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INTERACTION AS A FUNCTION OF PARTICIPATION
VERSUS OBSERVATION.**

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A FUNCTION OF PARTICIPATION VERSUS OBSERVATION

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EUGENE ELLSWORTH LANDY

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1968

ATTITUDE AND ATTITUDE CHANGE TOWARD INTERACTION AS
A FUNCTION OF PARTICIPATION VERSUS OBSERVATION

APPROVED BY

William R. Hood
A. E. Cahill
Mayson Frazier
Leon G. Hirschberg
A. J. Richardson

DISSERTATION COMMITTEE

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ATTITUDE AND ATTITUDE CHANGE TOWARD INTERACTION AS A FUNCTION OF PARTICIPATION VERSUS OBSERVATION

CHAPTER I

INTRODUCTION AND PROBLEM

This dissertation attempts to study attitudes and attitude changes toward interaction by comparing subjects who participate in an interaction against those subjects who observe the video taped interaction of the participation subjects. Control subjects are utilized with both participation and observation subjects.

It is expected that those subjects who participate in an interaction change their attitudes toward interaction. Those subjects who observe the participation subjects' interaction also change their attitudes toward interaction. The attitude changes toward interaction of the participation subjects and the observation subjects are in a similar direction.

The essence of any interpersonal relationship is interaction. By interaction it is meant that behavior is emitted in the presence of others, and some form of communication takes place (Thibaut & Kelley, 1959, Ch. 2). Berne (1964, p. 15) refers to this process as the fundamental unit of social action. Several of these fundamental units of social action he calls a transaction.

A transaction or series of transactions, then, constitutes a component part of an interaction. More than one transaction may occur during an interaction.

In an instance of interaction, there is at least the possibility that the action of each person, e. g. , his behavior and his communication, affects others (Thibaut & Kelley, 1959, Ch. 2). This results in a complex set of transactions which in themselves have the possibility of being a series of actions that further affect others (Berne, 1961, pp. 86-124).

A survey of the literature reveals articles on interaction dating back over fifty years. Many books have been written about interaction, and articles have appeared in a variety of journals. These journals range from those published by the American Psychological Association and other related professional and academic areas such as schools of education, guidance and counseling, social work, and sociology, through privately published journals, to psychiatric and psychoanalytic journals in the United States and abroad.

No attempt will be made here to review the complete body of literature, but excellent summaries are available in surveys by Bales (1950), Dashiell (1935), Lindzey (1954), Murphy, Murphy, & Newcomb (1937), Roseborough (1953), Secord & Backman (1964), and Sherif & Sherif (1956).

In the late forties the National Training Laboratories in Bethel, Maine formed what might be considered one of the earliest, if not the

first, structured interaction between individuals in togetherness situations. The original investigation of interaction, the "sensitivity group" and "T-Group" interactions are now traditional (Argyris, 1962; Schein & Bennis, 1965).

From these traditional and now considered conservative forms of interaction have come accepted derivations such as "encounter groups" (Rogers, 1966), "actualization groups" (Gunther, 1967), "confrontation groups" and "here and now groups" (Bach, 1967), "transaction groups" (Berne, 1961), "reality groups" (Glasser, 1965), and "psychodrama groups" (Moreno, 1953).

With the impact of the so-called "group binge" (Hoover, 1967) of the last seven years, the number of articles and journals publishing articles concerning interaction has become legion. The ever increasing rate of investigation and publication by ingenious innovators, originators, inventors, discoverers, rediscoverers, and many others implies that the "group binge" has apparently only started. Time (1966), in an editorial, refers to the new concepts of psychotherapy as "pop-psych."

In a recent article, Murphy (1967) has summarized rather insightfully the intertwining and interrelationships of various people and disciplines and their influences on each other.

Recent derivations of the original "sensitivity group" and "T-Group" interactions are the "marathon group" interactions, which last 60 hours (Bach, 1966b) and are sometimes referred to as the 300 year week-end (Alexander, 1966), and the "swing group" interactions (Stoller,

1964).

Recently, more unusual and exotic forms of interaction have been attempted. These types of interaction utilize the standard techniques developed in the "sensitivity group" and "T-Group" research but attempt to incorporate new dimensions of interaction at different levels. The "sexual intercourse group" (Schwab, 1967) attempts to develop intimate interaction, as do "nude groups" (Bach, 1966a). "Walk-in-groups" where strangers on the street are asked to join the interaction and "theater groups" held between showings of motion pictures with participants consisting of the audience (Schwab, 1967) are currently popular.

"LSD groups" headed by Timothy Leary and Sidney Cohen (Leary, 1966; & Cohen, 1966), and Betty Eisner's "carbon dioxide inhalation groups" and "Ritalin groups" are presently under scrutiny (Mazo, 1968). George Bach's "attack groups" (1967) in which participants learn to verbally attack one another and Gerhar Sommer's (Mazo, 1968) "consciousness expansion groups" are gaining popularity. There are also "hypnosis groups" where all participants in the interaction are hypnotized (Mazo, 1968), as well as "art groups," "music groups," and "dance groups" (Murphy, 1967).

"Jacuzzi groups," where all participants (sometimes nude, sometimes not) gather in a large Jacuzzi bath for interaction, developed from the "swimming pool groups" (Time, 1968).

Esalen Institute in Big Sur, California has been having "exercise groups" and "touch groups" and more recently "body movement groups."

Esalen has also been holding "self awareness groups" and "mind expanding groups" (Murphy, 1967). Other unique forms of "groups" are cited in the Esalen Program (1968).

Virginia Satir (1964) of the ~~the~~ Mental Research Institute at Stanford, as well as Fredrick Stoller (1968) of the Youth Studies Center at the University of Southern California have been dealing with "large family groups."

Solon Samuels (1966), director of Gateways Hospital, has been holding "classes of groups" based on principles of learning theory, as have Glasser and Iverson (1966) at the Ventura School for Girls. Synanon Foundation (Alverson, 1967) has opened up its verbally violent "synanon group" to the public and called it the Synanon Game Club.

Regardless of the form of the "interaction groups," the basic purpose is similar in each, a face-to-face interaction between participants in a togetherness situation.

Historically, it is neither significant nor important whether J. H. Pratt, a Boston physician who treated tuberculosis patients in 1905, or J. L. Moreno, who treated Viennese prostitutes in 1911, is credited with being the innovator of interaction between people in similar situations as a form of medical treatment (Moreno, 1953, pp. 11-21). What is significant is that interaction between people in a togetherness situation has an effect on the others present and by means of behavior and communication creates transactions between them (Berne, 1961, pp. 86-124; Sherif, Sherif, & Nebergall, 1965, pp. 5-6; Thibaut & Kelley,

1959, Ch. 2).

Attitudes and attitude changes toward interaction are founded on: (1) the control each person perceives himself to have on the outcome of the interaction, and (2) the direction of the interaction (Biddle & Thomas, 1966, p. 332). Direction is defined as the perceived favorable (positive) or unfavorable (negative) value of the transaction to each individual within the framework of an interaction (Sherif, Sherif, & Nebergall, 1965, p. 7).

Lieberman (1950) studied the direction of attitudes and attitude changes toward interaction by role changes in factory work situations. He found that attitudes and attitude changes toward interaction were congruent with role change.

Levine and Butler (1952) studied attitudes and attitude changes toward interaction by comparing the decisions of individuals in formal lectures to those in group discussions regarding an established work policy in a manufacturing plant. They concluded that acquisition of knowledge in itself does not automatically lead to attitude change as evidenced by the formal lecture sample. Interaction by individuals in group discussions did lead to attitude changes as indicated by their decisions on established work policies.

Culberson (1957) investigated attitudes and attitude changes toward interaction of roles. He had people prejudiced against Negroes play the role of the Negro. The control group observed the role playing. Results indicated that an interaction of roles can favorably change

attitudes by participants as opposed to observing role playing.

Griffin and Enrilich (1963) studied attitudes and attitude changes toward interaction between participation and non-participation in discussion groups on a proposed change of company policy in a work situation. They found that interaction in discussion groups yielded attitude change as opposed to non-participation.

In summary, "The differential effects of attitude and attitude change toward interaction in togetherness situations are determined to a greater extent by immediate stimulus conditions." (Sherif & Sherif, 1956, p. 184)

One aspect of attitude and attitude change toward interaction in togetherness situation is communication via mass media, or more specifically, that aspect of communication that encompasses audio and visual stimulation simultaneously. - Television is an excellent example.

The rise of television in the last 20 years has been astounding. In 1948, Wilson reported difficulty in locating television set owners in New York City. In 1954, there were over three million set owners in New York City (Hovland, 1954).

The literature appears to be primarily interested in the effects of television on attitude formation and attitude change of the viewer, and especially the effect of violence on the attitudes of young children. Does the young child identify with the violent behavior seen on television and attempt to emulate it in his everyday life, thereby forming attitudes similar to those portrayed on television? The controversy over whether

television does or does not have an effect, through identification, on the attitudes of the viewer is presented from both sides.

Hendrickson and Cook (1956) take the point of view that violence on television is not the cause of or correlated with the aggressive behavior of children. They further state that children are naturally aggressive, and that television allows them to release the aggression by observing the violence that they are not capable of acting out. The New York Journal American (Beaumont, 1965) published a series of five articles entitled "What Is Television Doing to Your Child?" They indicated that television allows children to identify with the person performing the violent behavior. It teaches them to be aggressive. It teaches them how not to get caught and how to lie about what they have done. Television "teaches the child how to be a good solid juvenile delinquent. Television molds the attitudes of the children (third article)." Senator Thomas Dodd (1965), speaking to the United States Senate, reported that his Subcommittee on Juvenile Delinquency had found relationships between violence on television and crime by delinquents.

Himmelweit, Oppenheim, and Vince (1958) reported the influence of television on attitudes of children in England. Arons and May (1963) have reported the effects of television on the attitudes of children and adults, and the influence that television has had on society in the United States. Eron (1963) has shown a significant relationship between violence on television and aggressive behavior in third graders.

The literature also considers the value of advertising and effects

advertising has on the attitudes people have toward products. Krugman (1965) states, "Sales are produced by changing perceptions of the product in the course of merely shifting the relative salience of attitudes, especially when the purchaser is not particularly involved in the message" (p. 349).

The use of this electronic wonder is never ending and the recent development of closed circuit television and video tape recording equipment has made available even further uses of television. These uses are of course seen in commercial advertising, but the educational uses may be unlimited (Finn, 1953).

The literature has reported uses of closed circuit television and video tape recording in areas of education, speech therapy, geology, political science, law, psychology, psychotherapy, testing, and teaching. The use of video tape recording has not been limited to the United States. The literature reports its use throughout the world. (Bailyn, Williams, Himmelweit, Seldes, Bogart, Max, Pool, & Adler, 1962; Barrington, 1965).

Research utilizing closed circuit television and video tape recording has for the most part been restricted to educational and teaching use (Holmes, 1961; Ruhe & Proud, 1958; Wilmer, 1967c; Wilmer, 1968b; Ruhe, Gundel, Laybourne, Forman, Jacobs, & Eaton, 1960; Wilcox, 1962; and Reid, 1966).

Most of the authors that have reported studies in psychology and related disciplines and have utilized the closed circuit television and

video tape recording systems had previously been using audio tape recording. The new tool simply broadened their scope and already existing forms of methodology. Principally the system has been used in research as a means of feedback information to subjects (Lair, 1967; and Lewis, 1966).

There have been reports of studies in hypnosis (Woody, 1965), in personality theory (Anast, 1966), in the health sciences (Blancheri & Merrill, 1964), in psychiatry (Wiltson & Dutton, 1965), in medicine (Michaux, Cohen, & Kurland, 1963) and in attitudes (Mielke, 1966; Halloran, 1967) utilizing video tape recordings.

Research in the area of attitudes and attitude changes toward interaction by use of closed circuit television and video tape recording equipment has been limited. Alger and Hogan (1967) have reported a study dealing with attitude changes toward interaction between married couples. Wilmer (1967d) has reported attitude changes toward interaction between adolescents involved with drugs. Cornelison and Tausig (1964), Stoller (1965), and Boyd & Sisney (1967) reported studies of attitudes and attitude changes toward interaction between perceived and real self-images. Kagen, Krathwohl, and Miller (1963) utilized video tape recording for stimulated recall of attitude changes toward interaction by observation of behavior. Walz and Johnston (1963) used video tape recording as a means of allowing counselors to observe their own attitudes toward interaction. Mills (1967) discusses the attitude change toward interaction of members of small natural groups in the presence

of a participant observer as compared to the video tape camera. Wiler (1968a, 1967a, and 1967b) discusses attitude change toward interaction of psychiatric patients produced by the presence of the video tape camera.

The original work of Lindsley (1962) on attitude change toward interaction by means of social reinforcement via closed circuit television stimulated further research in social psychiatry, in attempts to understand attitude changes toward interaction of psychiatric patients (Suess, 1966; Nathan, Marland, & Lindsley, 1968; Nathan, Schneller, & Lindsley, 1964).

Video tape recording has also been used to determine attitude changes toward interaction in group psychotherapy (Stoller, 1967a; 1967b), individual psychotherapy (McGuire, 1963), the training of psychotherapists (Benchoter, Eaton, & Smith, 1965; Moore, Chernell, & West, 1965; Moore, Hanes, & Harrison, 1961; Schiff & Reivich, 1964), and psychotherapeutic research (McGuire & Stigall, 1966; McGuire, Moore, Harrison, & Riley, 1961).

Much of this training and research in attitude and attitude changes toward interaction is currently being done at Western Behavioral Science Institute in La Jolla, California, at Esalen Institute in Big Sur, California, and at Langley Porter Neuropsychiatric Hospital in San Francisco, California.

With the advent of low cost closed circuit television and video tape recording equipment a few years ago, new research utilizing the equipment has begun at universities across the country. Today, video

tape recording equipment is so relatively inexpensive, that social scientists have privately purchased the equipment and have initiated research in their personal areas of interest.

It appears evident that closed circuit television and video tape recording systems have stimulated research in areas that were seemingly unmanageable prior to their existence and will play an increasingly important role in the future.

Problem

In the study of attitude and attitude change toward interaction utilizing closed circuit television and video tape recording systems, Frederick Stoller must certainly be considered one of the pioneers. In a recent paper (Stoller, 1967b) discussing his earlier work with chronic hospitalized schizophrenic patients and the use of closed circuit television and video tape recording in developing attitude changes toward interaction at Camarillo State Hospital, he points out that participation in interactions was televised throughout the hospital. He states that:

The response the participants received from their ward was one of excitement and recognition. . . Both ward personnel and fellow patients remarked on how well they [the participants] had done and looked (Stoller, 1967b, p. 159).

He further stated that:

It was, therefore, quite gratifying to note the nature of the response induced through the modality of television. There was no question that a marked enhancement in the response of these hospitalized patients over and above the

usual format had occurred (p. 159).

In a later study at Camarillo State Hospital, patients participated in interactions that were televised via closed circuit television to a sample of patient observers. A control sample of patients viewed a commercial television show in place of the interaction for the same period of time. After observing the televised interaction or the commercial show, each observation sample participated in an interaction. It was anticipated that the sample that observed the interaction would proceed at a faster pace than the sample who viewed the commercial show when both samples were placed in an interaction situation. The expected results were not obtained in terms of the attitude changes toward interaction or the behavior of the patients (Stoller, 1962). However, the hospital staff involved with the observation sample reported learning a great deal about conducting interactions as opposed to the staff that viewed the commercial television show. Stoller states, "This led me to the idea of using closed circuit television as a training tool for the hospital staff" (1968).

Stoller (1964) also reported a two year study on the use of video tape recording regarding attitudes and attitude changes toward interaction of hospitalized patients as a function of varying the length of time of the interaction. He called these interactions the "swing group" and they were usually of twelve hours duration. Regarding video tape recording and playback, Stoller states, "The use of video tape presents a possibility for immediate self-viewing and self-evaluation of one's impact

on others which is unequaled by any other modality" (1967, p. 160).

As described above, studies have attempted to determine attitude and attitude change toward interaction by a multitude of ingenious methods. Yet the observer of interactions has not been considered in most research. Stoller (1962, 1964, 1967a, and 1968) appears to have come the farthest in attempts to determine attitude changes of the observer toward interaction. To this author's knowledge, by a search of the literature and personal inquiry, no study to date has scientifically compared the attitudes and attitude changes toward interaction of the participant and the observer of interaction as attempted herein.

Experimental Participation Sample

An experimental participation sample (E. P. S.) of subjects are pretested to determine their attitudes toward interaction before being placed in an interaction situation.

Immediately after their participation in the interaction situation, they are posttested to further determine their attitudes toward interaction. Attitude change toward interaction for the experimental participation sample is determined by comparison of the pretest and posttest.

The interaction of the experimental participation sample is video tape recorded, and this video tape recording is utilized as the stimulus for the experimental observation sample.

Control Participation Sample

A control participation sample (C. P. S.) undergoes the identical

conditions of pretesting and posttesting as the experimental participation sample. During the experimental participation sample period of interaction, the control participation sample is placed in a non-interaction situation. Attitude change for the control participation sample is determined by comparison of the pretest and posttest. The participation condition consists of both the experimental participation sample and the control participation sample. Attitude changes toward interaction between the pretest and posttest of the experimental participation sample are compared to the attitude changes toward interaction between the pretest and posttest of the control participation sample. This comparison of attitude changes toward interaction between the pretest and posttest of both the experimental participation sample and the control participation sample allows determination of the attitude changes toward interaction for the entire participation condition.

Experimental Observation Sample

The experimental observation sample (E. O. S.) is pretested to determine their attitudes toward interaction before the observation of the video tape recorded interaction of the experimental participation sample. Immediately after the observation, they are posttested to further determine their attitudes toward interaction. Attitude change toward interaction for the experimental observation sample is determined by comparison of the pretest and posttest.

Control Observation Sample

A control observation sample (C. O. S.) undergoes the identical pretesting of the experimental observation sample to determine their attitudes toward interaction. Instead of observing an interaction situation, the control observation sample observed a film of single celled animals. In this way the condition of observation is maintained and any possibility of attitude change by identification with the observed is eliminated. Immediately after the observation they are posttested to further determine their attitudes toward interaction. Attitude change toward interaction for the control observation sample is determined by comparison of the pretest and posttest.

The observation condition consists of both the experimental observation sample and the control observation sample. Attitude changes toward interaction between the pretest and posttest of both the experimental observation sample and the control observation sample allows determination of the attitude changes toward interaction for the entire observation sample.

In determining the instrumentation of the pretest and the posttest a scale was needed that would differentiate the area of content of the interaction from the mode of interaction and would allow a rank ordering of the levels of attitudes toward interaction. Ordinal scaling allows interaction of levels between area of content and mode of interaction.

The Hill Interaction Matrix (Hill, 1965) fits the instrumentation need of this experiment. The Hill Interaction Matrix (HIM) is a four by four matrix of 16 cells. The four columns of the matrix deal with the area of content of the interaction.

Column I deals with the 'topic' area of content. Column II deals with the 'group' area of content. Column III deals with the 'personal' area of content. Column IV deals with the 'relationship' area of content.

Attitudes toward interaction at the lowest level of the area of content are clustered in Column I, and attitudes toward interaction at the highest level of the area of content are clustered at Column IV. The four rows of the matrix deal with the mode of interaction. Attitudes toward interaction at the lowest level of mode of interaction are clustered in Row B, and attitudes toward interaction at the highest level of mode of interaction are clustered in Row E.

Row B deals with the 'conventional' mode of interaction. Row C deals with the 'assertive' mode of interaction. Row D deals with the 'speculative' mode of interaction. Row E deals with the 'confrontive' mode of interaction.

Therefore, the attitudes and attitude changes toward interaction by area of content and mode of interaction need not necessarily be equivalent in terms of magnitude or direction of change.

A brief description of each column of the area of content of interaction and each row of the mode of interaction may be useful at this point. Hill (1965) describes the following:

Column I (General Interest Topic) - It is natural for interaction participants to talk about current events and therefore this is an appropriate form of behavior in moderation. In the 'conventional' mode of interaction this takes the form of discussing likes and dislikes, what one had for breakfast, social amenities, and so forth. In the 'assertive' mode this usually involves sounding off on some topic such as administration, the establishment, etc.. 'Speculative' deals with explorations of topics that are relevant to the participant personally. The 'confrontive' mode involves statements on the topic under discussion that somehow pull it together in a way that the implications of the discussions are quite clear for all the members present.

Column II (Group) - The major significance of this category stems from the fact that for an interaction to develop and improve, it is necessary to discuss the interaction itself. At the 'conventional' mode of interaction this has to do with general matters about the interaction, e. g. when is the next meeting?, where did we leave off last week?, and so forth. The 'assertive' style usually is characterized by non-constructive criticism about the interaction. The 'speculative' approach has to do with discussions about what may be wrong with the way the interaction operates and suggestions for its improvement. 'Confrontive' always has as its property the addressing of some issue, topic or process that the interaction consciously or unconsciously has collusively avoided.

Column III (Personal) - Certainly a discussion of the personal problems that participants bring to the interaction are relevant. In the 'conventional' mode this tends to take the form of members presenting themselves in terms of background data (e. g. , where born, how many brothers and sisters, where went to school, etc.). In the 'assertive' mode this usually takes the form of a member or members indicating their uniqueness. On the 'speculative' level this means an exploration of the presented problem of a member with questions about the time of onset, advice giving and interpretations as to possible cause, etc.. The 'confrontive' mode is concerned more with attempting to get at a true rather than distorted version of what someone's personal problem really is.

Column IV (Relationship) - Transactions that take place between members and the relationships are thereby formed and acted out. In the 'relationship' category the relationships among the participants may be acted out in a positive

fashion in the 'conventional' or in a negative fashion in the 'assertive' mode. They are discussed consciously in the 'speculative' mode or are the subject of reality testing and participant feedback in the 'confrontive' mode.

Row B (Conventional) - The 'conventional' mode of interaction is more ubiquitous and is the common garden variety of interaction. It is especially to be found in social groups such as bull sessions, coffee klatches, sewing circles, and cocktail parties. Also much of the connective tissue and cohesiveness is developed and maintained through interaction at this level.

Row C (Assertive) - The 'assertive' mode subsumes not only sounding off and gripe sessions, but also the defeatist-passive mode of help-rejecting.

Row D (Speculative) - This is the natural or stereotyped mode of interaction, that is to say, this is how most participants believe they are expected to behave. While it is intellectual in nature it is an essential mode of interaction. No interaction can operate continuously on the 'confrontive' level as one must either have new things to confront members with or repeat over and over the same confrontations - which rapidly disintegrates into 'assertive' level nagging. It is called 'speculative' because much of the interaction has to do with asking questions and forming hypothesis about presented problems as well as giving advice on the matter. It is for the most part at this level that 'the games people play' are conducted in interaction. The major limitation other than that inherent in intellectualization is that the presenter - the 'topic person' - controls the source of data and can shut off, divert, or distort if the discussion is not proceeding according to plan.

Row E (Confrontive) - Operation in this mode always is accompanied by interaction tension. Obviously the data presented in 'confrontation' should provide important material for the 'topic person.' To become a relatively well-functioning person, one must be willing and able to make effective contact with others and the ability to confront is integral to going beyond superficial human contacts. It involves to a great extent what might be subsumed under Reality Testing (Hill, 1965, pp. 20-34).

The total acceptance score is obtained by summing the cells of

the matrix. It is possible for an individual to make attitude changes toward interaction and obtain the same or similar total acceptance score on the pretest and posttest. It is for this reason that Hill (1965) discusses the matrix in terms of quadrants. Therefore, by also considering the change of quadrant scores between the pretest and posttest it is possible to determine the levels of the area of content and the mode of interaction that have changed. Column and row scores considered independently will allow determination of the cell or cells within the quadrant that have changed. The direction of the attitude change toward interaction may be interpreted by the increase or decrease of the total acceptance, quadrant, column, or row score. Individual cell scores were not tested. Only extreme cell scores would require individual testing, and these extreme cells would be apparent by changes observed in quadrant, column or row scores.

Hill (1965) indicates that a favorable (positive) attitude change toward interaction will cause the individual to progress by quadrants from I to IV. An unfavorable (negative) attitude change toward interaction will cause the individual to regress by quadrants from IV to I.

A review of the pertinent literature and the introduction and problem stated above have lead this author to formulate the following specific hypotheses:

Hypothesis 1

Individuals who participate in an interaction will change their attitudes toward interaction as a function of their participation in the

interaction.

Hypothesis 2

Individuals who observe the video taped interaction of the experimental participation sample will change their attitudes toward interaction as a function of their observation of the interaction.

Hypothesis 3

Attitude changes toward interaction made by the observation sample will be in the same area of content or mode of interaction on the HIM as the attitude changes toward interaction made by the participation sample.

CHAPTER II

METHOD

Selection of Subjects

A total of 87 male and 85 female (N 172) undergraduate students enrolled at the University of Oklahoma were used as subjects. These subjects volunteered from classes in the following departments: anthropology, education, philosophy, political science, psychology, and sociology. Subjects were also obtained from university dormitory housing and from social fraternities and sororities on a volunteer basis.

Classes and housing meetings were visited by the experimenter and were read the following statement:

(If not introduced): My name is Eugene Landy.

(If introduced): I am affiliated with the Institute of Group Relations here at the university. We are currently administering a research project entitled G. P. & O. No. 100107.

My purpose in being here is to ask for volunteers to participate in this research study. It is a very interesting and stimulating and enjoyable social-psychological study which simply involves your making some verbal and visual decisions. Since the project is funded, we will be able to pay people who participate.

The study will take a little more than an hour and a half. There will only be two opportunities for you to participate. The first is this coming week-end of January 5-7, 1968, with the first group of participants starting Friday night, January 5, and other groups through Sunday, January 7. The second and last opportunity will be the

week-end of Saturday, January 20, through Sunday, January 21.

Every person who volunteers will receive \$1.00 for the time needed to participate in the study. You may only participate in one of the two week-ends.

I will now circulate a sign-up booklet. Each page of the booklet is a different date. The yellow paper is for those who wish to participate on this week-end (January 5-7) and the white paper is for those who wish to participate on the week-end of the 20th and 21st. Please be sure to put your name and phone number under the appropriate heading of male or female.

Those signing for this week-end, look over the names of the people who have already signed. If you see anyone you know, DO NOT sign up for that time, but sign for another time. This applies only to this week-end of the 5th and 7th, the yellow paper booklet.

Those who have signed up please pick up the direction sheet on how to get to the Institute of Group Relations which I will leave on the desk. Transportation will be provided for those who are unable to get there. If you need transportation, draw a circle around the number in front of your name, and we will be in touch with you about transportation. Are there any questions?

If there were questions, they usually referred to the nature of the experiment. The experimenter answered the inquiries appropriately. He then thanked the class for their attention and the professor for his time and assistance.

Sufficient numbers of subjects were obtained for the first week-end of January 5-7, 1968, so that on January 8, after all subjects had completed the experiment, the subjects for the scheduled week-end of January 20-21, 1968, were notified that the experiment had terminated and their participation as subjects was no longer necessary.

Apparatus and Materials

The Institute of Group Relations, University of Oklahoma, served

as the testing and experimental building. Four rooms in the Institute were used by all of the samples. The experimental and control observation samples were administered simultaneously in different rooms. A Polaroid Swinger camera was used to photograph the experimental participation sample subjects. The room used for the interaction of the experimental participation sample is 30 by 30 feet. It is wall to wall carpeted in a dark green pattern with lighter green draw curtains covering the windows and most of the walls, which are also painted green. There are four poles toward the center of the room, 12 feet from each corner. Within the room used was an Ampex Closed Circuit Television System and Video Taping Equipment. One Electro-Voice, Vm 22/microphone was placed in the center of the experimental participation sample (interaction group No. 3).

The experimental observation sample viewed the video taped sessions on a Setchell-Carlson 27-inch television screen console in the same room. The control observation sample viewed the film on an equivalent-size screen. the HIM-B was used as the pretest and post-test for all samples. (Appendix A)

The film shown to the control observation sample subjects as a non-experimental task was selected for its lack of human subjects and human interaction. The entire film consisted of four shorter films entitled: "Feeding in a Carnivorous Ciliate Protozoan," "Feeding in a Herbivorous Ciliate Protozoan," "Feeding in Suctorians," "Life Story of the Paramecium." (See Appendix B) These short films were all

black and white and silent and were spliced together to be equal in time to the experimental observation sample video tape.

Procedure

The general design of this study involves: (1) an experimental and control participation subject sample, (2) an experimental and control observation subject sample.

The experimental participation sample (E. P. S.) was administered a pre-measure, the experimental condition (interaction participation), and a post-measure immediately after the experimental condition. (A description of the experimental participation sample subjects, the topic matter, and the transactions between subjects within the interaction appears in Appendix C.) The control participation sample (C. P. S.) was administered a pre-measure, a non-experimental task (quiet reading), and a post-measure. The experimental observation sample (E. O. S.) was administered a pre-measure, the experimental condition which in this case was the video tape of the experimental participation sample, and a post-measure immediately after the experimental condition. The control observation sample (C. O. S.) was administered a pre-measure and a non-experimental task (viewed a film) and a post-measure. The post-measure was administered immediately after the non-experimental task.

All subjects were asked to fill out a questionnaire from which some of the characteristics of the subjects are summarized in Table 1.

Table 1

Summary of Characteristics of Subject Population

Total = 172	Age Range = 17-30 years
Males = 87	Mean age = 19.1
Females = 85	Mean semester in college = 2.9
Single = 167	Mean grade point average = 2.7
Married = 5	Mean number of members in immediate family = 4.9

Source: Questionnaire. (Appendix D)

Participation Condition. The participation sample subjects were pre-tested using the Hill Interaction Matrix (HIM) form B. Posttesting was also accomplished utilizing the HIM form B. The HIM-B was used throughout the experiment with all the samples of subjects for both the pretest and the posttest.

Upon completion of the pretest, the subjects were asked if they knew each other. Those subjects who did not know any of the other subjects were selected as experimental participation sample subjects. The remainder of the subjects were utilized as control participation sample subjects.

Table 2 summarizes the participation condition size from which the experimental participation sample and the control participation sample subjects were drawn.

Table 2

Subject Assignment in Participation Sample Conditions

Sample	Male	Female	Total
Experimental Participation	4	4	8
Control Participation	5	12	17
Total Participation Sample	9	16	25

Experimental Participation Sample. The experimental participation sample subjects were read the following statement:

You are about to participate in a group experience with a group leader. This group experience will be video taped for viewing at a later time. These kinds of groups are sometimes referred to as interaction groups, sensitivity groups, "here and now" groups, or encounter groups. These interaction groups, as we will call them, are based solely upon your participation and interaction in and with each member of the group.

You will have exactly one hour to participate in this interaction group.

During the above speech, the test booklets were collected and the permission to video tape (Appendix E) and the subject information sheet (Appendix D) had been passed out. The experimenter continued:

Will you now read and sign your permission to be video taped and fill out the subject information sheet. If there is anyone here who does not wish to continue or participate in the group, he may now be excused.

The experimenter paused for people to leave; none did. He then continued:

We are about to take your photos, and we will put these photos with your permission to be video taped so as not to confuse names and faces in our records.

The experimenter answered questions as each subject's photo was taken with a Polaroid Swinger camera and name tags with the subject's first name were written for each participant.

The experimenter then said: "I would like to introduce you to your group leader, Doc Hall. Now, if you will please take seats in the chairs provided, the group will begin."

The interaction then commenced and was video taped. The subjects were posttested immediately after the interaction experience.

The first interaction was attempted with five male and four female (N=9) participants. This interaction was principally utilized to test the video tape and sound equipment and give the operator and the experimenter the opportunity to become accustomed to the type of interaction that would take place. The second interaction consisted of three male and four female participants (N=7). This interaction was not utilized as the stimulus for the experimental observation sample because the video tape was unacceptable quality for replay and it was felt this could have an undesired effect on the observers. The third interaction (which became the experimental participation sample), which was used as the stimulus for the experimental observation sample, was made up of four male and four female participants (N=8). One of the female participants was Negroid, and the other seven subjects were Caucasian.

Since only the third interaction (experimental participation sample)

was utilized as the stimulus for experimental observation samples, those subjects who participated in the first and second interactions were omitted from the experiment.

Control Participation Sample. Upon completion of the pretest, the control participation sample subjects were read the following statement:

Will you please read quietly and do not talk to your neighbor. You may either study or read the magazines or books that we have provided. However, please do not talk to your neighbor. Any questions? Thank you.

The control participation sample was administered the posttest one hour after the pretest. An experimenter was in the room with the subjects as they were reading to assure a lack of interpersonal interaction. The total control participation sample originally consisted of 22 participants, 9 male and 13 female.

The second Sub Sample of control participation subjects, consisting of 4 male and 1 female (N=5) subjects, did communicate during the period that silence and quiet reading was required. Therefore, these subjects were omitted from the sample and the experiment. The final control participation sample, therefore, consisted of 17 control subjects, 5 male and 12 female.

Observation Condition. The observation sample subjects were also pretested in the same rooms the participation sample subjects utilized. The experimental observation sample consisted of 102 subjects. (See Table 3.)

Table 3

Experimental Observation Sample

Sub Sample No.	Males	Females	Total
1	12	13	25
2	11	14	25
3	5	2	7
4	28	17	45
Total	56	46	102

The control observation sample consisted of 45 subjects. (See Table 4).

Table 4

Control Observation Sample

Sub Sample No.	Males	Females	Total
1	3	6	9
2	10	10	20
3	4	0	4
4	3	9	12
Total	20	25	45

Experimental Observation Sample. Upon completion of the pretest and the subject information sheet, the experimental observation sample subjects were presented with the Polaroid photos taken of the experimental participation sample and were read the following statement:

I am going to show you some pictures. I would like you to look at them carefully. If you recognize or know any of the people in the pictures, I would like you to tell me which person you know and how you know them.

Those subjects who recognized or knew any of the experimental participation sample marked their papers accordingly and were allowed to continue as experimental observation sample subject. However, these subjects were omitted from the sample due to their prior knowledge of the experimental participation sample (interaction group) members.

The subjects were then asked to adjust their chairs so as to have a clear view of the television screen and were read the following statement:

You are about to observe a real group experience that was video taped in this room earlier. These kinds of groups are sometimes referred to as interaction groups, sensitivity groups, 'here and now' or encounter groups. The video tape will run exactly one hour. At that time you will take a short test.

I must ask you not to talk to your neighbor or anyone during the showing of this video tape. Concentration on the video tape is absolutely necessary and this requires total silence.

The subjects were then shown the video tape of the experimental participation sample. The subjects were immediately posttested at the conclusion of the showing.

Control Observation Sample. Upon completion of the pretest, the control observation sample subjects were read the following statement:

You are about to observe a film. The film will last exactly one hour. At that time you will take a short test. I must ask you not to talk to your neighbor or anyone during the showing of this film. Concentration on the film is absolutely necessary, and this requires total silence.

The film was shown and the subjects were posttested immediately after the showing.

Upon departing, subjects were informed that in approximately three months (April 1, 1968) at the conclusion of the research project, an explanation and a summary of the research project would be posted on the bulletin board of the Institute of Group Relations in the front hallway, if they cared to come out and read it. They were all then thanked for their cooperation and dismissed.

Table 5 summarizes the final distribution of subject samples and frequency in each condition. Also the frequency of male and female subjects is shown.

Table 5

Summary of Subject Sample by Conditions, Sex, and Totals

Conditions	No. of Sub Samples in Each Condition	Males	Females	Total
Participation				
Experimental Sample	1	4	4	8
Control Sample	2	5	12	17
Observation				
Experimental Sample	4	56	56	102
Control Sample	4	20	25	45
Total		85	87	172

CHAPTER III

RESULTS

The data was collected and scored by hand utilizing the standard scoring templates supplied with the HIM-B.

The test consists of sixty-four items. These are four items for each of the sixteen cells of the matrix. All items were standardized on college students, and Guttman type scaling was introduced whereby an item could be made easier or harder to be accepted by shifting the cut off point. (Hill, 1966, p. 5)

Of the four items within each cell, 75 per cent or more of the standardization population accepted one item, and it was weighted one point. Between 75 and 50 per cent of the standardization population accepted the second item, and it was weighted two points. Fifty to 25 per cent of the standardization population accepted the third item, and it was weighted three points. Less than 25 per cent of the standardization population accepted the fourth item, and it was weighted four points (Hill, 1965, 1966).

The more difficult it is to accept an item, the greater the weighted score. The maximum score obtainable for any cell is ten, and the range is therefore zero to ten. As for quadrants, columns, and rows, the range is from zero to forty and the range on the total acceptance score for the test is from zero to one hundred sixty. (Hill, 1966, p. 6)

In any cell all four items are typical for that

cell as well as typically occurring in interactions. (Hill, 1966, p. 4)

Scores were recorded on the HIM tally sheet which consists of a four by four matrix of cells (Appendix F) of which the HIM is constructed. Cell scores (pretest and posttest) for each subject in each sample are shown in Appendix G.

The columns of the matrix deal with the style of content of an interaction. The content style of an interaction has four categories on the HIM. These categories are the area of content. The area of content can be characterized by what the interaction participants talk about. Column I, the "topic" area of content, can be characterized by a discussion of topic external to the interaction, e. g. , current events. Column II, the "group" area of content, is characterized by the discussion of the "group" talking about itself. Column III, the "personal" area of content, is characterized by an interaction member talking about his life or himself in an historical manner. Column IV, the "relationship" area of content, is characterized by the relationship of participants and the reactions of participants to each other. These categories are treated in the HIM as an ordinal scale of interaction with "topic," "group," "personal," "relationship" categories being in the order of increasing criterion, based on Hill's theory as summarized in Chapter 1.

The four rows of the matrix deal with the mode of interaction in an interaction. The first row, "B" deals with the "conventional" mode of interaction and is characterized by chit-chat and relies on social

amenities. The second row, "C", deals with the "assertive" mode of interaction and is characterized by social protest behavior and usually the asserting of independence. The third row, "D", deals with the "speculative" mode of interaction which is characterized by the asking of questions and forming of hypothesis about oneself. The fourth row, "E", deals with the "confrontive" mode of interaction. This mode of interaction is characterized by reality testing and member feedback and is accompanied by involvement, tension, and risk-taking. These categories are also treated as an ordinal scale of interaction with "conventional," "assertive," "speculative," and "confrontive" categories being in the order of increasing significance as outlined in Chapter 1.

Sums of the total acceptance scores (TAS), the quadrants of the 16 cell matrix, and the columns and rows were computed for the pretest and posttest for each subject.

The total acceptance score is based on the score from the 16 cell matrix without regard to internal changes within the matrix. To better understand the internal movement within the matrix, the matrix was partitioned into quadrants. Quadrant I consisted of cells IB and IIB, IC and IIC. Quadrant II consisted of cells ID and IID, IE and IIE. Quadrant III consisted of cells IIIB and IVB, IIIC and IVC. Quadrant IV consisted of cells IIID and IVD, IIIE and IVE.

Means of the total acceptance scores, the quadrant scores, and the column and row scores were computed for the pretest and the posttest for each of the four samples; the experimental participation sample

(E. P. S.), the control participation sample (C. P. S.), the experimental observation sample (E. O. S.), and the control observation sample (C. O. S.).

Tests of significance were calculated on three levels of analysis:

1. the total acceptance score, 2. the quadrant scores, and 3. the column and row scores.

Three tests of significance were performed on each of the four samples of the experiment.

1. Difference scores were obtained between the pretest and the posttest, and a dependent t value for repeated measures (Walker & Lev, 1953, pp. 153-154) was calculated to determine within sample change between the administration of the pretest and the posttest for each of the four samples.

2. Pretest-Posttest difference scores were computed for each subject. A single mean difference score between pretest and posttest was then obtained for each sample, and an independent t value (Walker and Lev, 1953, p. 158) was calculated for the participation condition and the observation condition between experimental and control samples.

3. An independent t value was also calculated using Pretest-Posttest difference scores to compare the experimental participation sample and the experimental observation sample changes.

The means and mean differences of the total acceptance scores, the quadrants, the columns, and the rows, made the location of changes occurring within the 16 cell matrix possible and enabled the experimenter

to locate changes occurring between pretest and posttest within each sample. It was also possible to locate the area of change between the participation and observation conditions, and finally to compare the change between the experimental participation sample and the experimental observation sample.

Experimental Participation Sample

Table 6 summarizes the dependent t values obtained for the experimental participation sample. Figure 1 summarizes the sample means of the total acceptance scores, the quadrant scores, and the column and row scores within the experimental sample between the pretest and posttest.

No significant changes occurred between the pretest and the posttest for the total acceptance scores. There was also no significant change in quadrants, columns, or rows. Quadrant II did indicate a trend toward change. Quadrant II encompasses the "speculative" and "confrontive" modes of interaction and the "topic" and "group" areas of content. Row "D" the "speculative" mode of interaction also indicated a trend toward change. This would imply then that the trend toward change for this sample is in the "speculative" mode of interaction in the "topic" and "group" areas of content.

Table 6

Summary of Dependent t Values for the
Experimental Participation Sample

Experimental Sample	Participation n = 8	t	p (two tail)
1. Total Acceptance Score		-1.25	.4-.2
2. Quadrants			
	Quadrant I	-0.52	.8-.6
	Quadrant II	-1.94	.1-.05
	Quadrant III	+0.49	.8-.6
	Quadrant IV	-0.19	.9-.8
3. Columns			
	Column I	-1.39	.4-.2
	Column II	-1.30	.4-.2
	Column III	+1.14	.4-.2
	Column IV	-0.58	.6-.5
4. Rows			
	Row B	+0.48	.8-.6
	Row C	-0.80	.5-.4
	Row D	-1.92	.1-.05
	Row E	-0.65	.6-.5

(QUADRANTS)				(ROWS)	
	(I)		(III)	Pretest	Posttest
Pretest	20.4		24.8	21.1	21.6
Posttest	19.8		25.3	24.0	23.4
	(II)		(IV)		
Pretest	15.3		17.6	15.8	12.6
Posttest	10.8		17.3	17.1	15.4
				(TOTALS)	
				78.0	
				73.0	
				Posttest	

Pretest	18.9	16.8	19.8	22.6
Posttest	17.1	13.4	20.9	21.6

P
 • = .1-.05
 * = .05-.02
 ** = .02-.01

Fig. 1. Summary of Sample Means for the Experimental Participation Sample $n = 8$

Control Participation Sample

Table 7 summarizes the dependent t values obtained for the control participation sample. Figure 2 summarizes the sample means of the total acceptance scores, the quadrant scores, and the column and row scores within the control participation sample between the pretest and posttest. No significant changes or trends toward changes occurred in the total acceptance score, the quadrants, the columns, or the rows of the control participation sample.

Table 7

Summary of Dependent t Values for the Control Participation Sample

Control Sample	Participation n = 17	t	p (two tail)
1. Total Acceptance Score		-0.22	.5-1.0
2. Quadrants			
	Quadrant I	+0.48	.8-.6
	Quadrant II	-0.57	.6-.5
	Quadrant III	+0.32	.8-.6
	Quadrant IV	-0.54	.6-.5
3. Columns			
	Column I	+0.53	.6-.5
	Column II	-0.64	.6-.5
	Column III	+0.25	.8-.6
	Column IV	-0.59	.6-.5
4. Rows			
	Row B	+1.14	.4-.2
	Row C	+0.05	.9-1.0
	Row D	-0.54	.6-.5
	Row E	-0.49	.8-.6

(QUADRANTS)				(ROWS)	
	(I)		(III)	Pretest	Posttest
Pretest	19.0		22.5	21.5	22.2
Posttest	19.4		22.7	19.8	19.8
	(II)		(IV)		
Pretest	15.2		17.1	15.9	15.3
Posttest	14.6		16.5	16.4	15.8

Pretest	17.3	16.9	19.7	19.8
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Posttest	17.7	16.3	19.9	19.2
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Pretest	73.6
Posttest	73.1

(TOTALS)

P

● = .1-.05

* = .05-.02

** = .02-.01

Fig. 2. Summary of Sample Means for the Control Participation
Sample n = 17

Experimental Observation Sample

Table 8 summarizes the dependent t values obtained for the experimental observation sample. Figure 3 summarizes the sample means of the total acceptance scores, the quadrant scores, and the column and row scores within the experimental observation sample between the pre-test and the posttest. No significant changes occurred in the total acceptance scores or in Quadrants I through III.

Row B, the "conventional" mode of interaction indicated a change at the $p < .02$ level in the negative direction. This implies that subjects viewing the video tape of the interaction developed attitudes that were negative toward the "conventional" mode of interaction across all the areas of content, but not necessarily equally. This is a change that did not occur in the experimental participation sample.

Quadrant IV which encompasses the "speculative" and "confrontive" modes of interaction and the "personal" and "relationship" areas of content indicated a significant change at the $p < .05$ level of analysis in a positive direction. Row E, the "confrontive" mode of interaction, indicated a change at the $p < .05$ level of significance also in a positive direction. This would imply that subjects viewing the video tape developed a more positive attitude toward the "confrontive" mode of interaction in the "personal" and "relationship" areas of content. This change was also not observed in the experimental participation sample.

Table 8

Summary of Dependent t Values for the
Experimental Observation Sample

Experimental Observation Sample	n = 102	t	p
(two tail)			
1. Total Acceptance Score		+1.02	.4-.2
2. Quadrants			
	Quadrant I	-1.51	.2-.1
	Quadrant II	+0.80	.5-.4
	Quadrant III	+0.62	.6-.5
	Quadrant IV	+2.14	.05-.02
3. Columns			
	Column I	-0.62	.6-.5
	Column II	+0.34	.8-.6
	Column III	+1.46	.2-.1
	Column IV	+1.35	.2-.1
4. Rows			
	Row B	-2.48	.02-.01
	Row C	-1.78	.1-.05
	Row D	+0.85	.4-.2
	Row E	+2.02	.05-.02

(QUADRANTS)				(ROWS)	
	(I)		(III)	Pretest	Posttest
Pretest	20.5		21.0	22.5	*** 21.3
Posttest	19.9		21.3	19.1	● 20.0
	(II)		(IV)		
Pretest	18.8		17.0	16.1	16.5
Posttest	19.2		18.1	19.7	* 20.8

Pretest	18.5	20.8	19.0	19.0
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(COLUMNS)				
Posttest	18.2	21.0	19.7	19.7

Pretest	77.3	(TOTALS)
Posttest	78.6	

P
 ● = .1-.05
 * = .05-.02
 ** = .02-.01

Fig. 3. Summary of Sample Means for the Experimental Observation Sample $n = 102$

Control Observation Sample

Table 9 summarizes the dependent *t* values obtained for the control observation sample. Figure 4 summarizes the sample means of the total acceptance scores, the quadrant scores, and the column and row scores within the control observation sample between the pretest and posttest. No significant changes occurred in the total acceptance score, the quadrants, the columns, or the rows of the control observation sample.

Table 9

Summary of Dependent *t* Values for the Control Observation Sample

Control Sample	Observation n = 45	<i>t</i>	<i>p</i>
(two tail)			
1.	Total Acceptance Score	-0.61	.5-1.0
2.	Quadrants		
	Quadrant I	+0.62	.6-.5
	Quadrant II	-0.73	.5-.4
	Quadrant III	-0.67	.6-.5
	Quadrant IV	-0.58	.6-.5
3.	Columns		
	Column I	+0.11	.9-1.0
	Column II	-0.40	.8-.6
	Column III	+0.26	.8-.6
	Column IV	-1.32	.2-.1
4.	Rows		
	Row B	+0.75	.5-.4
	Row C	-1.14	.4-.2
	Row D	-0.04	.9-1.0
	Row E	-1.24	.4-.2

(QUADRANTS)

(ROWS)

	(I)		(III)	
Pretest	17.6		20.7	
Posttest	17.8		20.2	
	(II)		(IV)	
Pretest	16.8		15.4	
Posttest	16.2		15.0	

Pretest	Posttest
17.0	17.6
17.3	16.5
18.1	18.1
18.0	17.2

Pretest	21.1	17.1	15.0	17.1
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(COLUMNS)

Posttest	21.2	16.9	15.2	16.0
----------	------	------	------	------

Pretest

70.4
69.3

(TOTALS)

Posttest

P

● = .1-.05

* = .05-.02

** = .02-.01

Fig. 4. Summary of Sample Means for the Control Observation
Sample n = 45

All tests of significance to this point have been based on the HIM score and have attempted to determine the changes that occur within a sample between the administration of the pretest and posttest. The subsequent tests of significance are based on changes that occur between sample and attempt to determine the differences between samples by comparing the pretest-posttest (posttest minus pretest) mean difference change scores for each sample.

Experimental Participation Sample
Versus Control Participation Sample

Table 10 summarizes the independent t values obtained for the differences between the experimental participation sample and the control participation sample. Figure 5 summarizes the means of the sample differences of the total acceptance score, the quadrant scores, and the column and row scores between the experimental participation sample and the control participation sample.

No significant differences in change scores occurred between the experimental participation sample and the control participation sample for the total acceptance score, the quadrant, column, or row scores between the experimental participation sample and the control participation sample.

Table 10

Summary of Independent t Values for the Experimental

Participation Sample vs Control

Participation Sample

Experimental Participation Sample n = 8	vs Control Participation Sample n = 17	t	p
(two tail)			
1. Total Acceptance Score		-1.00	.4-.2
2. Quadrants			
	Quadrant I	-0.69	.6-.5
	Quadrant II	-1.54	.2-.1
	Quadrant III	+0.10	.9-1.0
	Quadrant IV	+0.16	.9-.8
3. Columns			
	Column I	-1.50	.2-.1
	Column II	-1.02	.4-.2
	Column III	+0.54	.6-.5
	Column IV	-0.21	.9-.8
4. Rows			
	Row B	-0.17	.9-.8
	Row C	-0.45	.8-.6
	Row D	-1.30	.4-.2
	Row E	-0.36	.2-.1

(QUADRANTS)				(ROWS)	
	(I)		(III)	E. P. S.	C. P. S.
E. P. S.	-0.63		+0.50	+0.50	+0.71
C. P. S.	+0.41		+0.35	-0.63	+0.06
	(II)		(IV)		
E. P. S.	-4.50		-0.38	-3.13	-0.59
C. P. S.	-0.59		-0.65	-1.75	-0.65

E. P. S.	-1.75	-3.38	+1.13	-1.00
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(COLUMNS)				
C. P. S.	+0.41	-0.59	+0.29	-0.59

E. P. S.	-5.0	(TOTALS)
C. P. S.	-0.47	

p

● = .1-.05

* = .05-.02

** = .02-.01

Fig 5. Summary of Means of Sample Differences for the
Experimental Participation Sample $n = 8$ vs Control
Participation Sample $n = 17$

Experimental Observation Sample Versus Control Observation Sample

Table 11 summarizes the independent t values obtained for the differences between the experimental observation sample and the control observation sample. Figure 6 summarizes the means of the sample differences of the total acceptance scores, and the column and row scores between the experimental observation sample and the control observation sample.

No significant differences in change scores occurred between the experimental observation sample and the control observation sample for the total acceptance score, quadrant score, or column score.

Table 11

Summary of Independent t Values for the Experimental
Observation Sample vs Control Observation Sample

Experimental Observation Sample n = 102	Control vs Observation Sample n = 45	t	p (two tail)
1. Total Acceptance Score		+1.09	.4-.2
2. Quadrants			
	Quadrant I	-1.44	.2-.1
	Quadrant II	+1.07	.4-.2
	Quadrant III	+0.91	.4-.2
	Quadrant IV	+1.81	.1-.05
3. Columns			
	Column I	-0.47	.8-.6
	Column II	+0.56	.6-.5
	Column III	+0.61	.6-.5
	Column IV	+1.85	.1-.05
4. Rows			
	Row B	-2.02	.05-.02
	Row C	+1.97	.05-.02
	Row D	+0.57	.6-.5
	Row E	+2.26	.05-.02

(QUADRANTS)				(ROWS)	
	(I)		(III)	E. O. S.	C. O. S.
E. O. S.	-0.59		+0.81	-1.17 *	+0.51
C. O. S.	+0.29		-0.47	+0.89 *	-0.78
	(II)		(IV)		
E. O. S.	+0.49		+1.07	+0.44	-0.02
C. O. S.	-0.56		-0.56	+1.12 *	-0.80

E. O. S.	-0.29	+0.20	+0.69	+0.70
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(COLUMNS)				
C. O. S.	+0.07	-0.24	-0.18	-1.09

E. O. S.	+1.28
C. O. S.	-1.09

(TOTALS)

p

◆ = .1-.05

* = .05-.02

** = .02-.01

Fig. 6. Summary of Means of Sample Differences for the
Experimental Observation Sample n = 102 vs Control
Observation Sample n = 45

Rows B and C, the "conventional" and "assertive" modes of interaction, respectively, did indicate a significant difference at the $p < .05$ level for both rows. A difference in the negative direction occurs at the "conventional" mode of interaction; whereas, a difference in the positive direction occurs at the "assertive" mode of interaction. This would imply negative attitudes toward interaction at the "conventional" mode of interaction as a difference between the two samples were developed; whereas, positive attitudes toward interaction at the "assertive" mode of interaction as a difference between the two samples were developed. This is consistent with the within sample change and trend toward change between the pretest and posttest for the experimental observation sample.

Quadrant IV indicated a significant difference in change scores at the $p < .05$ level. Row E, the "confrontive" mode of interaction, also indicated a significant difference in change scores at the $p < .05$ level. Column IV, the "relationship" area of content, indicated a trend. The direction of the positive change for Quadrant IV and Row E implies that the subjects viewing the video tape of the interaction indicated positive attitude changes toward the "confrontive" mode of interaction. Changes in the "confrontive" mode of interaction were seen as significant in the within sample change between the pretest and the posttest for the experimental observation sample.

Experimental Participation Sample Versus
Experimental Observation Sample

Table 12 summarizes the independent t values obtained for the comparison of the difference of change between the experimental participation sample and the experimental observation sample. Figure 7 summarizes the means of the sample differences of the total acceptance score, the quadrant scores, and the column and row scores between the experimental participation sample and the experimental observation sample.

No significant differences in change scores or trends occurred between the experimental participation sample and the experimental observation sample for the total acceptance score and Quadrants I, III, and IV. Quadrant II did indicate a significant difference between samples at the $p < .05$ level. The direction was negative for the experimental participation sample and positive for the experimental observation sample. There were not significant changes or trends in the columns. Row D, the "speculative" mode of interaction, did indicate a significant change at the $p < .05$ level. Here again the experimental participation sample was in a negative direction and the experimental observation sample in a positive direction.

Table 12

Summary of Independent t Values for the Experimental Participation

Sample vs Experimental Observation Sample

Experimental Participation Sample n = 8	vs	Experimental Observation Sample n = 102	t	p
				(two tail)
1. Total Acceptance Score			-1.47	.2-.1
2. Quadrants				
	Quadrant	I	-0.02	.9-1.0
	Quadrant	II	-2.05	.05-.02
	Quadrant	III	+0.25	.8-.6
	Quadrant	IV	-0.69	.6-.5
3. Columns				
	Column	I	-1.08	.4-.2
	Column	II	-1.35	.2-.1
	Column	III	+0.40	.8-.6
	Column	IV	-1.55	.2-.1
4. Rows				
	Row	B	+1.45	.2-.1
	Row	C	-1.65	.2-.1
	Row	D	-2.08	.05-.02
	Row	E	-1.03	.4-.2

	(QUADRANTS)			
	(I)		(III)	
E. P. S.	-0.63		+0.50	
E. O. S.	-0.59		+0.31	
	(II)		(IV)	
E. P. S.	-4.50		-0.38	
E. O. S.	+0.49		+1.07	

(ROWS)	
E. P. S.	E. O. S.
+0.50	-1.17
-0.63	+0.89
-3.13 *	+0.44
-1.75	-1.12

	E. P. S.			
	-1.75	-3.38	+1.13	-1.00

COLUMNS

	E. O. S.			
	-0.29	+0.20	+0.69	+0.70

E. P. S.	
-5.0	
+1.28	(TOTALS)
E. O. S.	

p

• = .1-.05

* = .05-.02

** = .02-.01

Fig. 7. Summary of Means of Sample Differences for the Experimental Participation Sample $n = 8$ vs Experimental Observation Sample $n = 102$

Hypothesis 1

Individuals who participate in an interaction will change their attitudes toward interaction as a function of their participation in the interaction.

There appears to be little support for this hypothesis when considering the attitude change toward interaction of the experimental participation sample that occurs between the pretest and posttest. When comparing this change with the control participation sample, the attitude difference toward interaction is not significant.

Hypothesis 2

Individuals who observe the video taped interaction of the experimental participation sample will change their attitudes toward interaction as a function of their observation of the interaction.

This hypothesis is supported by the attitude changes toward interaction that occur between the pretest and posttest of the experimental observation sample. When compared with the control observation sample, the hypothesis is further substantiated.

Hypothesis 3

Attitude changes toward interaction made by the observation sample will be in the same area of content or mode of interaction on the HIM as the attitude changes toward interaction made by the participation sample.

The attitude changes toward interaction made by the experimental participation sample and the experimental observation sample were in the "speculative" mode of interaction. The experimental participation sample and experimental observation sample indicated differences toward this mode of interaction. A difference between each sample at the same mode of interaction, then, supports the hypothesis.

CHAPTER IV

DISCUSSION OF RESULTS

The results of this experiment which are to be discussed below may be summarized as follows.

The experimental participation sample indicated no attitude changes toward interaction. The control participation sample also indicated no change in attitudes toward interaction between the pretest and posttest.

The experimental observation sample indicated negative attitude changes toward interaction at the "conventional" mode of interaction. Positive attitude changes toward interaction were also indicated at the "confrontive" mode of interaction in the "personal" and "relationship" area of content. These changes occurred between the pretest and posttest. The control observation sample indicated no change in attitudes toward interaction between pretest and posttest.

When comparing the mean differences of the change scores between the experimental participation sample and the control participation sample, no attitude changes toward interaction were evident. Yet, when comparing the mean differences of the change scores between the experimental observation sample and the control observation sample, attitude changes toward interaction at the "conventional" mode of

interaction indicated negative attitude changes; whereas, positive attitude changes were indicated in the "assertive" mode of interaction. Also positive attitude changes toward interaction were indicated at the "confrontive" mode of interaction.

Finally, the comparison of the mean differences of the change scores between the experimental participation sample and the experimental observation sample indicated attitude changes toward interaction at the "speculative" mode of interaction. The experimental participation sample attitude changes were in the negative direction, and the experimental observation sample attitude changes were in the positive direction.

The experimental observation sample indicated negative attitude changes toward interaction at the "conventional" mode of interaction. The positive attitude changes toward interaction at the "confrontive" mode of interaction in the "personal" and "relationship" areas of content of the experimental observation sample imply that the observer has identified with a participant or some aspect of the interaction. He is functioning as a participant observer, once removed, so to speak, and is free to engage in unanswerable confrontations with the interaction participants being viewed on the screen. Whereas the interaction participants must stand ready to answer any confrontations threatened, the observer is safe and no interpersonal risk-taking is involved with any confrontations he may make to the observed interaction participant on the screen or to himself.

Marshal McLuhan (1964) writes that the electronic age of television means involvement and identification. He states, "Television involves all the senses." He refers to it as a cool, low-definition medium; that is, it provides a minimum of information but involves all the senses at once. This, he concludes, means that there is not only high involvement through television, but also high participation. "An observer identifies with the action and is an intimately involved participator." (McLuhan, 1964, pp. 268-294.)

The comparison of the differences between the experimental participation sample and the experimental observation sample indicated that attitude changes toward interaction at the "speculative" mode of interaction existed. The experimental observation sample attitude changes toward interaction at the "speculative" mode of interaction were in the positive direction as opposed to the negative direction of the experimental participation sample.

The mean differences in change scores between the experimental participation sample and the experimental observation sample at the "speculative" mode of interaction implies that the interaction participants perceived functioning at the "speculative" mode of interaction as a threat to their security operations and involving too great an interpersonal risk-taking. Therefore, they changed their attitudes toward this mode of interaction. Hill (1965) states that:

While all of us have many fears, such as the fear of death, fear of the unknown, fear of high places and so

forth, we also have in common a fear of interacting with other human beings. Being in interaction situations mobilizes the free-floating anxiety connected with this fear. Consequently, much behavior in interactions that is labelled resistance is really security operations to maintain a state of minimal anxiety in the face of the interpersonal threat. This is done in various ways, by stereotyped behavior, by beating the other person to the punch, by going through the motions and so on. We believe for anything to take place in an interaction (other than intellectual insight) there must be some interpersonal impact of the members on each other, and there must be some exposure of human irrationalities and some investment in each other by the members. This means that the security operation must be abandoned from time to time and interpersonal risk must be undertaken (pp. 17-18).

In an analysis of interaction and social function, Goffman (1959) has utilized the metaphor of the theatrical performance. He points out that symbolically, the social role the individual plays during the interaction of social intercourse can be equated to the actor performing before an audience. The experimental participation sample subjects were in the position of having to present themselves for a one hour interaction, with people they did not know, in a strange setting, while literally being photographed by the closed circuit television and video tape camera, which would be equivalent to the actor on opening night. In Goffman's (1959) terms, if the actor is to sustain a creditable performance in presenting a character to an audience, he must utilize every technique available to him. The experimental participation sample subjects were in the position of having to prove their performance believable to their audience and themselves. They were aware that if their performance was questionable, it would make the role they were playing questionable

and thereby place in jeopardy the validity of their entire act. Bach (1954) and Bion (1961) point out that interaction participants strive to have their "stories" accepted by other participants. Interaction at the "speculative" mode of interaction was therefore perceived as too risky for the time and place of the performance they were about to give. It created too many interpersonal risk-taking situations that possibly could not be dealt with in a believable manner for the role at that time. The experimental participation sample found it safer to operate on a mode of interaction that involved less risk-taking and in which there would be less doubt of their performance being accepted and their role believed.

The experimental observation sample identified with the interaction participants, were involved with the interaction participants, and by the very safe, non risk-taking method of observation participated with the interaction participants at the "speculative" mode of interaction. There was no threat to their security operations.

It is interesting to note that the experimental observation sample tended to develop attitude changes toward interaction in the positive direction in a great many instances, more than any other sample of subjects. This could be related to what Berne (1964, p. 124) refers to as the game of "Let's you and him fight." The observers appear to be making positive attitude changes toward interaction, although not involved in the actual participation. The observation via television by identification with the interaction has allowed the experimental observation

sample to participate.

Face-to-face discourse is not as selective, abstract, nor explicit as television; it probably comes closer to communicating an unabridged situation than any other medium, and, insofar as it exploits the give-take of dynamic relationship, it's clearly the most indispensable human one. (Carpenter & McLuhan, 1960, p. 173.)

Moreno (1953) has utilized audiences in psychodrama interactions for years. He noticed that the audience was as involved as the participant and has often used them as part of the interaction.

Participation by observation through identification in a non-risk situation would account for the positive direction of attitude changes toward interaction at the "speculative" mode of interaction by the experimental observation sample.

The results of the experiment support the hypothesis that individuals who observe an interaction will change their attitudes toward interaction as a function of that observation. Also, attitude changes toward interaction will be in the same area of content or mode of interaction for the participation and the observation samples. The failure to obtain $p = .05$ level of confidence for participants of interactions must be considered. Non-experimental participants of interactions usually request the interactions for "the purpose of getting help with problems and self enlightenment or insight" (Hill, 1965, pp. 18-19). The experimental participation sample subjects in this case volunteered for an unknown experiment.

Non-experimental interaction participants must usually pay to

participate in interactions; whereas, the experimental participation subjects were paid to participate. The non-experimental interaction participants will usually attend a series of meetings over weeks or months, lasting an hour and a half to four or five hours. The experimental participation sample subjects underwent a single meeting of fifty minutes duration.

Future research in the area of attitude and attitude changes toward interaction by participation and observation should initially attempt to deal with the disproportionalities that exist between non-experimental interaction participants and experimental interaction participants.

An exciting aspect of future research could involve a similar experimental design. The experimental participation sample would be video taped and observed by the experimental observation sample, who are pretested and posttested. Then, the experimental observation sample would be placed in an interaction as participants and posttested after the interaction to determine the attitude changes toward interaction pre and post observation and pre and post participation. These results could be compared to the initial experimental participation sample for differences.

It might also prove interesting to have the experimental observation sample, after participating in an interaction, observe their own interaction and determine these pre and post differences. The experimental participation sample could also have observed the experimental observation sample subjects participating in an interaction.

The scope of potential research utilizing participant and observer in an attempt to determine attitudes and attitude changes toward inter-action is almost unlimited.

CHAPTER V

SUMMARY

The purpose of this experiment was to determine attitude changes toward interaction by comparing participation in an interaction to observation of an interaction.

A review of the literature pertinent to attitude changes toward interaction, "interaction groups," and television was presented and summarized. The present research involved 87 male and 85 female (N=172) subjects selected from undergraduate students at the University of Oklahoma. The subjects were partitioned into two conditions; the participation condition and the observation condition. Each condition was divided into experimental sample and a control sample.

The experimental participation sample was pretested before participation in an interaction and posttested after participation. This interaction was video tape recorded. The control participation sample was pretested and posttested with no interaction between the tests. The experimental observation sample was pretested before observing the interaction of the video tape recorded experimental participation sample and after viewing the interaction sample. The control observation sample was pretested before and after viewing a film that contained no

interaction.

The Hill Interaction Matrix was utilized to determine the area of content and mode of interaction of attitude changes toward interaction for the pretest and posttest of all samples in each condition.

Dependent *t* values were calculated for the within sample change of all four samples. Independent *t* values were calculated for comparison of sample mean differences between the experimental and control sample of each condition. A final comparison was made between the experimental participation sample and the experimental observation sample. Results indicated significant attitude changes toward interaction between the pretest and posttest of the experimental observation sample. No attitude changes toward interaction were indicated when comparisons were made between the experimental participation sample and the control participation sample. Significant attitude changes toward interaction were indicated by the comparison between the experimental observation sample and the control observation sample, as well as the comparison between the experimental participation sample and the experimental observation sample.

The initial hypothesis that participation in an interaction will change attitudes toward interaction lacked support. The second hypothesis that observation of an interaction will change attitudes toward interaction was supported as was the final hypothesis that the experimental participation sample and the experimental observation sample would yield attitude changes toward interaction at the same mode of

interaction.

The discussion pointed out the differences of experimental versus non experimental interaction participation and the theoretical aspects of participation by observation of an interaction. Suggestions for future research were offered.

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APPENDIXES

APPENDIX A

Standard Test Administration Instructions

HIM-B

This test contains sixty-four items and each one describes a typical or usual situation which arises in groups similar to the one you will be joining. We would like you to give your reaction to each of these group situations. There are no right or wrong answers and this is not a personality test or a test of intelligence. Your best answer is the one that comes first to mind. Therefore if you answer the questions carefully but quickly you need not take longer than twenty minutes to complete the test.

Do not mark on this Test Booklet. Record your answers on the accompanying Answer Sheet. Also write name on Answer Sheet.

If you do not understand the meaning of an item, then please ask for further explanation from the person administering the test. If you still don't understand then record the letters D. K. (Don't Know) opposite the item on the Answer Sheet.

Now turn to the first item on the test. It says:

1. I talk to people about my background, family, school, work, etc.

1	2	3	4	5	6
Most People	Many People	Some People	Few People	One or Two People	Nobody

In an Interaction Group would you talk about these things to: 1. Most People who would be in such a group. 2. Many People who would be in such a group. or 3. Some people or 4. A Few People or 5. One or Two People or 6. Nobody?

For example, if your answer is Many People then you black in on the Answer Sheet opposite Item No. 1 the square with the 2 in it as Many People is the number 2 answer in the test.

In other words, for each item you think of yourself as a member of an Interaction group and how you would react in terms of the six possible answers; choose the one that best represents your reaction and record the number of that reaction on the Answer Sheet.

You have completed item number one. If there is no question then proceed in the same manner to complete the rest of the test.

HIM-B

1. I talk to people about my background: family, school, work, etc.

1	2	3	4	5	6
Most People	Many People	Some People	Few People	One or Two People	Nobody

2. I tell other people specifically what kind of reactions I have toward them when they ask me.

1	2	3	4	5	6
Most People	Many People	Some People	Few People	One or Two People	Nobody

3. I like to discuss Psychology with people.

1	2	3	4	5	6
Most People	Many People	Some People	Few People	One or Two People	Nobody

4. I side in with people who say they are getting a raw deal.

1	2	3	4	5	6
Most People	Many People	Some People	Few People	One or Two People	Nobody

5. In a group I'd ask questions about how one member reacts to another.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

6. I'm interested in what kind of things motivate people.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

7. People need to be told off regularly

1	2	3	4	5	6
Most People	Many People	Some People	Few People	One or Two People	Nobody

8. When a group is having trouble operating, I figure out what's wrong with the group and propose solutions.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

9. I ask for or give summaries and restatements of what's said.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

10. I am sarcastic to people.

1	2	3	4	5	6
Most People	Many People	Some People	Few People	One or Two People	Nobody

11. I try to support and encourage other people.

1	2	3	4	5	6
Most People	Many People	Some People	Few People	One or Two People	Nobody

12. When people point out examples of my immature, irrational or inadequate behavior I try to profit by this.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

13. Even though my ideas are unpopular I tend to uphold them.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

14. I side in with people who criticize the group.

1	2	3	4	5	6
Most People	Many People	Some People	Few People	One or Two People	Nobody

15. I like to know something about the background of people.

1	2	3	4	5	6
Most People	Many People	Some People	Few People	One or Two People	Nobody

16. I let people know what I think of them.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

17. I offer suggestions as to how a group might improve its functioning.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

18. I'm willing to seek help from people for my personal problems.

1	2	3	4	5	6
Most People	Many People	Some People	Few People	One or Two People	Nobody

19. I like people who initiate and plan group activities.

1	2	3	4	5	6
Most People	Many People	Some People	Few People	One or Two People	Nobody

20. When groups try to solve peoples problems its a case of the 'blind leading the blind.'

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

21. If conflicting goals are fouling up a group I will point this out.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

22. Groups tend to get off the subject and wander all over.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

23. I try to get people to honestly examine the kind of relationships they form with others.

1	2	3	4	5	6
Most People	Many People	Some People	Few People	One or Two People	Nobody

24. I like to discuss current events.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

25. I help plan a group's activities.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

26. I like to chat with people

1	2	3	4	5	6
Most People	Many People	Some People	Few People	One or Two People	Nobody

27. I openly criticize the policies of those in charge or in positions of authority.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

28. I try to integrate or synthesize and pull together divergent opinions or ideas expressed in a group.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

29. I like to discuss what causes various kinds of emotional upsets and mental illnesses.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

30. I compare the group I'm in with other groups I've known.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

31. I try to help people with their personal problems.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

32. I retaliate when people point out my weaknesses.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

33. When people talk about their problems I like to bring the discussion around to the principles or types of behavior that are illustrated by these problems.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

34. I share with the group my observations of its function and its subsequent failures.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

35. I point out discrepancies or contradictions between peoples behavior and what they say they're like.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

36. I like for others to help me understand myself.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

37. I'm the one who asks what are the plans and procedures of the group.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

38. I like to praise people.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

39. I disagree with the way groups tend to operate.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

40. I make fun of people.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

41. I'm interested in people.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

42. It is my responsibility to give group members an honest statement of how I react to them even if it may hurt their feelings.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

43. I'm willing to share details of my private life with people.

1	2	3	4	5	6
Most People	Many People	Some People	Few People	One or Two People	Nobody

44. When I tell people how I react to them I try to do so but in a way that doesn't hurt their feelings.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

45. I try to clarify or pull out some conclusions for the group when it gets bogged down or confused in discussing a topic.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

46. When a member's behavior prevents or inhibits a group's progress, I point out to the group the effect of his behavior.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

47. I try to find out what kind of reactions my behavior produces on other individuals

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

48. I like to exchange gossip.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

49. I like to kid with people.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

50. I try to get people to discuss the kinds of defenses and psychological principles that their behavior illustrates.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

51. People have pretty foggy notions on most controversial issues.

1	2	3	4	5	6
Most People	Many People	Some People	Few People	One or Two People	Nobody

52. I like to offer observations about the group's performance.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

53. I like to get people to discuss how they feel about each other.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

54. People need to know more about Psychological and Psychiatric terms and concepts.

1	2	3	4	5	6
Most People	Many People	Some People	Few People	One or Two People	Nobody

55. I react negatively to suggestions implying that I change my personality.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

56. I try to get people to deal with their problems which they avoid.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

57. I like to argue with people.

1	2	3	4	5	6
Most People	Many People	Some People	Few People	One or Two People	Nobody

58. I like to be close and personal with people.

1	2	3	4	5	6
Most People	Many People	Some People	Few People	One or Two People	Nobody

59. People who talk about their troubles gripe me.

1	2	3	4	5	6
Most People	Many People	Some People	Few People	One or Two People	Nobody

60. I share with the group how I think we're doing.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

61. When people ask about how I react toward them I usually tell them.

1	2	3	4	5	6
Most People	Many People	Some People	Few People	One or Two People	Nobody

62. I try to find out how people actually see me and see my problems.

1	2	3	4	5	6
Most People	Many People	Some People	Few People	One or Two People	Nobody

63. I like to socialize.

1	2	3	4	5	6
Usually	Often	Sometimes	Occasionally	Rarely	Never

64. I'm interested in people.

1	2	3	4	5	6
Most People	Many People	Some People	Few People	One or Two People	Nobody

APPENDIX B

Films Used for Control Observation Sample

The following films were used for viewing by the control observation sample for the non experimental task. The films are silent and have title cards in French. They did not show interaction between people.

These films were obtained through the University of Oklahoma, Audio-Visual Department:

Title	Film No.
1. Feeding in a Carnivorous Ciliate Protozoan	593.1-C
2. Feeding in a Herbivorous Ciliate Protozoan	593.1-H
3. Feeding in Suctorians	563.7-S
4. Life Story of the Paramecium	593-L

APPENDIX C

Summary of Subjects, Transactions and Topics of the Experimental Participation Sample Interaction

The four male and four female ($n = 8$) subjects sat in a semi-circle in seats of their own choice. From left to right they were: Subject 1, female, age 20; Subject 2, female, age 19; Subject 3, female, age 20; Subject 4, male, age 19; Subject 5, male, age 19; Subject 6, male, age 18; Subject 7, female, age 22; Subject 8, male, age 19. All subjects were single except Subject 2 was married. All subjects were Caucasian except Subject 7 who was Negro. All subjects will be referred to only by number henceforth.

The "group leader" sat at the extreme right of the semicircle next to 8 and will be referred to as L.

5 started the interaction by questioning what was to happen in an interaction. 3 replied as did 6 and 7. The topic was what to talk about. This lasted approximately two minutes. 3 asked 5 about student housing in Norman and 5 replied to 3. L asked if this was of interest to everybody. 3 and 4 agreed, pointing out that Oklahoma University has a housing problem. 7 offered a criticism of Oklahoma University and focused it specifically on the city of Norman, pointing out that she was "black."

L inquired how she felt about living in Norman. 7 answered that Oklahoma University was okay, but the city of Norman had no jobs for Negroes. 2 agreed it was a "bad scene." 5 said prejudice is overt in Norman as opposed to the North where it is covert and felt it is better to be open about prejudice than underhanded. 7 talked about prejudice in other cities. 5 restated the point that it is better to have open prejudice. L asked 5 if he was defending the system. 5 replied negatively, indicating that reality is accepting what is.

L asked the group what "Black Power" means. 2 responded that Black Power means nothing to her. 5 responded to 2, and five transactions on the fact that color is a difference and makes a difference occurred. 5 concluded by saying he would not marry a Negro. 2 asked 5 about marrying a Japanese, Chinese, Arab, Turk, etc. 3 said she could be friendly, but not marry a Negro, Asian, or any other person not white. 2 questioned 3 about her relationship with people, and that if you have a relationship, race should make no difference. 5 said that intermarriage was not the norm. L asked "what norm?" 5 responded that it didn't matter. 2 and 5 exchanged four transactions regarding prejudice being learned, and 5 said that marrying a Negro would be going against his parents. 4, 2, 3, and 5 discussed interracial sexual intercourse. 7 responded to a question from 3 that she would marry a white man. 3 said she wouldn't marry a Negro. L asked if you should do something even if you don't believe in it.

4 talked about society and its expectations. L stated that it was

now "in" to be black. 3, 4, and 5 discussed racial integration and 3 worried about children of mixed marriages. 2 stated they would have no more trouble than Negro children do now. 2 and 7 were for miscegenation and 3 was against it. 4 brought in the black social structure. 3 stated she was not prejudiced, "Negroes can come to my home, but I don't want to marry one." 3 talked about an old white boyfriend and how her mother persuaded her not to marry him. She said her parents were army and from the South. L said she was brainwashed by her mother. 3 rejected the statement by L. 2 asked 3 if her children could marry a Negro. 3 said yes because society would be different in twenty-five years. 2 said "not if you keep putting down other people because of their color." 3 responded loudly that she was not prejudiced. 2 asked 3 to define prejudice. 3 defined prejudice as against a whole people.

5 asked 2 what flavor ice icream she liked and 2 responded, "any color." 7 informed 5 that ice cream was not like a whole race of people. L informed the group that the whites were a minority in the world. 7 said you can't block out a whole race of people because of their color. 3 said she was willing "to be blocked out with my white husband, in my white house, in my white neighborhood." 4 said "and you're not prejudiced." 5 interjected an intellectual statement regarding international Black Power. L stated that the comment was away from the feelings people were having in the group. 2 commented on how money power is all white. 7 said "you can't win no matter how much money you have because of your skin color." L and 3 had six transactions about

prejudiced parents and how you learn prejudice from your parents. 7, 3 and 2 talked about the values of an individual and 3 said your color makes a difference. 7 and 3 had eight transactions discussing children and 7 said to 3 "you're prejudiced." 2 agreed with 7. L asked 8 what he thought about all that had been going on. 8 responded he wasn't sure, but he thought 3 was prejudiced. 4 agreed with him. 4 said more Negroes are in the army than in college. 2 said "what happens to them when they get back? After fighting to keep the world free for democracy."

6 got into a long talk on political apathy. L said "let's continue with the discussion." 6 said whites don't know how to act to Negroes because they haven't seen many Negroes. 7 said, "But people are people." 6 said "whites are not exposed to Negroes." 7 said, "Bull." 6 said whites have been influenced by what they see on television and read in newspapers about Negroes. 7 said, "Bull, people are people." 4 said that Black Power simply wants things equal. 8 said Black Power has a bad feeling like communism. L said you've shown some real feeling. 8 said, "I'm scared by it [Black Power]."

5 said riots hurt Negroes more than help them. He then went on to talk about riots in Rochester, New York. L, 5, and 6 pointed out the outcomes of riots, positive and negative. 4 talked about prices in Negro ghetto stores. 6 said high prices are everywhere. 5 talked more on riots and was against them. 2 said they were looting to get junk and get even. 5 asked why and 2 explained her statements. 8 said that the riots have brought it to a head. 5 talked about losses in riots. 2 asked 5 if

he would like to live in an integrated neighborhood. 5 answered, "Yes, but no riots." L asked if he would have sex with Negroes, why not marry one?" 5 said it was different and that's not what he meant. 2, 6, and 5 discussed the effects of riots on Negroes. 2 asked about money and Negroes. 5 said he hates riots and Negroes that riot. 6 talked about Miami, Florida riots.

7 went into the history of sit-ins and how Black Power started. 6 talked about Martin Luther King and 4 asked how laws are made, and why the Negro population doesn't vote. 4 and 6 talked about the laws of Mississippi and Alabama. 6, 4, and 5 talked about the violence in these states. 7 made a statement about the Negro's inability to register to vote in those states.

The allotted time was up and L concluded the interaction with a final statement.

APPENDIX D

SUBJECT INFORMATION SHEET

- 1.) Name: _____
- 2.) Sex: _____
- 3.) Age: _____
- 4.) Single: _____ Married: _____ Other: _____
- 5.) Number of semesters in college: _____
- 6.) Grade Point Average: _____
- 7.) How many members are in your immediate family (including yourself)? _____
- 8.) Are you familiar with the dynamics of interaction groups? _____
- 9.) Have you ever participated in an interaction group? _____
- 10.) If so, when? _____

APPENDIX E

VIDEO TAPE PERMISSION

I hereby give permission to Eugene E. Landy to video tape and replay the tape of the interaction group experience in which I am about to participate and will be a member.

I grant this permission with the knowledge and understanding that he will utilize this tape solely for academic and research purposes.

Name

School Address

School Phone

Date

APPENDIX F

Hill Interaction Matrix

		<u>Area of Content</u>				<u>Mode of interaction</u>
Rows		Columns				
		I	II	III	IV	
B		1	2	9	10	Conventional
		Quadrant I		Quadrant III		
C		3	4	11	12	Assertive
D		5	6	13	14	Speculative
		Quadrant II		Quadrant IV		
E		7	8	15	16	Confrontive
		Topic	Group	Personal	Relationship	

APPENDIX G

CELL FREQUENCY OF HIM SCORES OF ALL SUBJECTS,
SUBDIVIDED BY EXPERIMENTAL AND CONTROL SAMPLES

EXPERIMENTAL PARTICIPATION SAMPLE - PRETEST

Subject No.	IB	IIB	IIIB	IVB	IC	IIC	IIIC	IVC	ID	IID	IIID	IVD	IE	IIIE	IIIE	IVE	TOTAL
001	4	0	10	7	10	8	1	7	3	0	3	5	1	3	3	4	69
002	10	3	10	10	7	6	4	10	6	3	6	3	3	6	10	6	103
003	10	8	6	6	7	3	6	4	4	3	4	5	1	6	4	1	78
004	3	1	6	3	4	3	6	10	4	1	1	3	1	4	1	6	57
005	1	3	4	1	10	7	6	5	1	1	3	1	2	3	0	3	51
006	6	1	6	10	7	6	1	6	3	6	6	3	3	10	6	6	86
007	2	5	6	7	4	8	1	10	6	10	6	6	6	4	9	8	98
008	6	1	7	6	3	6	10	6	10	1	2	7	3	4	4	6	82

EXPERIMENTAL PARTICIPATION SAMPLE - POSTTEST

001	4	0	10	7	10	7	1	7	3	0	7	3	0	1	3	3	66
002	10	3	10	10	7	6	4	10	3	3	6	3	6	6	8	10	105
003	10	10	6	10	3	3	3	6	1	3	4	5	1	10	4	1	80
004	6	1	6	3	4	6	6	10	4	1	1	2	1	4	4	6	65
005	1	0	4	1	10	6	6	5	1	2	1	1	1	3	1	3	46
006	6	3	6	5	6	6	1	6	3	3	6	7	6	3	10	6	83
007	2	5	6	7	4	3	6	10	5	1	10	1	2	0	3	3	68
008	6	1	7	7	3	6	10	6	6	0	2	3	2	1	5	6	71

CONTROL PARTICIPATION SAMPLE - PRETEST

009	7	8	10	3	10	6	6	10	7	3	6	3	10	6	4	3	102
010	6	3	6	6	3	5	1	1	10	1	6	8	2	3	4	6	71
011	9	1	0	3	4	10	6	10	1	1	2	1	0	0	4	7	59
012	9	1	6	10	3	5	6	0	6	3	6	3	2	6	10	2	78
013	3	10	6	6	6	3	4	10	10	10	3	1	10	10	6	7	105
014	5	8	7	10	3	3	1	3	1	1	6	1	3	3	6	7	68

CONTROL PARTICIPATION SAMPLE - PRETEST

Subject No.	IB	IIB	IIIB	IVB	IC	IIC	IIIC	IVC	ID	IID	IIID	IVD	IE	IIIE	IIIE	IVE	TOTAL
015	3	2	0	5	7	10	10	10	3	3	1	3	1	6	6	6	76
016	5	0	6	7	4	6	9	4	3	1	3	3	1	3	4	6	65
017	6	1	10	5	4	3	6	3	1	3	0	4	1	9	3	7	66
018	8	6	1	10	4	6	6	0	4	1	3	3	4	4	1	5	66
019	10	10	10	10	4	0	5	4	10	10	10	10	4	10	10	5	122
020	4	3	6	6	2	4	1	3	3	1	4	1	3	1	3	1	46
021	6	5	6	2	6	6	6	10	10	1	8	6	3	3	0	6	84
022	6	3	6	10	0	1	4	6	1	3	7	1	0	0	2	0	50
023	0	3	6	6	1	3	2	3	2	1	4	0	1	0	3	2	37
024	1	7	3	1	7	10	6	6	3	10	3	7	6	6	8	6	90
025	1	5	9	3	3	6	6	10	6	1	5	3	2	0	0	6	66

CONTROL PARTICIPATION SAMPLE - POSTTEST

009	9	10	6	10	6	5	6	10	6	7	6	1	5	6	3	6	102
010	6	3	10	6	3	4	4	1	10	1	6	8	3	1	8	4	78
011	9	1	0	3	6	10	6	10	1	1	3	1	0	0	1	2	54
012	6	1	6	10	4	4	4	0	10	3	10	3	3	6	10	8	88
013	3	10	6	6	4	4	4	10	10	7	3	1	10	7	5	1	91
014	6	8	6	10	7	6	5	3	1	5	6	1	3	6	10	7	90
015	3	2	0	5	7	10	10	10	3	3	1	3	3	6	6	6	78
016	5	0	6	7	4	6	5	4	1	1	3	1	1	1	3	3	51
017	6	4	6	9	4	6	3	3	3	3	1	1	1	6	3	6	65
018	8	4	3	6	4	3	5	2	5	1	6	3	6	4	3	5	68
019	10	10	10	10	4	3	5	4	5	10	10	10	6	6	10	10	123
020	4	4	6	6	0	1	1	1	7	1	6	1	0	1	0	0	39
021	6	1	6	5	6	6	6	10	10	1	3	6	7	3	3	6	85
022	6	4	6	10	0	1	0	0	0	1	5	1	0	0	2	1	37

CONTROL PARTICIPATION SAMPLE - POSTTEST

Subject No.	IB	IB	IBB	IVB	IC	IC	IIC	IVC	ID	ID	IID	IVD	IE	IE	IIE	IVE	TOTAL
023	2	1	6	6	1	3	3	2	2	0	1	1	0	0	3	2	33
024	1	7	6	1	10	10	10	10	1	7	3	3	3	6	4	6	88
025	1	5	10	3	6	6	6	10	6	1	6	2	2	2	4	3	73

EXPERIMENTAL OBSERVATION SAMPLE - PRETEST

026	1	1	0	6	4	6	0	3	1	3	0	1	0	1	3	3	33
027	10	10	10	10	6	6	5	10	7	10	3	1	6	7	3	3	101
028	5	4	10	10	5	4	4	6	3	6	10	1	7	7	7	1	90
029	5	7	10	6	3	3	6	1	1	1	4	1	0	0	1	3	52
030	3	3	1	6	6	3	3	6	3	3	4	3	0	4	9	3	60
031	4	9	6	6	4	3	5	10	6	3	1	2	1	7	5	6	78
032	5	6	3	3	10	6	1	1	8	1	3	1	3	6	5	3	65
033	5	7	6	6	6	4	8	6	10	10	4	6	10	6	8	1	103
034	6	8	6	10	5	3	5	4	10	3	6	1	4	6	3	6	86
035	4	3	10	6	3	3	4	4	10	3	3	3	10	3	5	7	81
036	6	4	7	6	1	3	5	2	4	4	6	0	0	5	2	3	58
037	8	3	6	5	3	0	3	7	6	6	4	3	10	6	10	4	84
038	6	4	3	6	6	2	3	7	3	3	1	3	3	3	0	3	56
039	10	3	7	7	6	1	10	10	1	1	3	4	0	3	5	5	76
040	10	1	7	6	1	3	6	0	0	8	4	1	3	3	6	3	62
041	6	8	10	10	10	3	6	1	1	10	4	1	4	7	2	6	89
042	1	1	0	2	2	6	0	2	0	1	2	0	0	1	0	2	20
043	6	9	7	10	7	7	9	6	3	10	4	1	4	7	0	2	92
044	1	7	6	6	8	3	6	7	1	3	3	1	1	3	7	6	69
045	6	5	6	4	4	6	6	10	4	0	0	1	1	6	2	5	66
046	7	1	3	3	5	1	1	6	1	1	3	3	1	1	6	0	43
047	4	1	1	1	5	3	2	6	2	1	3	1	0	3	1	2	36

EXPERIMENTAL OBSERVATION SAMPLE - PRETEST

Subject No.	IB	IB	IBB	IVB	IC	IC	IBC	IVC	ID	ID	IID	IVD	IE	IE	IEE	IVE	TOTAL
048	1	1	6	7	3	6	6	10	2	1	7	1	1	3	6	6	67
049	5	0	7	2	10	7	6	10	10	1	3	5	10	6	6	10	98
050	7	5	6	5	3	1	1	6	7	10	10	10	6	6	6	8	97
051	6	6	6	8	10	2	4	1	1	4	3	10	3	1	3	7	75
052	10	10	6	10	3	3	1	3	0	6	4	0	3	3	5	2	69
053	3	7	6	7	6	3	1	6	6	10	6	6	6	6	10	6	95
054	6	3	6	6	3	3	4	6	4	1	3	1	7	3	6	7	69
055	6	10	10	10	8	6	4	6	4	10	1	6	6	7	10	6	110
056	10	1	6	3	1	3	10	2	1	4	5	3	1	3	4	7	64
057	4	3	6	10	6	7	4	10	10	6	6	6	4	6	10	10	108
058	4	6	6	7	3	1	4	6	3	2	4	7	10	6	7	4	80
059	3	1	6	1	10	10	10	6	3	10	2	3	6	6	4	6	87
060	6	3	6	6	3	6	6	6	3	3	0	4	3	6	1	6	68
061	2	3	3	2	4	3	3	10	1	4	0	5	1	3	3	6	53
062	9	1	6	10	4	3	4	3	3	4	6	3	1	4	10	6	77
063	1	7	6	6	1	10	1	6	10	3	4	7	7	3	7	10	89
064	4	6	7	6	7	6	6	10	10	6	4	7	10	7	6	7	109
065	6	4	10	0	3	3	3	1	3	10	6	6	4	10	3	6	78
066	6	10	6	10	6	6	6	10	5	10	6	7	6	10	6	6	116
067	1	0	6	5	6	10	3	1	3	5	6	2	1	6	3	3	61
068	1	10	6	6	10	10	6	1	6	10	0	1	4	10	4	6	91
069	6	3	10	10	2	1	1	3	3	6	6	3	4	7	7	5	77
070	4	10	3	6	6	10	6	6	10	10	3	6	10	10	8	10	118
071	5	8	6	6	10	3	4	7	6	6	1	6	4	6	8	10	96
072	4	1	3	3	3	3	4	1	2	1	3	1	0	4	1	3	37
073	3	0	3	4	8	10	6	6	1	2	0	1	0	2	10	3	59
074	3	3	3	4	8	3	4	6	8	4	6	1	6	6	6	10	81
075	6	6	10	2	10	1	10	10	4	3	3	3	1	3	8	1	81

EXPERIMENTAL OBSERVATION SAMPLE - PRETEST

Subject No.	IB	IIB	IIIB	IVB	IC	IIC	IIIC	IVC	ID	IID	IIID	IVD	IE	IIE	IIIE	IVE	TOTAL
076	6	10	6	6	4	3	5	3	4	10	6	7	8	10	5	6	99
077	6	6	10	8	2	3	7	6	6	3	7	1	1	2	6	3	77
078	10	6	10	6	3	6	4	5	4	6	6	3	6	10	6	3	93
079	8	10	3	6	10	6	5	10	7	10	6	2	10	6	8	10	117
080	6	7	6	6	6	3	3	6	6	9	5	10	10	7	7	7	104
081	6	3	7	1	6	4	2	0	1	3	3	1	1	3	6	0	47
082	6	8	6	4	3	3	0	1	7	10	4	0	4	10	3	9	78
083	3	5	6	5	8	6	1	7	3	6	10	6	3	3	8	6	86
084	10	3	10	5	6	6	4	10	3	7	3	6	3	6	1	3	86
085	10	8	10	6	6	3	6	6	3	1	0	0	1	1	1	2	64
086	10	10	6	10	6	3	1	4	3	3	10	3	10	6	6	5	96
087	6	6	6	10	4	3	3	8	6	6	6	3	6	10	4	6	93
088	5	10	6	6	4	3	6	0	1	10	4	5	6	1	3	3	73
089	9	1	6	4	5	10	1	3	1	1	6	3	1	0	1	6	58
090	10	6	6	10	4	3	2	7	3	10	3	1	4	10	3	6	88
091	10	10	10	6	7	6	7	1	7	0	3	3	6	7	4	3	90
092	1	7	6	6	3	3	6	3	7	1	4	0	3	3	6	3	62
093	6	10	6	6	4	7	6	3	3	6	4	3	3	3	1	6	77
094	5	10	10	6	3	2	8	6	6	3	1	5	6	10	3	3	87
095	6	8	3	6	3	6	0	1	7	6	1	3	10	6	5	6	77
096	6	10	6	10	1	6	1	4	1	10	1	5	6	7	6	3	83
097	0	1	0	0	0	3	0	0	0	1	1	1	0	0	0	3	10
098	6	4	10	2	6	6	0	1	3	3	4	1	3	3	2	6	60
099	1	6	1	4	3	10	6	10	6	3	3	3	3	10	10	3	82
100	5	7	10	9	3	3	4	5	6	10	3	3	3	10	10	6	99
101	6	6	3	3	10	3	6	6	1	3	4	3	1	8	7	8	78
102	6	8	9	9	3	6	6	9	10	6	-	1	1	2	1	3	80

EXPERIMENTAL OBSERVATION SAMPLE - PRETEST

Subject No.	IB	IB	IIIB	IVB	IC	IIC	IIIC	IVC	ID	ID	IID	IVD	IE	IE	IIIE	IVE	TOTAL
103	6	6	1	9	7	2	5	10	6	6	3	6	0	10	1	3	81
104	3	10	10	1	6	10	6	6	8	10	3	10	10	10	8	10	121
105	1	1	1	1	4	3	3	6	1	1	1	3	4	6	4	3	43
106	10	10	10	3	10	4	3	6	0	6	0	3	1	4	1	6	77
107	6	10	10	3	6	3	3	5	7	9	4	6	6	3	5	3	89
108	3	10	3	3	6	7	6	5	3	2	2	5	1	10	3	6	75
109	1	6	6	1	6	4	0	3	6	6	1	1	4	10	4	4	63
110	10	1	3	6	3	0	1	7	0	3	3	1	1	6	4	1	50
111	6	1	6	6	1	3	1	4	1	10	3	6	6	10	7	7	78
112	6	3	3	9	7	6	3	6	8	7	3	3	6	10	10	10	100
113	6	1	10	10	7	2	6	4	1	7	10	6	4	3	6	3	86
114	6	4	6	6	4	4	3	0	3	6	5	2	4	7	7	4	71
115	6	10	10	3	3	6	1	1	1	10	1	1	6	6	7	6	78
116	6	6	10	10	6	6	1	10	3	6	10	3	7	10	10	3	107
117	3	3	6	3	3	2	3	10	1	6	3	1	1	2	8	5	60
118	1	10	3	0	6	6	3	0	0	2	1	1	4	10	1	2	50
119	4	9	10	2	7	4	4	6	8	7	10	2	6	6	10	5	100
120	6	3	0	3	6	1	6	0	1	3	1	1	3	7	7	1	49
121	4	3	0	3	6	10	7	4	2	3	0	1	1	3	5	7	59
122	1	7	4	2	10	4	6	9	3	1	1	1	3	4	3	1	60
123	6	6	10	10	10	7	4	6	1	7	3	7	4	6	2	6	95
124	3	7	4	7	7	2	7	6	4	3	7	7	5	10	0	6	85
125	6	10	6	3	4	6	3	5	1	3	3	1	3	1	6	6	67
126	4	7	7	6	6	6	3	10	7	8	6	6	6	6	10	10	108
127	4	1	10	2	4	3	4	6	6	7	2	5	1	7	10	6	78

EXPERIMENTAL OBSERVATION SAMPLE - POSTTEST

Subject No.	IB	IIB	IIIB	IVB	IC	IIC	IIIC	IVC	ID	IID	IID	IVD	IE	IIE	IIIE	IVE	TOTAL
026	1	1	0	6	6	3	3	5	0	3	0	1	0	1	3	6	39
027	10	10	6	10	6	2	10	10	1	10	3	3	6	7	1	3	98
028	5	3	6	10	3	3	4	6	7	6	10	1	7	10	3	3	87
029	6	5	10	4	0	3	6	1	1	1	1	3	1	1	1	3	47
030	3	3	3	3	7	3	3	6	3	3	4	7	1	4	9	3	65
031	4	10	6	6	6	3	4	7	6	10	3	3	4	10	4	6	92
032	8	6	6	6	10	6	4	1	1	3	3	5	3	6	6	3	77
033	5	10	10	6	6	0	8	3	10	10	4	10	10	10	8	1	111
034	6	1	6	8	7	6	6	10	3	3	6	8	1	6	7	3	85
035	4	6	10	6	3	6	4	6	7	10	3	1	7	3	1	7	84
036	6	6	10	6	1	3	3	5	1	6	3	4	2	6	3	3	68
037	4	3	6	6	3	6	3	7	6	6	6	6	7	10	10	10	99
038	3	5	3	2	3	0	3	1	2	3	1	1	4	0	3	4	38
039	9	5	1	0	2	5	4	7	1	10	6	6	1	6	0	5	68
040	9	1	3	6	0	3	1	0	1	3	4	1	3	3	6	2	46
041	6	10	10	8	10	3	6	1	1	7	3	3	6	3	6	6	89
042	1	3	0	0	3	1	0	4	0	1	0	3	2	1	4	1	24
043	6	10	3	10	7	6	9	6	2	3	1	1	1	5	3	2	75
044	1	7	6	3	4	3	6	7	1	3	2	1	3	6	3	6	62
045	6	3	2	3	4	6	6	6	1	2	2	4	6	3	5	2	61
046	7	1	3	3	2	1	3	10	1	1	3	2	1	1	3	1	43
047	1	1	0	3	5	3	10	6	3	1	3	1	0	1	1	3	42
048	4	1	6	2	1	3	6	5	3	1	3	1	3	1	6	6	52
049	5	2	7	0	8	6	6	10	10	1	3	3	10	6	4	10	91
050	10	3	10	8	6	6	1	10	10	10	10	10	7	6	10	10	127
051	6	7	6	8	6	3	1	1	1	6	3	10	3	6	10	10	87
052	10	10	3	3	2	6	3	2	1	3	4	0	1	3	0	2	53
053	6	7	6	5	3	3	4	6	3	7	10	6	10	10	10	6	102

EXPERIMENTAL OBSERVATION SAMPLE - POSTTEST

Subject No.	IB	IIB	IIIB	IVB	IC	IIC	IIIC	IVC	ID	IID	IIID	IVD	IE	IIE	IIIE	IVE	TOTAL
054	6	3	6	6	2	3	6	3	4	1	3	1	3	1	3	6	57
055	6	10	10	10	5	3	4	6	4	10	4	6	10	10	10	6	114
056	7	1	6	6	1	6	10	5	1	6	6	3	3	6	3	7	77
057	4	3	6	6	6	7	4	10	10	6	6	7	4	6	10	10	105
058	4	6	6	8	3	4	4	6	6	2	6	6	7	6	8	4	86
059	6	6	6	6	10	10	10	6	10	7	3	6	7	10	4	6	113
060	6	3	6	7	3	3	6	6	3	3	0	1	3	6	6	6	68
061	2	2	3	2	1	3	1	7	4	3	0	3	1	1	6	6	45
062	10	8	6	10	4	3	3	3	3	10	6	3	7	6	8	6	96
063	6	7	6	6	1	10	1	6	7	10	4	3	10	3	10	10	100
064	4	10	7	6	3	6	6	10	10	6	3	7	6	10	4	10	108
065	6	4	10	7	6	1	0	1	3	6	4	6	4	10	6	4	78
066	6	6	6	10	6	6	6	10	1	10	6	7	6	6	10	6	108
067	4	3	6	2	6	5	4	4	6	1	6	0	1	1	3	6	58
068	1	10	6	3	10	7	6	1	3	10	1	1	4	7	1	6	77
069	6	3	6	10	3	6	1	6	4	10	6	3	10	6	10	10	100
070	4	10	3	4	6	10	6	6	10	10	3	10	10	10	8	10	120
071	0	5	6	3	10	3	4	7	3	7	3	6	3	6	4	6	76
072	4	0	0	3	4	5	4	1	2	0	0	1	1	1	1	6	33
073	4	1	3	1	5	10	6	5	1	0	0	1	0	0	1	3	41
074	3	3	3	5	8	4	1	4	4	6	10	3	3	6	6	4	73
075	6	4	10	6	6	6	10	10	6	3	7	7	1	1	3	6	97
076	6	10	6	6	6	3	5	3	1	10	6	7	6	6	8	6	95
077	6	3	10	8	3	10	4	10	1	3	7	6	3	7	4	3	88
078	6	6	10	6	3	6	1	6	3	3	3	3	6	10	1	7	80
079	4	10	3	6	6	6	6	10	10	10	4	2	10	10	8	6	111
080	6	7	6	6	6	3	1	6	10	9	6	10	10	10	10	10	116
081	6	1	3	1	6	6	6	7	1	1	3	3	1	1	6	3	55

EXPERIMENTAL OBSERVATION SAMPLE - POSTTEST

Subject No.	IB	IIB	IIIB	IVB	IC	IIC	IIIC	IVC	ID	IID	IID	IVD	IE	IIE	IIIE	IVE	TOTAL
082	6	8	6	4	10	3	1	5	10	10	6	1	4	10	10	7	101
083	3	3	7	3	8	7	1	6	6	7	10	10	3	6	10	6	96
084	10	2	10	3	2	6	6	10	3	3	3	1	1	6	4	3	73
085	10	1	10	6	6	6	6	6	3	1	0	0	1	1	1	2	60
086	10	10	10	10	10	3	1	6	10	10	10	7	10	6	10	2	125
087	6	6	6	10	4	3	1	6	3	10	6	7	6	10	6	6	96
088	5	10	6	6	4	3	4	3	1	10	3	7	3	6	3	3	77
089	9	1	6	4	5	10	1	2	1	1	6	0	0	0	1	6	53
090	6	6	6	10	3	3	5	7	1	10	3	3	4	10	3	3	83
091	6	10	10	6	3	6	10	3	6	7	7	3	6	3	1	6	93
092	1	3	6	6	2	3	6	3	10	1	4	3	3	3	10	7	71
093	6	10	6	6	4	7	5	3	6	6	3	3	3	6	4	6	84
094	5	10	10	5	3	6	10	5	3	3	1	1	6	6	3	7	84
095	6	10	7	3	3	6	3	1	10	3	1	3	10	6	10	6	88
096	6	10	10	10	1	6	1	6	4	10	4	3	6	10	6	3	96
097	3	0	3	0	2	3	0	4	2	1	3	3	1	1	3	2	31
098	6	3	10	10	6	10	3	1	6	3	4	3	3	6	4	6	84
099	1	3	0	1	3	10	6	6	3	3	1	3	4	6	8	3	61
100	2	5	10	10	6	6	6	6	5	3	10	7	1	6	8	6	97
101	6	6	6	1	10	3	6	6	3	3	4	3	4	6	3	4	74
102	6	1	10	9	3	6	4	2	6	0	1	3	5	4	4	3	67
103	0	6	6	4	2	5	4	10	8	8	2	2	7	6	4	9	83
104	1	10	10	1	10	10	6	6	5	10	3	10	10	10	6	10	118
105	1	1	4	1	4	6	6	6	0	1	0	3	3	6	4	6	52
106	10	3	6	3	6	6	6	10	0	3	3	3	1	6	8	6	80
107	3	10	10	3	6	6	4	10	7	10	3	3	6	10	6	6	103
108	3	10	3	0	6	5	6	5	3	7	0	0	1	10	3	4	66
109	1	6	6	0	6	1	2	4	3	3	2	2	4	6	4	1	51

EXPERIMENTAL OBSERVATION SAMPLE - POSTTEST

Subject No.	IB	IIB	IIIB	IVB	IC	IIC	IIIC	IVC	ID	IID	IIID	IVD	IE	IEE	IIIE	IVE	TOTAL
110	10	1	3	10	3	1	6	10	1	1	3	2	3	3	3	4	64
111	6	1	6	4	1	3	1	6	1	6	4	7	6	10	7	9	78
112	6	5	6	6	6	3	3	6	1	10	3	3	10	6	10	10	94
113	6	3	10	10	7	2	5	4	4	10	10	3	3	6	6	3	92
114	6	8	6	6	6	3	3	5	3	6	5	0	4	7	10	3	81
115	6	10	10	3	8	2	1	6	6	10	5	7	10	10	10	6	110
116	2	8	10	6	6	6	6	6	6	10	6	7	3	6	10	7	105
117	3	1	6	10	3	4	3	10	1	6	3	1	10	6	9	4	80
118	1	9	6	0	6	1	3	6	0	2	1	1	4	7	1	0	48
119	4	5	10	6	10	6	4	6	1	7	3	3	6	6	4	3	84
120	6	1	0	3	6	1	1	2	1	3	1	1	1	3	4	1	35
121	1	3	0	1	6	10	10	7	2	5	0	1	1	6	6	10	60
122	4	7	4	2	10	6	6	10	6	1	0	1	3	10	4	3	77
123	6	6	6	10	10	10	6	6	2	7	3	5	1	10	3	6	97
124	1	0	0	6	3	6	10	7	0	4	1	0	2	0	2	3	45
125	5	1	6	1	5	6	6	6	1	1	3	1	1	4	4	3	54
126	6	3	6	6	3	6	3	6	10	6	6	1	10	6	10	10	98
127	4	1	6	1	6	5	5	10	0	3	6	2	3	6	6	6	70

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CONTROL OBSERVATION SAMPLE - PRETEST

128	2	3	6	3	6	3	6	2	5	3	1	0	0	3	3	3	49
129	6	4	10	10	6	10	1	6	7	1	6	3	10	4	7	10	101
130	5	1	0	4	1	7	3	4	7	1	4	1	0	0	1	6	45
131	6	4	10	9	6	3	4	0	7	10	1	5	4	9	3	4	85
132	3	0	6	0	6	10	6	6	7	2	0	1	9	6	5	3	70
133	0	1	3	2	4	0	4	3	1	1	0	0	0	0	2	1	22
134	10	10	10	7	10	3	10	9	8	10	0	1	4	10	1	3	106

CONTROL OBSERVATION SAMPLE - PRETEST

Subject No.	IB	HB	HHB	IVB	IC	HIC	HHIC	IVC	ID	HD	HHID	IVD	IE	HIE	HHIE	IVE	TOTAL
135	0	0	0	2	3	4	1	3	3	1	3	0	1	2	0	0	23
136	2	4	0	2	6	5	9	9	2	1	2	0	3	1	1	0	47
137	6	4	6	10	1	3	0	0	3	1	8	1	1	0	5	7	56
138	10	1	10	10	6	3	8	10	3	10	6	3	1	7	5	2	95
139	6	1	6	3	6	1	1	1	1	4	0	3	1	1	2	0	37
140	10	4	3	6	1	2	1	10	3	1	6	1	1	3	0	2	54
141	1	1	3	4	4	6	0	1	4	1	6	3	3	6	6	10	59
142	5	0	4	3	8	6	1	0	3	3	1	5	3	2	3	3	50
143	3	10	7	4	4	3	4	4	1	10	6	2	6	6	10	7	87
144	10	8	6	6	6	7	6	6	6	10	4	3	4	6	10	7	105
145	6	4	6	10	1	6	3	5	3	3	6	7	2	6	6	6	80
146	10	8	10	10	4	3	0	1	1	6	1	8	1	3	3	3	72
147	6	8	10	10	1	3	4	6	10	4	6	6	8	5	6	6	99
148	6	0	3	3	6	6	6	10	3	3	2	1	1	0	3	3	56
149	3	1	3	6	3	3	1	6	1	5	10	3	4	6	9	6	70
150	6	3	6	7	3	3	6	6	6	1	3	3	3	6	4	6	72
151	6	10	10	8	6	6	1	3	7	6	6	7	6	10	6	3	101
152	4	1	3	6	6	6	4	6	3	3	1	3	6	6	6	6	70
153	1	6	4	3	3	3	4	6	3	10	1	7	6	10	6	3	76
154	6	1	10	3	1	0	1	1	3	3	7	3	3	3	3	4	52
155	4	1	6	3	6	3	1	10	3	1	1	3	1	3	6	3	55
156	6	1	6	6	3	1	6	6	6	3	10	7	6	6	10	1	84
157	6	10	10	10	10	0	3	0	7	10	6	3	6	10	6	5	102
158	7	1	3	6	6	7	8	10	3	1	2	3	1	1	5	3	67
159	6	6	7	10	10	3	9	6	10	10	6	10	10	10	8	10	131
160	6	8	10	6	3	4	1	6	1	7	3	3	9	6	3	4	80
161	1	1	6	3	6	6	5	3	1	3	1	1	1	3	6	3	50

CONTROL OBSERVATION SAMPLE - PRETEST

Subject No.	IB	IIB	IIIB	IVB	IC	IIC	IIIC	IVC	ID	IID	IIID	IVD	IE	IIE	IIIE	IVE	TOTAL
162	3	1	6	3	1	3	6	6	3	10	4	1	1	6	7	6	67
163	6	1	6	10	4	3	3	3	1	1	1	1	0	0	0	2	42
164	0	1	6	3	0	2	0	2	0	1	1	1	0	0	2	3	22
165	6	1	3	6	1	1	3	1	7	6	3	1	0	3	7	0	49
166	5	10	6	3	2	6	3	5	7	10	0	0	4	10	3	6	80
167	10	4	8	6	3	3	10	2	1	1	3	1	1	0	0	3	56
168	10	10	10	5	3	3	3	10	3	10	4	6	10	10	7	10	114
169	6	8	6	6	6	2	4	1	6	3	4	3	1	3	8	6	73
170	5	7	10	9	3	10	7	7	2	7	6	2	3	7	8	10	103
171	6	4	6	3	3	3	3	6	6	3	0	4	4	6	1	6	64
172	5	5	6	10	6	6	8	10	6	6	2	1	3	6	3	7	90

CONTROL OBSERVATION SAMPLE - POSTTEST

128	2	1	6	5	5	3	6	2	8	1	3	0	0	3	1	7	53
129	6	1	10	10	6	6	1	6	10	1	10	3	7	4	8	10	99
130	5	1	6	4	1	8	2	4	10	1	4	1	0	0	1	5	53
131	6	1	10	6	6	5	4	0	3	5	0	5	0	4	3	6	64
132	3	1	6	0	6	10	6	3	10	2	0	0	9	6	3	3	68
133	1	1	3	2	4	2	6	6	1	1	2	1	1	1	3	2	37
134	10	10	3	6	6	3	5	5	4	10	0	1	6	10	0	3	82
135	3	0	0	3	3	1	0	0	2	1	0	0	1	1	4	0	19
136	6	0	0	2	7	6	9	9	4	5	0	0	0	0	4	5	57
137	5	1	6	10	1	3	0	0	10	1	8	3	0	0	5	7	60
138	10	6	10	10	6	3	10	10	6	10	6	3	4	10	8	6	118
139	6	1	6	3	3	1	1	3	1	4	3	1	1	1	3	1	39
140	10	1	3	10	1	1	4	6	3	1	6	0	1	0	1	0	48
141	1	3	3	4	4	6	6	4	1	3	6	6	3	3	6	10	69

CONTROL OBSERVATION SAMPLE - POSTTEST

Subject No.	IB	IIB	IIIB	IVB	IC	HC	IIIC	IVC	ID	HD	IID	IVD	IE	HE	IIIE	IVE	TOTAL
142	5	1	3	3	8	6	6	0	3	1	1	3	0	3	0	3	46
143	6	10	10	1	4	1	1	4	1	10	6	7	6	6	6	1	80
144	10	10	6	6	6	6	6	6	3	10	4	3	3	6	8	10	103
145	6	3	6	10	6	1	3	6	6	3	10	7	3	6	3	4	83
146	10	1	10	6	4	3	3	1	1	3	1	4	1	3	3	3	57
147	4	5	10	7	4	3	4	4	3	6	6	3	4	6	6	3	78
148	6	1	1	3	6	6	3	10	3	1	3	1	0	1	0	3	48
149	7	1	6	6	3	3	3	6	1	5	10	3	6	6	9	6	81
150	3	1	3	4	3	3	3	6	3	0	3	0	2	1	0	3	38
151	6	10	6	8	6	6	1	3	6	6	6	3	10	10	10	3	100
152	1	3	3	6	6	6	1	6	3	3	1	3	3	6	4	3	58
153	1	6	3	3	3	3	6	3	1	10	1	3	3	10	4	3	63
154	6	3	10	7	1	0	1	0	6	1	3	3	3	3	3	4	54
155	6	1	6	3	6	3	3	10	3	1	1	3	7	1	4	6	64
156	6	1	3	6	3	1	6	4	10	1	6	3	7	1	10	4	72
157	6	10	10	10	10	4	6	3	6	10	6	7	6	10	6	5	115
158	10	1	3	6	5	7	8	10	3	1	5	3	1	1	1	3	68
159	6	6	7	10	10	3	6	6	6	10	10	3	10	10	8	6	117
160	6	10	10	4	1	4	1	6	7	7	1	5	3	3	3	1	72
161	4	6	3	1	6	6	5	6	3	3	1	3	3	6	4	3	63
162	3	1	6	8	1	1	10	6	7	10	4	1	1	3	1	5	68
163	6	1	6	10	4	3	0	0	0	1	1	1	0	0	0	2	35
164	4	1	3	4	0	3	2	2	0	1	3	1	0	0	1	3	28
165	6	1	3	6	0	1	3	1	10	3	6	1	1	4	10	1	57
166	5	10	6	6	4	6	2	5	6	10	1	3	4	7	6	2	83
167	10	9	8	6	3	3	10	2	1	3	3	0	1	6	3	3	71
168	10	10	10	6	3	6	6	10	10	10	4	3	10	10	8	10	126
169	6	8	6	6	4	2	4	1	3	3	4	3	1	3	8	6	68
170	5	10	10	9	3	9	8	7	3	10	6	1	4	1	8	10	104
171	6	1	6	3	3	6	3	1	3	2	1	4	1	3	1	6	50
172	6	10	6	7	6	3	6	10	6	10	2	3	6	6	6	10	103