient members of 12 psychotherapy groups, yielding factors that he labeled Engagement, Avoiding, and Conflict. His Engaged factor items are identical to the present Affiliative quintet. The present Nonaffiliative septet included MacKenzie's four Avoiding

(Distanced, Normative, Avoided, and Depended) items plus his pair of Conflict (Anger and Rejected) items. The Anxious item did not load differentially on MacKenzie's factors. Although MacKenzie's groups met for 35 sessions, for unexplained reasons his analysis was based on only the initial 14 sessions and 19% of his participants supplied no usable data. According to his group factors, Engagement dropped sharply during sessions 7 and 8, then increased steadily through session 11, and was generally higher during later (numbers 12-14) sessions. Complementing this, Avoiding increased during sessions 7 and 8, decreased through session 11, and was slightly lower in sessions 12, 13, and 14. These two patterns closely paralleled the present study's Affiliative and Nonaffiliative clusters. Also congruent was his Conflict duo's midgroup peak at session 10.

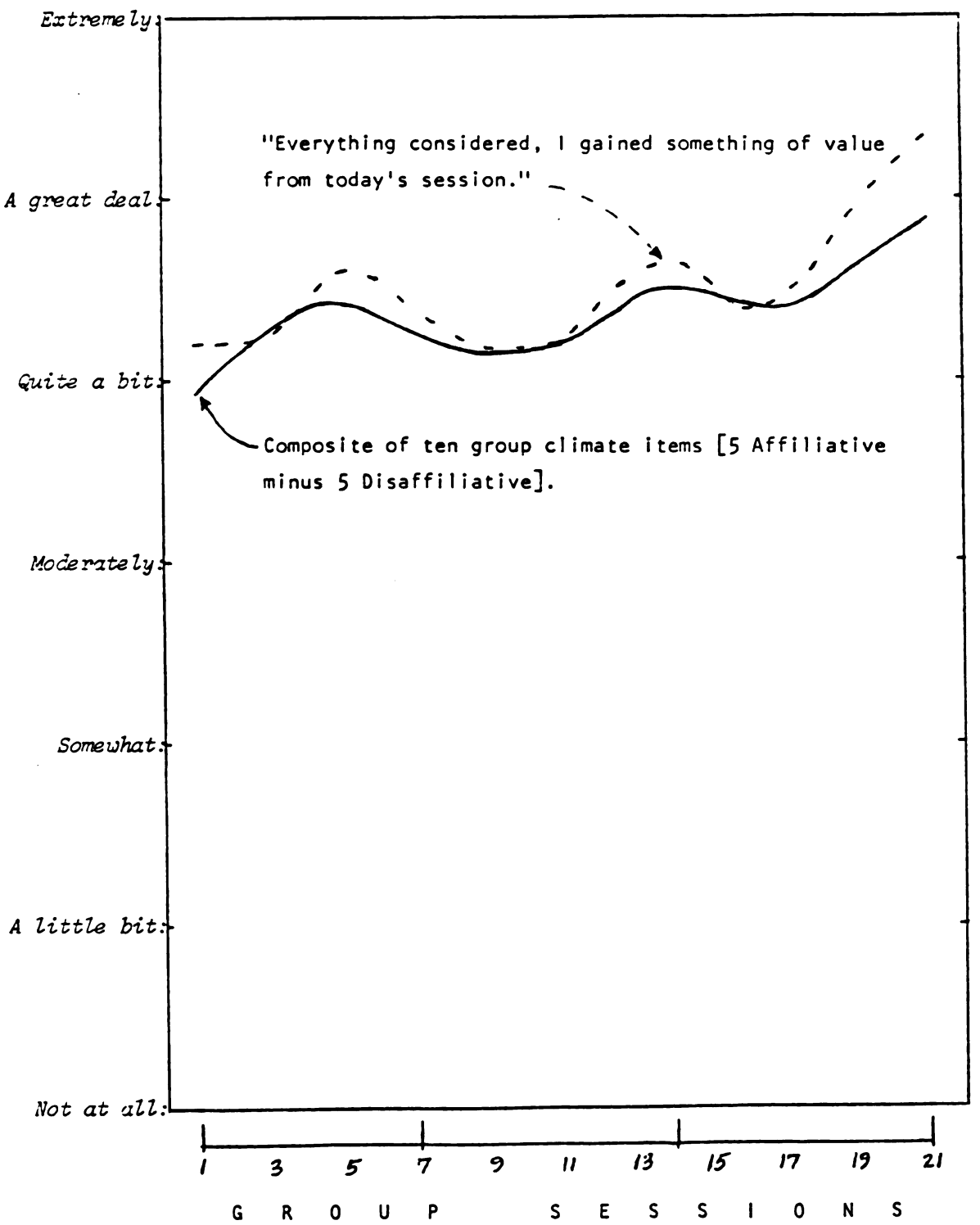
The subclustering of group climate items found in the present study and in MacKenzie's work also appears related to Alden's (1978) analysis of Moos' Ward Atmosphere Scale. Alden found that over half of the variance among Moos's subscales was attributable to a single evaluative (good vs. bad) factor representing general attitude toward the ward. This broadly resembles the major axis of the Affiliative versus Nonaffiliative clusters, suggesting that a relatively simple factorial structure may hold among diverse measures of atmosphere and/or climate.

In addition to the GCQ-S, members (but not observers) of the present groups responded to a 13th item, "Everything

considered, I gained something of value from today's session" on their postsession reports. For a series of 28 SEGIL groups that included eight of the present series of 11, group members' mean aggregated all-session ratings of Item 13 correlated strongly (r = .73, p < .01) with their mean aggregated composite Affiliative-Nonaffiliative ratings of group climate. Depended and Normative were omitted from this revised composite because of their generally weaker relationships to other Nonaffiliative items. Composite group climate ratings and Item 13 ratings were also plotted over all group sessions. These two curves were nearly parallel, as shown in Figure 3. Each peaked near groups' fifth, fourteenth, and final sessions, while reaching low points for groups' initial and middle sessions. This parallelism confirmed the existence of identifiable shifts in group atmosphere that were marked by midterm conflicts and later resolution. Although not shown here exclusion of the unusually high ratings associated with SEGIL marathon and final sessions did not notably alter the parallelism of Figure 3's curves.

This general rise of Affiliation, accompanied by its present midphase turbulance and temporary decline, broadly support the group development theories of Bennis (1964), Tuckman (1965), Yalom (1975), and Lacoursiere (1980). These authors characterized the early phases of group life as featuring dependent and orienting behaviors and later segments with rising consensual validation, cohesiveness, reso-

Figure 3. Mean Rating of Each Session of 28 Groups by All Members (*N*'s of 142 to 151 except for sessions 19 [113], 20 [81], and 21 [34]).



lution, and productivity. The midgroup decline appears to reflect phenomena designated as resolution-catharsis, conflict, and dissatisfaction, although this phase is usually completed by midgroup in the theories of Tuckman and Lacoursiere. The general shifts of the present group climate clusters also broadly support stage-oriented theories of group development. The relatively stable ratings of the Distanced, Anger, Reasoned, Confronted, and Revealed items, according to both members and observers, also seems consistent with Gibb's concepts (1964) about the continual fluctuations of levels of trust and of openness.

Similar to the rising Affiliativeness evidenced by mean ratings shifts, a trend toward increased interpersonal constructiveness emerged in the intercorrelations of group climate items. The primary example of this was Anger's shifting linkages to components of Affiliative and Nonaffiliative aspects of group climate. Early, members positively linked Anger with Participation, Confronted, and Revealed, while observers similarly linked Anger only to Confronted and Revealed. During the middle sessions, however, both members and observers linked Anger inversely to Cared. Members also positively linked Anger to four other Nonaffiliative items, whereas observers linked Anger positively only to Anxiety. Later, the negative correlation between Anger and Cared was sustained by observers and supplemented by Anger's strong bond to Depended, while members negatively correlated Anger with Revealed and Participated (contrary to

their early linkages) and also positively associated Anger with Anxiety, Rejected, and Distanced. These shifting patterns suggest that group members and observers learned that confrontation and disclosure need not necessarily be associated with defensiveness.

While members and observers evidenced generally similar correlational patterns and group climate shifts, as shown by the EmL and eMl patterns, members' ratings of group climate were much more favorable than were those of observers. Members' more sharp differentiation between Affiliative and Nonaffiliative ratings and the observers' significantly less favorable ratings may be attributed to several factors. Jones and Nisbett (1971) have said that actors, or individuals involved in interactions or tasks, more often attribute events to circumstancial versus personal characteristics. Contrarily, nonparticipant observers tend to attribute events more to actor's personal traits than to circumstances.

Jones and Nisbett (1971) partially attributed actor-observer differences to the observers' relatively lesser of historical awareness of contextual events, the greater ego investment of actors (akin to present group members), and to the differential visual perspectives by actors and observers. Having little or no information about the personal history of actors in groups' prior sessions, observers seem more likely to attribute behaviors to individuals' predispositions, or character traits, rather

than to circumstances. The present divergence in member-observer ratings may also be partly due to the observers' much more fragmented contact with these groups.

On the other hand, differences may occur merely because observers primarily attend to actors, while actors focus on visual stimuli outside themselves. This phenomenon might be clarified by a study that controlled for historical awareness by systematically varying the number of sessions that observers attended and comparing the ratings of observers who had greater and lesser degrees of exposure to particular groups. To further delineate observer biases, groups of experienced (previous group members) and inexperienced observers could be compared. The present author would expect historical awareness to account for some differences in perception.

The observers' less favorable ratings indirectly supported the findings of Cunningham et al. (1979) that passive observers tend to attribute negative interactions more to actors (group members) than do the actors themselves. Group members may similarly inflate the ratings of their group to enhance their own self-esteem. Observers' less favorable ratings may reflect a lesser need to perceive interactions positively, associated with their relative detachment. Ratings indicating less complimentary perceptions may be ego-threatening to members. For example, the increased Anger, decreased Confrontation, and relatively unchanged Distance and Avoidance ratings of observers evident in these

groups' later periods may have emerged because they were removed from the more vulnerable feelings associated with groups' endings. The observers' generally less favorable present ratings were congruent with the report of Lieberman et al.'s (1973) that nonparticipant observers rated group leaders less favorably than did members.

While members rated the present groups much more positively than did observers, both sources described them as distinctly more constructive than neutral and as also becoming increasingly constructive over time. These trends are reflected in group climate cluster relationships to the central interpersonal dimensions represented by the ARS and ARO scales. Each of the latter scales generally linked positively to the Affiliative cluster of group climate items, but less consistently and positively and more inconsistently with the Nonaffiliative cluster. Different interpersonal postures were apparently represented by these Affiliative and Nonaffiliative poles of group climate. The Affiliative quintet was composed of items that blended capacities for both intimacy (Cared, Revealed, and Participated) and differentiation (Reasoned, Confronted). The correlation of Confrontation with other Affiliative elements indicates that intimacy can be effectively integrated with individuation. The Nonaffiliative septet represents an interpersonal orientation characterized by insecurity, detachment, and the evasion of interdependence. Because Cared and Rejected contributed the largest number of neg-

ative intercluster correlations, it is reasonable to assume that the associated behaviors are reasonably fundamental features of group culture.

Studying data from 107 human societies, Rohner (1975) concluded that acceptance (versus rejection) of children by parents was crucial to personality development. Similarly, it is understandable that the Affiliative cluster would generally correlate positively, and the Nonaffiliative cluster less positively, with ARS and ARO because self-acceptance is a likely introject from nurturant interpersonal environments, while the acceptance of others seems the likely projection of such a positive self-evaluation.

In the context of marked differences in the administration times, and feedback provided by the group climate and behavior ratings, the robustness of their linkages seems notable. Although each instrument provided feedback to group members, this was individualized and discussed in depth for the behavior ratings, but group-oriented and only briefly viewed for the GCQ-S. Members may also have responded to defend themselves or their group from unfavorable and ego-alien perceptions on either measure. Because they reported how each person was rated by self and all others, the ARS and ARO measures are likely more anxiety-provoking than the GCQ-S. Additionally, the behavior ratings were gathered and presented to the group only twice, while the group climate ratings offered general group feedback on each session. More statistically significant linkages between group climate and

behavior ratings occurred late than early. This was a likely consequence of the much broader experiential base (43 versus 20 hours of group interaction) that undergirded this second series of behavior ratings.

The tendency of these interpersonal groups to be experienced positively may not be readily generalizable to all other small groups. Their constructiveness may have been facilitated by an undergirding theme that emphasized respect for the individual. Group development was augmented by the direction of trained leaders, readings, didactic instructions, and personal reflections recorded in a journal. Apparently these combined procedures contributed to the positive perceptions of most participants and some combination of them may be integral to constructive group development.

In summary, several factors indicated that members of these groups generally moved toward a greater sense of security and freedom. The increasingly strong endorsements of Affiliative behavior, their overall evolution toward Affiliation and away from Nonaffiliativeness, and the progressive differentiation of the related item clusters, all supported the interpersonal constructiveness of these groups. Similar shifts were independently reported by MacKenzie's account of changes during psychotherapy groups, the positive correlation between group climate and Item 13 ("Everything considered, I gained something of value from today's session"), and the general positive correlation of

members' ratings of their groups on ARS and ARO with the composite Affiliativeness climate measure. The shift toward increased Affiliativeness, and temporary midgroup elevation of Nonaffiliativeness, accompanied by the relative stability of group climate elements (Anger, Revealed, Distanced, and Confronted) associated with the two poles of group atmosphere, supports an integration of stage and cyclic theories of group development. The observers' consistently less favorable perceptions of group climate may be attributable to their more fragmentary awareness of the course of each group, as well as by group members' greater investment in self-esteem enhancing ratings, and the reception of differential visual stimulation. A study that controlled for historical awareness among observers might further clarify these issues.

REFERENCES

Adams, H. B. (1964). "Mental Illness" or interpersonal behavior? American Psychologist, 14, 191-197.

Alden, L. (1978). Factor analysis of the ward atmosphere scale. Journal of Consulting and Clinical Psychology, 46, 175-176.

Bales, R. F., & Stodtbeck, F. L. (1951). Phases in group problem solving. Journal of Abnormal Social Psychology, 46, 485-495.

Benjamin, L. S. (1974). Structural analysis of social behavior. Psychological Review, 81, 392-425.

Bennis, W. G., & Sheppard, H. A. (1956). A theory of group development. Human Relations, 9, 415-438.

Bennis, W. R. (1964). Patterns and vicissitudes in T-group development. In L. P. Bradford, J. R. Gibbs, & K. D. Benne (Eds.), T-group theory & laboratory method (pp. 248-278). New York: Wiley & Sons.

Berne, E. (1966). Principles of group treatment. New York: Grove Press.

Bion, W. R. (1959). Experience in groups. New York: Random House.

Carson, R. C. (1969). Interaction concepts of personality. Chicago: Aldine.

Cissna, K. N. (1984). Phases in group development: the negative evidence. Small Group Behavior, 15, 3-32.

Cooley, C. H. (1909). Social organization: a study of the larger mind. New York: Scribner's.

Dunphy, D. C. (1972). The primary group: a handbook for analysis and field research. New York: Appleton-Century-Crofts.

Durkheim, E. (1894). Suicide. Glencoe, IL: Free Press, 1951.

English, H. B., & English, A. C. (1958). A Comprehensive Dictionary of Psychological and Psychoanalytic Terms. New York: Longmans Green.

Foa, U. G. (1961). Convergences in the analysis of the structure of interpersonal behavior. Psychological Review, 68, 341-353.

Freedman, M. B., Leary, T. F., Ossorio, A. G., & Coffey, H. S. (1951). Interpersonal dimensions of personality. Journal of Personality, 20, 143-161.

Freud, S. (1919). Group psychology and the analysis of the ego. London: Hogarth.

Gerstenhaber, L. M. (1975). Acceptance versus rejection of others and self in personality self-reports (Doctoral dissertation, Michigan State University, 1974). Dissertation Abstracts International, 36, 441B-442B.

Gibb, J. R. (1964). Climate of trust formation. In L. P. Bradford, J. R. Gibb, & K. D. Benne (Eds.), T-group theory & laboratory method (pp. 279-309). New York: Wiley & Sons.

Hurley, J. R. (1976). Two prepotent interpersonal dimensions and the effects of trainers on T-groups. Small Group Behavior, 7, 77-98.

Hurley, J. R. (1980). Two interpersonal dimensions relevant to group and family therapy. In L. R. Wolberg & M. L. Aronson (Eds.), Group and family therapy 1980. New York: Brunner-Mazel.

Hurley, J. R. (1984). Leaders' interpersonal behavior and group members' changes. Manuscript submitted for publication.

Hurley, J. R. (1983). [Correlations among measures of the principal dimensions of interpersonal behavior.] Unpublished raw data.

Hurley, J. R., & Rosenthal, M. (1978a). Perceptions within AGPA's annual institute groups. GROUP, 2, 220-238.

Hurley, J. R., & Rosenthal, M. (1978b). Interpersonal rating shifts during and after AGPA's institute groups. International Journal of Group Psychotherapy, 28, 115-121.

Kernberg, O. F. (1984). The couch at sea: psychoanalytic studies of group and organizational leadership. International Journal of Group Psychotherapy, 34, 5-23.

Kiesler, D. L. (1983). The 1982 interpersonal circle: A taxonomy for complementarity in human transaction. Psychological Review, 90, 185-214.

Lacoursiere, R. B. (1980). The life cycle of groups. New York: Human Sciences Press.

LaForge, R., & Suczek, R. F. (1955). The interpersonal checklist. Journal of Personality, 24, 94-112.

Lakin, M., & Carson, R. C. (1964). Participant perception of group process in sensitivity training. International Journal of Group Psychotherapy, 14, 116-122.

Leary, T. (1957). Interpersonal diagnosis of personality: A functional theory and methodology for personality evaluation. New York: Ronald Press, 1957.

Lieberman, M. A., Yalom, I. D., & Miles, J. B. (1973). Encounter groups: First facts. New York: Basic Books, Inc.

Lorr, M., & McNair, D. M. (1965). Expansion of the interpersonal behavior circle. J. Personal. Social Psychol., 2, 823-830.

Lubin, B., & Zuckerman, M. (1967). Affective and perceptual cognitive patterns in sensitivity training groups. Psychological Reports, 21, 365-376.

MacKenzie, M. R. (1978). Measurements of group climate preliminary experiment with new instrument. Paper presented at the Annual Conference of the Society for Psychotherapy Research, Toronto, Canada.

MacKenzie, M. R. (1979). Group norms: Importance and measurement. International Journal of Group Psychotherapy, 29, 471-480.

MacKenzie, M. R. (1983). Clinical applications of group psychotherapy. In R. R. Dies & M. R. MacKenzie (Eds.), Advances in group psychotherapy (pp. 159-170). New York: International University Press.

McQuitty, L. (1961). Elementary factor analysis. Psychological Reports, 9, 71-78.

Moos, R. H. (1984). Evaluating treatment environments. New York: Wiley & Sons.

Nisbett, R. E., & Jones, E. E. (1971). The actor and the observer: Divergent perceptions of the causes of behavior. New York: General Learning Press.

Philip, H., & Dunphy, D. (1959). Developmental trends in small groups. Sociometry, 22, 162-174.

Psathas, G. (1960). Phase movement and equilibrium tendencies in interaction process in psychotherapy groups. Sociometry, 23, 177-194.

Ridgeway, C. (1983). The dynamics of small groups. New York: St. Martin Press.

Rioch, M. J. (1970). The work of Wilfred Bion on groups. Psychiatry, 33, 56-66.

Rohner, R. P. (1975). They love me, love me not. New York: Hraft Press.

Small, D. H., & Hurley, J. R. (1978). Work effectiveness and personal attributes of mental health paraprofessionals. In K. M. Nash, N. Lifton, & S. E. Smith (Eds.), The paraprofessionals: Selected readings (pp. 286-301). New Haven: Advocate Press.

Schaefer, E. S. (1961). Converging conceptual models for maternal behavior and child behavior. In J. C. Glidewell (Ed.), Parental attitudes and child behavior (pp. 124-146). New York: C. Thomas.

Schutz, W. C. (1955). What makes groups productive? Human Relations, 4, 429-465.

Smith, J. A. (1979). Use of the Liked-Disliked scale in interpersonal ratings. Unpublished Master's Thesis, Michigan State University.

Stock, D., & Thelen, H. A. (1958). Emotional dynamics of group culture. New York: National Training Laboratories.

Symonds, P. N. (1939). The psychology of parent-child relations. New York: Appleton Century.

Tavistock Institute (1956). Table describing group development. Human Relations, 9.

Tuckman, B. (1965). Developmental sequences in small groups. Psychological Bulletin, 63, 384-399.

Wiggins, J. S. (1982). Circumplex models of interpersonal behavior in clinical psychology. In P. C. Kendal & J. N. Butcher (Eds.)., Handbook of research methods in clinical psychology (pp. 183-221). New York: Wiley.

Yalom, I. D. (1975). The theory and practice of group psychotherapy (2nd ed.). New York: Basic Books.

APPENDIX A-1

GROUP CLIMATE QUESTIONNAIRE (GCQ-S)

Observer:

Group:

Day: Date:

Instructions: Read each statement carefully and try to think of the group as a whole. Using the Rating Scale as a guide, circle the number of each statement which best describes the group during today's session. PLEASE MARK ONLY ONE ANSWER FOR EACH STATEMENT.

Rating Scale
0 not at all
1 a little bit
2 somewhat
3 moderately
4 quite a bit
5 a great deal
6 extremely

1. The members LIKED and CARED about each other	0 1 2 3 4 5 6
2. The members tried to UNDERSTAND why they do the things they do, tried to REASON it out	0 1 2 3 4 5 6
3. The members AVOIDED looking at important issues going on between themselves	0 1 2 3 4 5 6
4. The members felt what was happening was IMPORTANT and there was a sense of PARTICIPATION	0 1 2 3 4 5 6
5. The members DEPENDED upon the group leader(s) for direction	0 1 2 3 4 5 6
6. There was FRICTION and ANGER between the members	0 1 2 3 4 5 6
7. The members were DISTANT and WITHDRAWN from each other	0 1 2 3 4 5 6
8. The members CHALLENGED and CONFRONTED each other in their efforts to sort things out	0 1 2 3 4 5 6
9. The members appeared to do things the way they thought would be ACCEPTABLE to the group	0 1 2 3 4 5 6
10. The members DISTRUSTED and REJECTED each other	0 1 2 3 4 5 6
11. The members REVEALED sensitive personal information or feelings	0 1 2 3 4 5 6
12. The members appeared TENSE AND ANXIOUS	0 1 2 3 4 5 6

Please describe briefly the event that was most PERSONALLY important to you during today's session. This might be something that involved you directly, or something that happended between other members, but which made you think about yourself. Explain what it was about the event that made it important for you PERSONALLY.

EVENT IT'S MEANING TO YOU

-continue on back if necessary-

APPENDIX A-2

Group:

Initials:

Date:

1. The members LIKED and CARED about each other	0 1 2 3 4 5 6
2. The members tried to UNDERSTAND why they do the things they do, tried to REASON it out	0 1 2 3 4 5 6
3. The members AVOIDED looking at important issues going on between themselves	0 1 2 3 4 5 6
4. The members felt what was happening was IMPORTANT and there was a sense of PARTICIPATION	0 1 2 3 4 5 6
5. The members DEPENDED upon the group leader(s) for direction	0 1 2 3 4 5 6
6. There was FRICTION and ANGER between the members	0 1 2 3 4 5 6
7. The members were DISTANT and WITHDRAWN from each other	0 1 2 3 4 5 6
8. The members CHALLENGED and CONFRONTED each other in their efforts to sort things out	0 1 2 3 4 5 6
9. The members appeared to do things the way they thought would be ACCEPTABLE to the group	0 1 2 3 4 5 6
10. The members DISTRUSTED and REJECTED each other	0 1 2 3 4 5 6
11. The members REVEALED sensitive personal information or feelings	0 1 2 3 4 5 6
12. The members appeared TENSE AND ANXIOUS	0 1 2 3 4 5 6
13. Everything considered, I gained something of value from today's session	0 1 2 3 4 5 6

Appendix B-1

Members' Mean Ratings of Group Climate Items, Standard Deviations, and *t*-Values of Interperiod Shifts

ITEM	Means and (standard deviations)			Mean's Interperiod Shifts and Related *t*-Values					
	Early	Middle	Late	Late—Early		Late-Middle		Middle-Early	
				M	*t*	*M*	*t*	*M*	*t*
Reasoned	4.26 (.27)	4.04 (.50)	4.27 (.27)	.01	.06	.23	1.88	-.22	-1.25
Cared	4.11 (.25)	4.09 (.48)	4.42 (.48)	.31	2.20*	.33	2.60*	-.02	-.12
Participated	4.00 (.25)	3.81 (.51)	4.22 (.44)	.22	2.23*	.41	3.07**	-.19	-1.83
Confronted	3.79 (.53)	3.87 (.47)	4.02 (.44)	.23	1.37	.15	1.32	.08	.71
Revealed	3.68 (.56)	3.71 (.73)	3.99 (.75)	.31	1.37	.28	1.38	.03	.15
Normative	2.34 (.44)	1.92 (.44)	1.83 (.48)	-.51	-7.07***	-.09	-.91	-.42	-3.48**
Anxious	2.30 (.41)	2.00 (.59)	1.83 (.51)	-.47	-2.40*	-.17	-.87	-.30	-1.63
Depended	1.84 (.63)	1.12 (.57)	.94 (.62)	-.90	-4.80***	-.18	-1.48	-.72	-3.58**
Angry	1.75 (.44)	1.82 (.65)	1.56 (.71)	-.19	-.66	-.26	-1.00	.07	.28
Avoided	1.66 (.35)	1.79 (.58)	1.46 (.44)	-.20	-2.04	-.33	-2.95*	.13	.69
Distanced	1.60 (.41)	1.66 (.43)	1.46 (.42)	-.14	-.91	-.20	-1.70	.06	.41
Rejected	1.06 (.36)	1.28 (.42)	.96 (.41)	-.10	-.66	-.32	-2.51*	.22	1.29

Note. All *N*'s = 11.

***$p < .001$, 2-tailed test. **$p < .01$, 2-tailed test. *$p < .05$, 2-tailed test.

Appendix B-2

Observers' Mean Ratings of Group Climate Items, Standard Deviations, and *t*-Values of Interperiod Shifts

ITEM	Means and (standard deviations)			Mean's Interperiod Shifts and Related *t*-Values					
	Early	Middle	Late	Late—Early		Late-Middle		Middle-Early	
				M	*t*	*M*	*t*	*M*	*t*
Reasoned	3.46 (.51)	3.07 (1.53)	3.68 (.77)	.22	.82	.61	1.17	-.39	-.74
Cared	3.49 (.56)	3.30 (1.14)	3.50 (1.00)	.01	.03	.20	.62	-.19	-.58
Participated	3.68 (.48)	3.45 (.83)	3.86 (.66)	.18	1.05	.41	1.72	-.23	-.91
Confronted	3.55 (.99)	2.97 (1.00)	3.44 (.59)	-.11	-.32	.47	1.38	-.58	-1.63
Revealed	2.89 (.74)	2.59 (1.34)	3.36 (1.14)	.47	1.29	.77	1.87	-.30	-.88
Normative	3.21 (1.19)	3.43 (1.24)	2.69 (.63)	-.52	-1.09	-.74	-1.63	.23	.52
Anxious	2.95 (.31)	2.86 (1.05)	2.62 (1.18)	-.33	-.84	-.24	-1.05	-.09	-.27
Depended	3.00 (.79)	2.56 (1.50)	2.26 (1.03)	-.74	-2.91*	-.30	-.68	-.44	-.95
Angry	2.03 (.69)	2.60 (1.04)	2.60 (1.18)	.57	1.28	.00	.00	.57	1.78
Avoided	2.47 (1.02)	3.26 (1.34)	2.48 (1.10)	.01	.03	-.78	-2.01	.79	1.80
Distanced	1.94 (.77)	2.48 (1.10)	1.93 (.92)	-.01	-.06	-.55	-1.77	.54	1.94
Rejected	1.61 (.89)	2.29 (1.26)	1.37 (.84)	-.24	-.62	-.92	-1.83	.68	1.49

Note. All *N*'s = 11.

*$p < .05$, 2-tailed test.

Appendix C

Hotelling's t^2 for Multiple Analysis of Variance of Members and Observers Ratings of Group Climate Across Early, Middle, and Late Sessions, Followed by Univeriate F-test (1, 20) Results

Planned Contrasts	t^2	Hypothesis DF/ Hypothesis MS*	Error DF/ Error MS*	F*	Significance of F
Members versus Observers	85.49	12	9	3.21	.044
Normative		1 19.06	20 .80	23.86	.000
Depended		1 28.26	20 1.49	18.93	.000
Reasoned		1 10.30	20 .60	17.04	.000
Anxious		1 9.59	20 .61	15.82	.001
Avoided		1 19.91	20 1.25	15.48	.001
Rejected		1 7.15	20 .54	13.34	.002
Cared		1 9.96	20 .88	11.34	.003
Angry		1 8.12	20 .79	10.27	.004
Revealed		1 11.90	20 1.52	7.83	.011
Confronted		1 5.46	20 .76	7.22	.041
Distanced		1 4.82	20 1.02	4.72	.042
Participated		1 1.98	20 .58	3.40	.080

APPENDIX D

Hotelling's $\pm^2$'s for Multiple Analyses of Variance of Group Climate Ratings Across Early, Middle, and Late Sessions by Members and Observers, Followed by Variate F-tests.

Planned Contrasts	$\pm^2$	Hypothesis DF/ Hypothesis MS*	Error DF/ Error MS*	F	Significance of F
Early versus Late	29.75	4	17	6.32	.003
Depended		1	20	26.95	.000
Normative Behavior		1	20	4.56	.045
Anxious		1	20	3.29	.085
Reasoned		1	20	.55	.469
Early versus Middle versus Late	9.40	6	15	1.18	.370
Rejected		2	19	2.74	.090
Confronted		2	19	1.61	.226
Anger		2	19	1.23	.314
Early versus Middle versus Late	32.01	10	11	1.76	.184
Participated		2	19	4.78	.021
Avoided		2	19	3.72	.043
Distanced		2	19	2.70	.091
Revealed		2	19	2.62	.099
Cared		2	19	1.10	.352

Appendix E-1.

Member-Based Correlations Among Mean Ratings of 12 Group Climate Items of Eleven Groups at Early, Midgroup, and Late (E,M,L)

	Affiliative Cluster																																							
	A			B			C			D			E			F			G			H			I			J			K			L							
	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
A. Revealed	.	.	.	56[c]	92[a]	92[a]	44	80[a]	60[c]	77[b]	81[a]	22	71[b]	81[a]	76[b]	-16	5	-48	52[c]	-31	-58[c]	-32	20	-20	-9	-43	-39	1	-10	-52[c]	2	-35	-57[c]	33	-59[c]	-66[c]						
B. Participated	56[c]	92[a]	92[a]	.	.	.	20	91[a]	79[b]	62[c]	88[a]	43	56[c]	60[b]	82[a]	-20	14	-33	61[c]	-10	-55[c]	-48	5	-11	-47	-9	-31	-5	0	-53[c]	-17	-46	-63[c]	21	-60[c]	-64[c]						
C. Reasoned	44	80[a]	60[c]	20	91[a]	75[b]	.	.	.	62[c]	86[a]	84[a]	53[c]	72[b]	79[b]	-58[c]	17	-8	-8	-29	-22	-51	-19	-31	-63[c]	-61[c]	-77[b]	-66[b]	-24	-32	-63[c]	-46	-76[b]	-39	-67[b]	-49						
D. Confronted	77[b]	81[a]	22	62[c]	88[a]	43	62[c]	86[a]	84[a]	.	.	.	60[c]	50	56[c]	-34	-22	17	63	17	14	-20	21	-13	-32	-20	-64[c]	3	22	-8	-18	-16	-51	27	-36	-23						
E. Cared	71[b]	81[a]	76[b]	56[c]	60[b]	82[a]	53[c]	72[b]	79[b]	60[c]	50	56[c]	.	.	.	3	-16	-16	26	-74	-60	-55	-14	-11	-32	-53	-31	-20	-62[c]	-67[b]	-12	-56[c]	-63[c]	7	-84[a]	-63[c]						
Affiliative R^2 =	6.24			6.23			5.06			5.36			5.27			1.08			2.97			1.55			3.10			2.09			3.23			3.91						
F. Normative	-16	5	-48	-20	14	-33	-58[c]	17	-8	-34	-22	17	3	-16	-16	.	.	.	19	33	39	49	48	64[c]	68[b]	29	18	62[c]	42	28	56[c]	56[c]	60	33	49	68[b]						
G. Angry	52[c]	-31	-58[c]	61[c]	-10	-55[c]	-8	-29	-22	63[c]	17	14	26	-74[b]	-60[c]	19	33	39	.	.	.	8	47	24	14	54[c]	-8	55[c]	66[a]	79[b]	29	60[c]	57[c]	51	72[b]	73[b]						
H. Depended	-32	20	-20	-48	5	-11	-51	-19	-31	-20	21	-13	-55[c]	-14	-11	49	48	64[c]	8	47	24	.	.	.	70[b]	53[c]	61[c]	73[b]	56[c]	34	46	60[c]	64[c]	51	51	58[c]						
I. Avoided	-9	-43	-39	-47	-9	-31	-63[c]	-61[c]	-77[b]	-32	-20	-64[c]	-32	-53[c]	-31	68[b]	29	18	14	54[c]	-8	70[b]	53[c]	61[c]	.	.	.	81[a]	55[c]	5	87[a]	71[b]	58[c]	67[b]	73[b]	36						
J. Anxious	1	-10	-52[c]	-5	0	-53[c]	-66[c]	-24	-32	3	22	-8	-20	-62[c]	-67[b]	62[c]	42	28	55[c]	66[a]	79[b]	73[b]	56[c]	34	81[a]	55[c]	5	.	.	.	84[a]	57[c]	53[c]	85[a]	70[b]	69[b]						
K. Distanced	2	-35	-57[c]	-17	-46	-63[c]	-63[c]	-46	-76[b]	-18	-16	-51	-13	-56[c]	-63[c]	56[c]	56[c]	60[c]	29	60[c]	57[c]	46	60[c]	64[c]	87[a]	71[b]	58[c]	84[a]	57[c]	53[c]	.	.	.	76[b]	88[a]	91[a]						
L. Rejected	33	-59[c]	-66[b]	21	-60[c]	-64[c]	-39	-67[b]	-49	27	-36	-23	7	-84[a]	-63[c]	33	49	68[b]	51	72[b]	73[b]	51	51	58[c]	67[b]	73[b]	36	85[a]	70[b]	69[b]	76[b]	88[a]	91[a]	.	.	.						
Nonaffiliative R^2 =	3.11			3.22			4.00			1.96			3.25			4.11			4.65			5.11			5.71			7.23			7.42			7.62						
Matrix Totals =	9.35			9.45			10.66			7.32			10.52			5.19			7.62			6.66			8.81			9.32			10.65			11.53						

[a]pr.001 by the 2-tailed test.
[b]pr.01 by the 2-tailed test.
[c]pr.05 by the 2-tailed test.

Note, All decimals omitted, multiply by .01 for r.

Appendix E-2.

Observer-Based Correlations Among Mean Ratings on 12 Group Climate Items of Eleven Groups for Early, Midgroup, and Late (E,M,L)

	Affiliative Cluster												*Nonaffiliative Cluster*											
	A			B			C			D			F			G			H			I		
	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L	E	M	L
A. Revealed	.	.	.	40	26	58[c]	9	71[b]	67[b]	20	71[b]	69[b]	38	56[c]	55[c]	-30	-46	35	16	2	10	-55[c]	-24	-13	-61[c]	-85[a]	-55[c]
B. Participated	40	26	58[c]	.	.	.	16	20	59[c]	0	25	70[b]	42	30	59[c]	-22	16	-40	44	-26	-9	-32	23	-11	44	-26	-9
C. Reasoned	9	71[b]	67[b]	16	20	59[c]	.	.	.	75[b]	77[b]	92[a]	2	65[c]	81[a]	23	-39	6	88[a]	-3	-22	-19	-22	-17	-22	-79[b]	-89[a]
D. Confronted	20	71[b]	69[b]	0	25	70[b]	75[b]	77[b]	92[a]	.	.	.	-25	20	92[a]	-47	-42	6	91[a]	34	-33	-7	3	-27	-21	-88[a]	-97[a]
E. Cared	30	56[c]	55[c]	42	30	59[c]	2	65[c]	81[a]	-25	20	92[a]	.	.	.	-2	-30	10	-5	-54[c]	-97[c]	-30	-50	-40	-4	-50	-97[a]
Affiliative Σr^2=		3.31			3.20			4.49			4.56			3.53			1.37			2.49			1.36			6.00
F. Formative	-30	-46	35	-22	16	-40	23	-39	6	-47	-42	6	-2	-30	10	.	.	.	-40	-35	-26	60[c]	71[b]	-43	36	41	-1
G. Angry	16	2	10	44	-26	-9	88[a]	-3	-22	91[a]	34	-33	-5	-54[c]	-97[c]	-40	-35	-26	.	.	.	17	7	88[a]	-22	-22	50
H. Depended	-55[c]	-24	-13	-32	23	-11	-19	-22	-17	-7	3	-27	-30	-50	-40	60[c]	71[b]	-43	17	7	88[a]	.	.	.	60[c]	17	37
I. Avoided	-61[c]	-85[a]	-55[c]	44	-26	-9	-22	-79[b]	-89[a]	-21	-88[a]	-97[a]	-4	-50	-97[a]	36	41	-1	-22	-22	50	60[c]	17	37	.	.	.
J. Anxious	30	11	-15	58[c]	-33	-46	30	5	-34	30	33	-96[c]	35	-40	-66[c]	2	5	-9	39	59[c]	70[b]	-1	42	47	30	11	-15
K. Distanced	-12	-42	16	-15	-27	9	1	-37	-40	10	-13	-50	-50	-71[b]	-60[c]	37	-8	-18	9	40	64[c]	46	9	32	30	34	60[c]
L. Dejected	36	-63[c]	47	9	-59[c]	-2	53[c]	-53[c]	-13	85[a]	-40	-23	-27	-85[a]	-27	-19	30	30	63	27	42	-2	42	-7	36	63[c]	47
Nonaffiliative Σr^2=		3.32			2.06			3.61			4.99			3.31			2.22			3.83			3.25			2.66
Matrix Totals =		6.63			4.26			8.10			9.55			8.84			3.59			6.32			4.61			8.74

	J			K			L		
	E	M	L	E	M	L	E	M	L
A. Revealed	30	11	-15	-12	-42	16	36	-63[c]	47
B. Participated	58[c]	-33	-46	-15	-27	9	9	-59[c]	-2
C. Reasoned	30	5	34	1	-37	-40	53[c]	-53	13
D. Confronted	30	33	96[c]	10	-13	50	85[a]	-48	-23
E. Cared	35	-40	-66[c]	-50	-71[b]	-60[c]	-27	-85[a]	-27
Affiliative Σr^2=		2.40			2.01			3.56	
F. Formative	2	5	-9	37	-8	-18	-19	38	30
G. Angry	39	59[c]	70[b]	9	40	64[c]	63[c]	27	42
H. Depended	-1	42	47	46	9	32	-2	42	-7
I. Avoided	30	11	-15	30	34	60[c]	36	63[c]	47
J. Anxious	.	.	.	10	40	56[c]	56[c]	42	33
K. Distanced	10	40	56[c]	.	.	.	53	64[c]	-17
L. Dejected	56[c]	42	33	53[c]	64[c]	-17	.	.	.
Nonaffiliative Σr^2=		2.70			3.06			3.16	
Matrix Totals =		5.10			5.09			6.72	

[a] pt.001 by the 2-tailed test.
[b] pt.01 by the 2-tailed test.
[c] pt.05 by the 2-tailed test.