EFFECTS OF MICROCOUNSELING ON SELECTED MARITAL COMMUNICATION VARIABLES

DISSERTATION

Presented to the Graduate Council of the North Texas State University in Partial Fulfillment of the Requirements

For the Degree of

DOCTOR OF PHILOSOPHY

By

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This study was undertaken to evaluate the effectiveness of the microcounseling training model for the improvement of marital communication.

The purposes of this study were (a) to assess the effects of microcounseling on the communication between married couples; (b) to determine whether the teaching of skills using microcounseling can have specific behavioral effects on the actions of individuals in training; (c) to assess whether this change has effects on sharing behavior of couples; (d) to determine whether skill training has any effect on marital adjustment of couples; and (e) to examine changes in meaning that training may cause.

A review of literature indicates that microcounseling has been used in many training settings with mixed results. Marital communication has not been significantly impacted by skills training at this time. Marital communication and adjustment are closely related. It appears that a change in one brings a change in the other. Use of videotape as a training device seems promising. Study of nonverbal communication is developing in hopeful directions.
This study dealt with eighteen married couples from the population of a large state university. At least one spouse from each couple was a student. Subjects were divided into three groups, a three-hour training group, a nine-hour training group, and a control group. Subjects were tested and videotaped before training began, after it was finished, and at a follow-up session four weeks after the end of training.

The experimental subjects were trained using a manual and a videotape model developed by the experimenter. Both followed microcounseling style which was modified to be appropriate for couples. Couples were taught the skills of basic sharing, affectionate sharing, and confrontive sharing. Trainees received training concerning their own communication; they watched their own videotaped sharing sessions; they read the manual entitled *Sharing*; and they watched a videotaped model couple.

The Locke-Wallace *Marital Adjustment Test*, the Primary Communication Inventory (Navran), and a Semantic Differential by Hickman and Baldwin were administered three times. Independent judges rated thirteen behaviors in the three categories of sharing, affection and confrontation.

Multifactor analysis of variance with repeated measures on one factor was calculated for the behavior ratings, the Marital Adjustment Test and the Primary Communication
Inventory. Means for forty-eight Semantic Differential items were calculated for the pre-test, post-test, and the follow-up. The .05 level of significance was chosen.

Based on statistical results it was concluded the microcounseling does not result in significant changes in marital communication. Neither does microcounseling bring about significant changes in marital adjustment or primary communication. Eleven of the semantic differential items did change significantly. It was nevertheless concluded that these changes were not enough to support the conclusion that great changes in meaning had occurred.

It was concluded that from a time-cost standpoint, microcounseling is not an efficient way to train married couples' communication.

It was recommended that (a) further research concentrate on fewer skills and give more time to train couples; (b) selected programmed materials be synthesized and developed for training marital communication; (c) research into videotape feedback be made more specific and exact; (d) use of public media to teach marital communication be explored; (e) group based training using microcounseling be developed; (f) nonverbal communication research be fostered; and (g) whole family communication systems, as derived from life style, be researched.
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CHAPTER I

INTRODUCTION

Among the most urgent problems facing individuals who are married is the inability to communicate intimately. Among marriage counselors it is axiomatic that it is necessary to communicate in an intimate fashion in order to develop and maintain an effective and productive marriage. Yet it is this very area of intimate marital communication which suffers from a near vacuum of specific, research-based knowledge.

Ours is an age of geometric increases in almost every kind of communication. It is likely that more information has been communicated in the past thirty years than in all the rest of history put together. More has been written, printed, translated, filmed, taped, reproduced, transmitted, and otherwise communicated than was technically possible in the past. Technology has enhanced communication greatly. These developments notwithstanding, intimate personal communication, perhaps the most important communication for human beings as persons, has plodded behind. Men and women fumble for words when they seek to express the depths of their own thoughts about, and feelings for, each other. This sharing
process becomes very difficult when these men and women have
the marital bond between them, especially if there is rela-
tionship difficulty in the marriage.

Statement of the Problem

This study was undertaken to evaluate the effectiveness
of the microcounseling training model for the improvement of
marital communication.

Purposes of the Study

The purposes of this study are

1. to assess the effects of microcounseling training
   on the intimate communication between married couples (a) of
   feelings, thoughts, beliefs, (b) of the expression of affectionate feelings, and (c) of the expression of confrontive
   feelings;

2. to determine whether the teaching of skills in the
   microcounseling style can have any specific behavioral
   effects on the actions of each individual in training;

3. to assess whether this change has any effects on
   the intimate sharing behavior of the couple;

4. to determine whether this skill training has any
   effect on the marital adjustment of the couple; and

5. to examine the changes in meaning that the learning
   of these skills has caused for persons in the microcounseling
   training.
Background and Significance

This project is a study that deals with the improvement of marital communication or sharing. It is not so much that marital sharing and communication do not occur, but that so much marital communication is faulty, multileveled, and convoluted with mixed or confused messages. Can these convolutions and confusions be cleared up with skills training? Can people be taught even the most basic of sharing and communication skills, and can this teaching be made effective enough to be revealed in the results of tests which claim to measure communication and marital adjustment? Will such learned skills have any enduring effects, or will they evaporate like the perfume of lovers after a short period of normal life interaction for a couple?

In this study the researcher compared the performance of two sets of trained married couples to that of a set of untrained couples. The primary task was to test whether selected skills could be taught effectively enough using a microcounseling training model to change test scores and ratings of selected behaviors, seen as evidence of the skill being present or absent.

The disciplines of counseling and psychotherapy have developed a number of important models which are focused on the communication process, especially the communication which occurs between a therapist and client. One of the
most interesting of these models is that put forth by Allen Ivey and his associates (12, 13). Microcounseling, as Ivey names his methodology, is a teaching model that uses a systematic approach to the training of behavioral skills considered basic to effective functioning as a counselor. Microcounseling, also sometimes called video programmed instruction, according to Moreland (15), involves the isolation of positive interviewer skills, and the utilization of written manuals describing each skill, videotaped models demonstrating good and bad examples of each skill, and the videotaping of the students as they practice interviewing. These interviews are immediately played back to the student in the presence of a supervisor who further helps the students to discriminate each skill.

Commenting on the Ivey model, Capuzzi (5) has pointed out that the microcounseling training model is based on five essential propositions, which are that (a) it is possible to lessen the complexity of the counseling or interviewing process through focusing on single skills; (b) the microcounseling training model provides important opportunities for self-observation and confrontations; (c) interviewers can learn from observing video models demonstrating the skills they are attempting to develop; (d) model training can be used to teach interviewing skills from a diverse and practical perspective; and (e) microcounseling training sessions are real interviewing sessions.
As the name implies, very small parts of behaviors in counseling are selected and taught to the beginning counselors on the assumption that once these basic skills are clearly understood, modeled, and practiced, the individual counselor can develop his own individual refinements of the technique. There are presently twelve basic microcounseling skills according to Ivey (13) and Capuzzi (5). These twelve skills are attending behavior, open invitation to talk, minimal encouragement to talk, reflection of feeling, paraphrasing, summarization of feeling, summarization of content, learning the attitudes of clients toward tests, expression of feeling, sharing behavior, direct mutual communication, and interpretation.

Microcounseling makes use of three important technological refinements: (a) videotape modeling, (b) videotape feedback, and (c) programmed learning. Most important, microcounseling makes use of an experiential learning matrix in which the trainee experiences the various skills by reading, seeing a model, planning and practicing the skill himself in the learning setting (13, pp. 11-14; 30). In this way the learning counselor builds up a repertoire of basic but decisive skills for his task.

Experimental analysis of this teaching model has demonstrated its effectiveness in several areas. These areas include assertion training (8), junior high and elementary
school teaching (1, 17), job interviewing training for the disadvantaged (2), psychiatric interviewing (13, pp. 196-197), clinician training in speech and hearing therapy (3), training of police who intervene in human conflict situations (6), and home-community drug problem counselors (7). Research continues in several other areas by Ivey (12) and now a host of others.

If one can apply this specific training model to the area of marital communications, perhaps married couples can be taught basic skills for sharing of their inner feelings, thoughts, and meanings. Once they have the basic skills, then, like the beginning counselor, they can add the fine points and refinements unique to themselves. A glaring error of some of the communications teaching packages that one can see offered to the public today is that they are preoccupied with small esoteric details of extremely refined intimate personal communication to the exclusion of the major basic skills. Others, like the Minnesota Couples Communication Program (13), have moved more carefully: they take care to detail the basic skills of communication in painstaking and complex details. Just as education of beginning counselors in basic "precounseling skills" (4) comes before the extreme refinement of high level skills, so with married couples, the training of intimate personal communication must begin, not with the sucking of each
other's big toe to communicate sensual awareness, as some would suggest (11), but with the elementary skills of direct personal sharing.

Hypotheses

There were three treatment groups assembled to test the hypotheses. One group (G$_1$) received one three-hour treatment in one evening, a second group (G$_2$) received three of the three-hour treatments over a three week period, and the third group (G$_3$) received no treatment; it was a control.

With respect to the three treatment groups, the following hypotheses were offered.

I. Immediately following the teaching of sharing via microcounseling, the experimental subjects, G$_1$ and G$_2$, will exhibit a significantly higher frequency of basic sharing behaviors than the control subjects, G$_3$. Specifically in these comparisons, it is expected that the treatment groups will yield the following order of magnitude in their scores: G$_2$ will have the largest scores with G$_1$ having the next highest scores, and G$_3$ making the lowest scores, that is, G$_2$ > G$_1$ > G$_3$. Moreover, this condition is expected to hold in both verbal and nonverbal comparisons of behavior.

II. Immediately following the teaching of sharing via microcounseling, the experimental subjects will
exhibit a significantly higher frequency of affectionate behavior than the control subjects and $G_2 > G_1 > G_3$. As with the first hypothesis, this condition was expected to hold in both verbal and nonverbal comparisons.

III. Immediately following the teaching of sharing via microcounseling, the experimental subjects will exhibit a significantly higher frequency of confrontation behavior than the control subjects and $G_2 > G_1 > G_3$, in both verbal and nonverbal comparisons of behavior.

IV. At the follow-up session (one month after the end of training) the experimental subjects will exhibit a significantly higher frequency of basic sharing behavior than the control subjects, and $G_2 > G_1 > G_3$ in both verbal and nonverbal comparisons of behavior.

V. At the follow-up session (one month after the end of training) the experimental subjects will exhibit a significantly higher frequency of affectionate behavior than the control subjects, and $G_2 > G_1 > G_3$ in both verbal and nonverbal comparisons of behavior.

VI. At the follow-up session (one month after the end of training) the experimental subjects will exhibit
a significantly higher frequency of confrontation behavior than the control subjects, and \( G_2 > G_1 > G_3 \) in both verbal and nonverbal comparisons of behavior.

VII. Immediately following the teaching of sharing, the experimental subjects will exhibit a significantly higher primary communication score than the control subjects and \( G_2 > G_1 > G_3 \).

VIII. Immediately following the teaching of sharing, the experimental subjects will exhibit a significantly higher marital adjustment score than the control subjects, and \( G_2 > G_1 > G_3 \).

IX. Immediately following the teaching of sharing, the experimental subjects will exhibit a significantly greater change in their mean profile-of-meaning-scores than the control subjects.

X. At the follow-up session (one month after the end of training) the experimental subjects will exhibit significantly higher primary communication scores than the control subjects and \( G_2 > G_1 > G_3 \).

XI. At the follow-up session (one month after the end of training) the experimental subjects will exhibit significantly higher marital adjustment scores than the control subjects and \( G_2 > G_1 > G_3 \).
XII. At the follow up session, the experimental subjects will exhibit significantly greater changes (direction not predicted) in their mean profile-of-meaning-scores than the control subjects.

Definition of Terms

1) **Microcounseling** is described by Ivey, et al., in nine steps

   i. The trainee receives instructions to enter a room where he will interview a client. Depending on the situation, the topic may or may not be defined. Similar instructions are given to the volunteer client, with the exception that he is told he is about to be interviewed.

   ii. A five-minute diagnostic session (with the trainee interviewing the client) is then videotaped.

   iii. The client leaves the room and completes an evaluation form or may be interviewed by a second supervisor. These data are then available for the supervisory session with the trainee.

   iv. The trainee reads a written manual describing the specific skill to be learned in this session. The supervisor talks with him about the session and about the manual.

   v. Video models of an expert demonstrating the specific skill are shown. There may be a positive and negative model of the skill.

   vi. The trainee is shown his initial interview and discusses this with his supervisor. He is asked to identify examples where he engaged in or failed to apply the specific skill in question.

   vii. The supervisor and trainee review the skill together and plan for the next counseling session.
viii. The trainee reinterviews the same client for five minutes.

ix. Feedback and evaluation on the final session are made available to the trainee (13, p. 6).

The procedure described above will be modified in ways to fit the couple's training model. The trainees in this study are married people trained as couples. The topics considered in this study are basic sharing behavior, affectionate behavior and confrontation behavior. The time for practice (and video sampling) will be ten minutes per session. The couple (two subjects) will be interviewed together after their practice sessions by a trainer-consultant for their communication. The couple (two subjects) will each read a programmed manual, see the tape model, and review their videotaped practice session with the trainer-consultant. An agenda will be set for each session so that the couple will concentrate on their basic sharing behavior, then on their affectionate behavior, and then on their confrontive behavior.

2) Basic Sharing Behavior is the process of clarifying immediate and specific thoughts, experiences, and feelings that each member of a couple has; this exchange includes feelings each person has in himself, and feelings each person has for the other. The particular behaviors involved are spelled out later in this paper.

3) Affectionate Behavior is one refinement of sharing behavior which adds the use of expressions and verbalizations
of positive feelings from one member of a couple to the other, which feelings (and thoughts and actions) are normally returned by the second spouse.

4) **Confrontive Behavior** is second refinement of sharing behavior. It involves self assertion through the use of expressions and verbalizations on non-hostile disagreement statements, differential opinion feelings, thoughts and actions by one spouse to the other. Attention is focused by the couple on the specific content or subject in which discrepancies exist.

**Limitations**

The couples who were studied were legally married couples who came into the project by referral from one of the counselors in the Counseling and Testing Center of North Texas State University. Referrals were also made by masters practicum counselors or other teachers at North Texas State University.

Improvement because of attention, or Hawthorne effect, is notorious for its effects on individuals in treatments of various kinds. Its effect may be present in this study, especially since instructions will be given to the experimental subject about the various behaviors that they are expected to show.
Because it is likely that some of the couples will know each other around the university where this study will be carried out, it is also possible that cross treatment contamination will be introduced.

Basic Assumptions

It is assumed that the consultant-trainers will have differences in their communication abilities, but that they will nevertheless be able to consult and train with reasonable uniformity. They were trained together for three and one-half hours with the same modeling tapes, programmed text, and feedback style that is to be used by the clients.

It was assumed that the couples chosen for the study are representative of marriages in general. A concerted effort to match couples on several socio-economic variables was made so as to balance the experimental design, but all couples had at least one student or university staff spouse. No systematic bias in favor of one style of marriage was thought to exist in these subjects.

It was and is assumed that if one can teach couples the various skills specified, and if one can show that evidence on the behavior rating scales, and on the tests taken by the couples, and if the changes predicted are in the direction specified, then one has indeed been able to build up and strengthen the communication between the couple.
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CHAPTER II

REVIEW OF THE LITERATURE

In order to facilitate a review of literature relevant for the present project, the material will be presented as it clusters around several topics. These topics are (a) videotape recorded feedback, (b) microcounseling, (c) marital communication and skills training, (d) nonverbal communication, and (e) marital communication and marital adjustment.

Videotape Recorded Feedback

The excitement, glamor and newness of videotape recorded feedback as a therapeutic and teaching device in psychology and psychiatry is now past. Inexpensive equipment has made use of videotape recorded feedback possible in many settings. Berger (14) has edited a 320-page book: *Videotape Techniques in Psychiatric Training and Treatment*. It covers training, treatment, technical and legal considerations, and many important areas in the rapidly growing field. Bailey and Sowder (8) reviewed current work with videotape recorded feedback and offered suggestions for designing future experiments. They point out that videotape recorded feedback is lauded by many writers and ascribed many beneficial effects, but few well done studies are available. They suggest that
self confrontation videotape recorded feedback is such a rapidly expanding field that it deserves much careful examination for its practical and heuristic value.

Ryan (68) suggests that imaginative use of videotape can help students to understand themselves and to communicate better with each other by permitting a person to be both performer and audience. He maintains that a student can see himself objectively and hence improve self confidence as well as help a person prepare for future actions like a job interview or a class presentation. Clift (22) synthesized research using videotape in several disciplines: teacher education, counselor education, psychotherapy, business training programs, and speech education in order to bring educators up to date on the non-broadcast uses and techniques of videotape. Believing in the overwhelming importance of this technology, Clift wants to encourage educators to use the equipment in regular school work and in many workshop formats which offer to help people develop skills, change behavior, or gain self knowledge.

Rolfe (66) maintains that videotape recorded feedback can be used more effectively in some therapeutic settings than others. Rolfe urges that a more flexible yet systematic and comprehensive therapy style than is normally used would be required for videotape recorded feedback to be beneficial. He suggests that a cybernetic psychotherapy model using
videotape recorded feedback as a method of recording, storing, and analyzing and then feeding back data would be most helpful. The fact that videotape recorded feedback is especially useful in handling and keeping large amounts of personal data has also been demonstrated by Cline (23) who used twin schizophrenic boys plus a normal male peer to show that behavioral change can be readily documented both qualitatively and quantitatively using videotape recorded feedback.

Of importance to this study is the work of Danet (24) who studied group therapy and showed that careful selections of feedback materials by a therapist adept at selection can greatly accelerate the development of cohesiveness in a group, aid its interaction, and ease the establishment of group unity. He has explored how self concept can be aided in its development by videotape recorded feedback. Danet points out, however, that the opposite results can occur too: if the selection of feedback is not carefully done, it can cause defensiveness and regression in some people. Martin (55) too has gathered evidence that videotape recorded feedback in some settings is at least unpredictable and can be disruptive.

Weiss (78) conducted a study to determine if videotape recorded feedback would cause an increase in facilitative genuineness in the Carkhuff tradition among black and white
counselors. Results indicated that subjects (counselors) receiving videotape recorded feedback tended to be seen as more significant by group members than those counselors who did not receive such feedback.

Considerable research has also been carried out in the area of psychotherapy with videotape recorded feedback as an adjunct. Dodge (27) has shown that it is possible, by playing the tape in slow motion, to detect expressions and inconsistencies so fleeting as to go unnoticed under normal circumstances. These incidents, called by Dodge "micro-momentary expressions", may be extremely valuable in self confrontation as an indicator of subtle conflict and struggle in a person. Rogers (65) studied whether viewing videotape recorded feedback sessions helps a person see himself objectively and gives less probability of defensiveness than when a person is given feedback from a therapist. He also claimed to show people many of Berne's (16) games from Transactional Analysis. Kubie (50), working in the same area, studied self image and suggested that videotape recorded feedback allows a subject to see himself and hear himself as opposed to hearing someone else so that the likelihood of defensiveness is greatly reduced, and self confrontation in this manner is very hard to reject. Kagan, et al. (46), taped adult subjects and later in the presence of an "interrogator" played back the tape. The process greatly aided patient
improvement and fueled learning of student counselors in training. Wilmer (79) has used videotape recorded feedback to facilitate the therapeutic progress of adolescent group psychiatric patients. Patients who had been in videotape recorded feedback group therapy were asked to make a fifteen minute videotape record monologue alone (that is, not in the presence of the group). When finished, the patient could view the tape and make a decision about it: he could share it with his therapist or others in his group, or he could have it erased. Only about two of one hundred patients chose to erase; Wilmer reports significant facilitation of the group process with videotape recorded feedback.

Summary

In summary, videotape recorded feedback is being used in many areas of research, teaching, and therapy. There is perhaps more confidence in its distinct and unique abilities than can be clearly demonstrated by research.

Microcounseling

Microcounseling is a relatively new idea for the training of beginning counselors. The technique is itself an adaptation of a series of techniques and methodologies developed into "micro-teaching" or "microtraining" by Dwight Allen (3) and other educators. The notion that specific, basic skills in a given behavior can be identified and taught in very
small increments or parts is the distinctive feature of the training style. Unlike other types of counselor training, according to Ivey, there is a kind of "demystification process" that occurs as the trainee learns how specific styles of behavior that he already knows well are assembled into the potent skill of counseling. Exposure, even for a very short time, to specific skill notation, modeling, and practice enables the trainee to become comfortable in rapid succession with the skills of counseling.

Bellucci (12) has reviewed microcounseling techniques as a behavioral model that uses positive reinforcement and imitative learning to shape student counselor skills. Berliner (15) has summarized a broad area of microcounseling research from the perspective of technical skills training. He describes the historical development of microteaching and microcounseling. He shows the present state of the art in preservice teacher training. He gives a critical analysis of present research in the area and raises important questions for further research.

The notion that counselor training could become efficient is apparently generating a growing body of research. Ivey, et al. (45) have assembled a handbook and a selection of articles of research done up until 1971. In this book Ivey describes three unpublished manuscripts that appear relevant to the present work. The first is the most important because
in it Aldrige (1, p. 191) describes how specific behaviors can be selected as representative of the skill under study. The occurrence or nonoccurrence of this specific behavior can be counted or timed as a way of testing the specific changes which the microcounseling training purports to produce. This use of specific behaviors makes a high degree of precise measurement possible in an otherwise ill-defined situation. Such precision is highly desirable in the research proposed in this project. By utilizing behavioral counting, Aldrige was able to show an inter-rater reliability of .90 on both verbal and nonverbal components of the trainee behavior, with striking training results in his students. The work of Aldrige is also important because it is not in the training of counseling skills, but in the teaching of junior high students to make specific responses. He was able to teach such students to pay closer attention and to execute attending behavior, a considerable achievement, in the noise and confusion characteristic of a junior high school.

The second of the studies reported by Ivey refers to training eighth grade students to ask "higher order questions" in a modified microcounseling procedure. In the experiment Sadker (69, p. 193) added a token economy reinforcement procedure to the usual microcounseling methods. Sadker reported an inter-rater agreement of .97 over an extended rating
period of thirty-two class sessions. Again, this study is important not only for its precision, but also for its illustration of the adaptability and flexibility of the microcounseling model in use with the behavioral methods such as a reinforcement procedure.

Ivey (45, pp. 106-108) also reports that Aldrige has experimented with the training of what he calls "direct, mutual communication". Aldrige has trained mothers of "problem children", junior high students, and ghetto parents in the skills of attending behavior and various other kinds of family communication. Moreover, Ivey says:

Direct, mutual communication has been found to be useful as a skill to facilitate marital communication, and it would seem that this, plus other microtraining skills, might be useful as a supplement to marriage counseling or as an addendum to marriage and the family courses in college and high school (45, p. 108).

It is this possible application of the microcounseling paradigm that is the object of the present research. Ivey has developed a programmed manual which he suggests can be used in the training program (40; 45, pp. 163-173). In this manual he illustrates how he asks the trainees to attend to specific behaviors that are present in the videotaped model used by the trainees who are learning direct, mutual communication.

Historically Ivey, et al. (41, 42, 45) have been most intensely concerned with the training of beginning counselors in the basic skills of attending, reflection of feeling, and
summarization of feeling. The microcounseling training units are very economical for staff time utilization; they help neophite counselors know what to do; they bring about a decrease in counselor talk time as compared to non-microcounseling trained counselors; and they aid the development of effective specific skills, such as open-ended questions and "minimal encourages" (45, pp. 56ff). The basic skills taught by microcounseling, according to Ivey, are: attending behavior, open invitation to talk, minimal encourages to talk, listening skills, such as selective attention, reflection and summarization of feeling, paraphrasing and summative paraphrase, and skills of self-expression such as expression of feeling, expression of content, and interpretation (45, pp. 35-73).

Ivey has written voluminously in his area. He considers himself to be a spokesman to the profession of counseling. In January of 1973 he suggested that microcounseling be "given away" to paraprofessional counselors, parents as drug counselors, teachers, and the general lay public (42) because he was so confident in the effectiveness of his teaching program. Later that year Ivey and Alschuler (43) suggested in a journal article that counseling must broaden its scope from remediation of crisis to preventive teaching to cure pathogenic institutions that cause mental illness.
and create obstacles to normal development. They spell out goals of psychological education, including tactics and strategies and moves to "demystify" the helping profession.

Moreover Ivey and his colleagues have developed a series of videotape cassettes and pictures to specify more exactly the nature of their intentions (39, 40). Their tapes are available for rental or sale to universities and schools, or individuals with credentials.

In support of the claims of the importance of the microcounseling model, Haase and DiMattia (32) have tested the training of the skills of attending, reflection of feelings, and expression of feelings in individuals who work as the support personnel for a counseling center. The support personnel had such duties around the counseling center as data collection, clerical tasks, preparation of informational material and analysis of scores on tests. Using three four-hour segments developed from the microcounseling model to train these sixteen workers, the experimenter were able to show significant pre-test and post-test score differences on expression of feelings, reflection of feelings, and attending behavior. Their work with these paraprofessionals is taken to support the effectiveness of the use of the microcounseling model. In a one year follow-up of this same study, Haase, DiMattia and Guttman (33)
found deterioration of the skills that they had attempted to teach their subjects. This raises a question about the endurance of the skills that microcounseling is supposed to teach.

Similarly, Miller, et al. (56) have reported the apparently successful use of the microcounseling model to enable counselors to communicate test scores effectively to students. Microcounseling techniques were used to train ten beginning graduate students in communicating test results while listening and responding to cues given by the client. Judges rated the ten trainees significantly higher than the ten controls on measures of listening and responding to client cues, use of brief, concise statements, and relating of text materials to client needs. It is important to note, however, that in this case client rating of the trained and untrained groups did not differ. On the other hand trainee counselors from both groups made enthusiastic responses to the microcounseling format.

Another of the studies of the use of microcounseling has applied it to a master's level practicum training of counselors. Guttman and Haase (31) assessed the generalizability of microcounseling skills, such as attending behavior (eye contact, verbal following, and posture), reflection of feeling, and summarization of feeling from the training period (which used actor-clients) to real counseling
sessions. Using a diagnostic interview, a brief training period, and two real post-training counseling interviews, the trainees were rated by judges on eye contact, verbal following, posture, reflection of feeling to the client, and summarization of feelings. Although their results generally supported the claims of Ivey (41, 45), they noted that some of the trained skills were not significantly different in the experimental and in the control groups after a follow-up period no longer than two weeks.

Perkins and Atkinson (63) applied the microcounseling model along with two other instructional techniques to the training of residence-hall assistants. They taught attending behavior, reflection of feeling, and summarization of feelings. Their results show significant increases in several desired behaviors, but they, like other researchers cited above, noted that there is a need for periodic supervised practice of the skills developed and taught in order to maintain performance levels. Parker (62) examined the effectiveness of microcounseling for developing specific counseling skills with twenty practicum students. Using a two hour and fifteen minute procedure with groups of five students, Parker's treatment included a didactic presentation, viewing a video model, counseling with actor-clients, and a critique with the actor clients. As with several of the
studies mentioned above, Parker found significant differences with his microcounseling-trained groups, but by the end of the semester follow-up period, these groups were no longer significantly different.

Moreland (58) reports that training of medical students enrolled in introductory psychiatry courses was effective in adding significantly to the skills of the new students and helped them to learn more facts than a control group of traditionally trained students. It appears that Moreland did not have a follow-up procedure except post-training, so one cannot conclude anything about lasting effects of the training. Similarly, Sodetz (75) used four different techniques of microtraining to explore their effects on counselor behavior. He concluded that microcounseling is a feasible and effective means of improving the abilities of counselors in training. Unfortunately, Sodetz does not report a follow-up study either.

Arnold (5) tested the microcounseling model using audiotape only and found mixed results. He noted that microcounseling was more effective than traditional methods for training only one skill, open-ended questions. Few other significant differences were found in his comparative study. His follow-up study, which was extensive and repeated,
showed that most of the skills developed so rapidly by microcounseling training were lost in one week's time, and completely undetectable after a semester of practicum training.

In comparing microcounseling with other training and supervision models, Ivey claims significant superiority for his specific teaching model. As suggested by the various studies above, microcounseling is clearly applicable to many settings. However, researchers other than Ivey do not always see microcounseling as the superior way. Danish and Brock (25), for example, compare the Carkhuff training style, the Ivey microcounseling model, and the Danish and Hauer model for the design and implementation of basic helping skills. They conclude that each model has effective techniques, and they do not report one as being superior to another. Gray (30) names five techniques for training psychiatric residents in behavior therapy. He suggests that these techniques are relatively underused, and that they are apparently all about equally good. The five techniques include experimental learning, observation of models, and microcounseling.

DiMattia and Arndt (26) compared microcounseling and the Carkhuff reflective listening skill training model. Their results indicated no significant differences between microcounseling skills training and the Carkhuff model. Both models were seen as effective. They concluded that the
Carkhuff model, with its relative simplicity, might be preferable to the complex, technologically sophisticated equipment required by microcounseling. Similarly, Lauver and Brody (52) compared the effectiveness of four kinds of training. These training styles were microcounseling, modified microcounseling, self modeling and verbal modeling. All four procedures involved an initial five-minute interview, a twenty to thirty minute instructional interview and a final interview. These researchers found no significant differences between the training styles and concluded that several different training styles, being equally effective, might be tailored to the needs of a given student.

A few other researchers have found microcounseling ineffective as a training medium. Authier and Gustafson (6) trained twelve paraprofessional counselors, four women and eight men, in a drug research center of a midwestern psychiatric institute. With or without supervisors, the trainees did not differ significantly across time. A similar result was obtained by Hocking (37) when he trained female hospital clerks at a Veterans Administration hospital. Using four different training settings, the standard microcounseling procedure and a self-reinforcement microtraining setting were effective in increasing eye contacts. But none of the four settings was effective in changing other components of attending behavior such as body posture, verbal following
and talk time. Hocking suggested that these results should be evaluated in light of the non-professional population of subjects that may be used, but he maintained that his results would strongly suggest caution in making the assumption that microcounseling is always effective in training people in attending skills.

The area of research on microcounseling, then, is growing but is not yet very deep or broad. Much remains to be done. As the developer of microteaching, Dwight A. Allen has suggested,

Microtraining is best considered a beginning, a "jumping-off" point from which each individual or group of individuals develop their own conceptions and directions for further growth...

I hope you find a way to use microcounseling techniques to develop new approaches, as a stimulus to new mechanisms of microtraining and not simply as a recipe for a narrow range of counseling and interviewing skills. To go beyond Ivey's ideas - to make them obsolete as he has in part made other ideas obsolete by amplifying the earlier efforts in microteaching - is one ultimate compliment you can give his work (45, p. xiii).

Summary

In summary, microcounseling is in a stage of active research as a counselor teaching model. As a training model, students enthusiastically receive it and learn from it. However, it is questionable as to how significant the results are, or how enduring the effects of such training are. Microcounseling training has been tried in several
settings, but much more research must be done to establish its distinctive capability as a training and counseling methodology.

Marital Communication and Skills Training

The area of marital communication is a relatively new area of scientific study. For many years there has been a great deal of concern about the area of communication between husband and wife, but not very much research has been done. Marital counseling has, of course, existed for generations in the hands of generalists such as physicians, lawyers, and clergymen. In 1942, with the birth of The American Association of Marriage and Family Counselors, the discipline became professionalized and specific. In the arena of marital counseling, however, at that time communication was only one of many important areas of research. Significant studies in the area of marital sharing and communication are scarce.

Bond (18) has examined what has been done in the specific area of marriage and family therapy, pointing out that almost no significant conclusions about the effects of videotape recorded feedback on family therapy have been reached. Alger and Hogan (2) claim, on the basis of their clinical experience, to have demonstrated significant and enduring results in families using videotape recorded
feedback. They maintain that their patients grasp better the complexities of their interactions and move toward more democratic interaction in family structure, but they offer no data to support their claims.

Berger (13) investigated patterns of change in body position during family therapy using videotape equipment. He examined orientation, openness, inclination, and postural congruence. Although there were only four subjects (two couples) selected because they were considered "polar couples" in terms of adjustment, the idea of postural shifts is important. Berger's results appear unfortunately inconclusive.

Apostoles, Anderson and Haye (4) used a marital therapy training format very similar to the one used in this present research. There was a thirty minute videotape session, a thirty minute viewing segment, and a thirty minute interpretative and integrative segment. A psychiatrist and a psychiatric nurse worked together on the project. While the project was "considered a success from all points of view", unfortunately little test data is available to show what was accomplished.

Silk (74) suggests that videotape is very useful in brief joint marital therapy. He points out that during
intense marital discord, videotape adds a note of objectiveness and truthfulness to the process. He suggested that a couple can react fully to each other and then reproduce that reaction for therapist clarification and instruction. He says that a couple can learn a great deal from seeing themselves in such an interaction. Unfortunately, no comparative data to support these claims is offered by Silk.

Busch (19) studied different strategies of communication among twenty couples. He found that several strategy variables were apparently not important and that only the type of discussion (personal, topical, impersonal) had any influence or messages given between couples.

Halzman (38) has studied patterns in verbal behavior of couples using the Ravich Interpersonal Game Test. She sorted couples into dominant-submissive, cooperative, and competitive types. Findings give the conclusion that cooperation between a couple lends to more talking, more simultaneous speech, more acknowledgement, more approval, and more agreement between the spouses.

Hickman and Baldwin (36) have compared conjoint marital therapy to a programmed text treatment approach. In this study, the subjects were thirty couples who petitioned the conciliation court in Phoenix, Arizona, for marriage counseling services. All couples indicated on the petition that the problem was "lack of communication". They were randomly
assigned to one of three groups: (a) a control group, (b) the programmed text group, and (c) the conjoint marital counseling group. The Semantic Differential (61) was used to assess changes in four concepts related to the marital relationship. The four concepts were (a) communication, (b) understanding, (c) my relationship to my spouse, and (d) my spouse's relationship to me. An index of the quality of the attitudes toward the marriage relationship was obtained from the total semantic differential scores. The authors also used the conciliation agreement of the court as a behavioral outcome measure. This document is signed by all couples wishing to continue their marriage following termination of conciliation services.

During the treatment period the programmed text group received attention twice weekly for an hour using the text Improving Communication in Marriage (Human Development Institute, 1967). This text calls attention to cognitive material concerning functional and dysfunctional marital communication processes. Each session in the study covered eight programmed lessons.

The counseled group came twice weekly to one-hour sessions for four weeks. The counselors, who were doctoral candidates in counseling, facilitated the communication processes. No specifics of the facilitation were given.
The control group received no treatment during the experimental period; it is not clear what was done with them.

These researchers compared the pretest-posttest changes in the semantic differential total scores by computing t-scores for differences between independent group means. The counseled group had significantly higher semantic-differential scores than did the control group, but comparisons between the programmed text group and the control group all yielded nonsignificant results. These authors have made several important contributions to the study of marital communication with their group comparisons, their use of a control group, their use of a programmed text, and their behavioral outcome tests that identify specific and measurable behaviors. The semantic differential as used by Hickman and Baldwin was used as a testing instrument in this study. Stewart and Hand (76) examined the positive and negative aspects of programmed instruction, especially marriage enrichment tapes, records, and home techniques. They concluded that help from a trained and qualified counselor is more desirable than the "do-it-yourself" programs.

Nadeau (59) also investigated a marital enrichment group. She noted that the thirteen couples in the group participated in several communication improvement exercises and marital sensitivity exercises. Generally positive results of testing are taken to indicate that marital
enrichment groups increase nonverbal communications skills, cause a more positive view of self and the marriage, and increase the effectiveness of interaction patterns. A two-month later follow-up showed little decay of these positive trends.

Azrin, Naster and Jones (7) wrote a complex article detailing their rapid (behavioristic) learning theory based approach to marital counseling. They offered a covey of contracts and programs to their clients. They counted and monitored many behaviors using lack of reciprocity in positive reinforcement as the central marital discord. They purported to show how positive reinforcement generalized to marital happiness when the couple was taught, through the program, to use a reciprocal approach to each other. Once reciprocity was achieved in a specific problem area, the happiness generalized so that 96% of the twenty-two couples reported marital happiness and better adjustment.

Ely, Guerney, and Stover (29) randomly assigned twenty-three student couples to either an experimental conjugal therapy group, or a no-treatment control group. The uniqueness of the experiment is that the author used divergent methods of criterion measurement. The study employed four different outcome measures, tapping a number of important outcome variables. The Ely Feeling Questionaire presents a number of situations to the spouses, and they are required
to respond under different instructions: (a) What would you say if you were in the situation?; (b) What should you say in the situation?; and others. Two categories of statements that are scorable by two independent judges are: (a) direct expression of one's own feelings (feeling expressions), and (b) clarification of spouse's feelings (feeling clarification).

A second measuring technique used was a role-playing situation which set up twelve standardized situations for the couple to act out. These interactions of the couples were then scored by two independent judges who showed good interrater reliability in their ratings of the dimensions of feeling expression and feeling clarification mentioned above.

The third instrument, which was also selected for use in the present research, is The Primary Communication Inventory (60). The instrument requires the spouses to answer twenty-five times on a five-point scale which assesses both the verbal and the nonverbal communication patterns of the couples.

The final instrument used was the author's own Conjugal Life Questionnaire, which is a self-report inventory which claims to evaluate the degree of acceptance and trust between the spouses.

The conjugal training group received ten two-hour training sessions and homework assignments, while the control
group simply waited for ten weeks. Treatment appears to have been the practicing of specific roles of speaker and listener in the expression of specific feelings from one spouse while the other attempted to be empathetic and non-judgmental. Continuous feedback was given by the therapist who also modeled during the training process.

The results indicate significantly more feelings expressed and clarified in both the questionnaires and the role-playing situation. There was significantly more change for the experimental group than there was for the control group as measured by The Primary Communication Inventory and there were nonsignificant differences on the Conjugal Life Questionnaire. Unfortunately this study did not include any follow-up data that might indicate the permanence of the effects of the treatment.

Pierce (64) hypothesized that communication training would significantly increase the level of constructive communication between spouses in problem marriages. He utilized Carkhuff's method (21) of training interpersonal communications skills for these spouses of deteriorated marriages. Dividing his subjects into three groups, Pierce used a conjugal therapy group, an insight therapy group, and a time-control group. Although the subjects were heterogeneous in several demographic respects, they all acknowledged poor communication as the major problem in their
marriage. The training group met for several months until they had come for a total of twenty-five hours of training. The other two groups also met for a total of twenty-five hours with varying kinds of sessions.

The conjugal group followed Carkhuff's training system by being taught first the pre-helping skills of attending, observing, and listening in role-playing situations. After a pre-helping phase, the partners paired off and practiced responding appropriately to their spouse's communications. Appropriate behavior was modeled by the trainer.

The measuring instruments used were Carkhuff's (21) five-point scales based on a fifteen minute interview between the spouses where a meaningful problem was discussed. Pierce reported significant differences between the conjugal group and all others. This study is important because it uses specific criterion of outcome effectiveness in communication. The conclusion that increasing communication skills will increase constructive action in the relationship remains illusive. Because there was not a multiple outcome measure and no follow-up, and because there was no measure of interaction outside the therapy room, it appears that the conclusions of Pierce may overreach the data.

**Summary**

To summarize this section, one must note that marital communication is such a large and complex area of research
that broad generalizations are hardly possible. Research in the various aspects of marital communication is still sparse and tentative. The research underway and recently reported awaits synthesis and ordering in a useful way. Communications training does appear to have several tentatively useful and helpful directions cited above, but none stands out as singularly helpful.

Nonverbal Communication

Most research mentioned here concentrates on verbal exchanges and verbal transactions. Little research has been done on nonverbal communication between married couples. However, Ivey (41, 45) has indicated in almost all his work that there is a significant nonverbal dimension to communication. He counts eye contact, posture, hand movements, and the like (See especially 45, pp. 166-173; 192) when describing communication.

Beier (11) suggests that couples create a healthy and supportive environment, or a destructive one, by nonverbal means. Eyes and eye contact especially are considered important to nonverbal communication. But judges in the Beier study of nonverbal communication also rate laughing, talking and touching, and the openedness or closedness of arms and legs as important nonverbal signals.

Kahn (47) has developed the "Marital Communication Scale", a test of nonverbal communication and marital satisfaction.
The scale purports to measure the accuracy of nonverbal communications between married couples, especially those of late middle age and aged couples. The test consists of sixteen items that spouses must interpret through observing each other giving eight messages each. Each subject is asked to read his spouse's "intentions" especially with reference to conflict resolution. The test appears to be at the stage of testing and development at this time.

Rosenthal (67) has developed a "Profile of Nonverbal Sensitivity" (PONS) which he claims measures two kinds of wordless communication, (a) tones of voice and (b) movements of face and body. The test is

...a 45 minute film which presents the viewer with a series of scenes such as facial expressions, or a few spoken phrases that are audible as sounds but not as words. Some of the scenes are both seen and heard. After each scene, a test-taker chooses the appropriate situational label from two labels offered as a standardized form. For example, the movie may show a woman's face for two seconds; she looks upset; she's saying something that sounds important but the words aren't clear. Then the scene disappears.

The test taker can mark one of two characterizations: "expressing jealous anger" or "talking about one's divorce." Or, the two situational labels might be "leaving on a trip" and "expressing deep affection." . . . There is only one correct answer for each scene (67, p. 65).

Rosenthal reports that people can score better than chance accuracy on understanding the meaning presented in as little as one twenty-fourth of one second! He notes that in over 130 groups of people, women are significantly better
than men in detecting nonverbal cues. He also indicated that practice tends to improve a person's Profile of Nonverbal Sensitivity score.

Scheflen (71, 72, 73) speaks of "the choreography of communicating" and the "linguistic-kinesic system". In hundreds of experiments he has examined the importance of space and orientation of people in communications. He suggests that behavior is a context for communication. Not only are words important, but also body positions, movement, orientation, territoriality, and environmental and cultural contexts.

1. Movements of the head, eyes, arms, and torso punctuate or mark the stream of speech, address speech to various listeners, and in general delineate the segments and phrases of human interaction.

2. Gestures (including facial displays) supplement the information content of speech by depicting sizes, shapes, and relations which are being represented in words, and

3. Kinesic behaviors can qualify or give instructions about verbal statements, in a relation Bateson calls "metacommunicative."

In short, the movement of the body helps in the clarification of meaning by supplementing certain features of the structure of language. A word can often have a number of meanings. ... Some particular denotation is specified by adding adjectives, further sentences, and iconic or symbolic gestures (73, p. 11).

Scheflen suggests moreover that various communications are behavioral controls of other person's behaviors. He identifies various cues and signals which people use to control transactions between them. Many subtle movements indicate complex meanings. For example, men teasing each
other but not intending to fight will brush the inside of their thumbs on their noses as a signal to play rather than fight (72, p. 62). And married couples, kissing each other make pelvic contact. But friends and kinsmen ordinarily hold their pelvises apart in a kiss of greeting. Also adult males, although friendly, do not kiss in American culture; they shake hands (72, p. 64). In still another example, a man may smile to lessen the aggressiveness of an insulting statement (72, p. 72). Almost any behavior can be a signal about communication, a metacommunication, according to Scheflen.

**Summary**

Nonverbal communication is an exciting new area of research which is rapidly taking shape. This summary can offer more hopeful comments: it does appear that useful and helpful results are forthcoming in this area, although much remains to be researched. Nonverbal communication is important because it makes up a very large component of all personal and marital communication. Knowledge of this kind of communication lends itself well to a skills training model which was developed for the present research.

**Marital Communication and Marital Adjustment**

In the beginning of this paper it was suggested that effective marital communication is an axiomatic correlate of
marital adjustment. Many researchers support this notion. For example, Knox (49) seems to make this assumption. His behavioral approach to marital counseling suggests that several areas are important to actualize communication. He notes that interests differ; that talk time (or amount of time that couples spend talking to each other) must increase usually; that communication about sexual feelings must be good; that arguments must be dealt with; and that love should be expressed.

Lack of adaptive communication is a major problem in an unhappy marriage. Likewise, it is one of the more frequent problems encountered in marriage counseling. Marriage counselors are aware of the number of spouses who do not have the skills required to communicate effectively with each other.

Since psychotherapy can probably best be described as a learning experience, the counselor may often increase the speed of therapy by teaching his clients basic issues about communication. Communication refers to a message which is transmitted through both verbal and nonverbal behavior. Verbal behavior refers to literal content.

... Nonverbal behavior refers to the gestures, facial expressions, and tone of voice, which communicate a context within which the verbal content is to be understood.

... The counselor should notice the verbal and nonverbal behavior of his clients as they interact during the counseling session and note when discrepancies occur (49, pp. 52-53).

Satir (70), who is famous for her conjoint style of marital systems counseling, seems to assume that good or effective communication is crucial to marital adjustment. In her definition of the communication process in the book *Conjoint Family Therapy* (70), communications are tied to the whole family system and its communications methods.
1. The communication techniques which people use can be seen as reliable indicators of interpersonal functioning. ... as an aid to therapy, or study of communication can help close the gap between inference and observation as well as help document the relationship between patterns of communication and symptomatic behavior.

2. People must communicate clearly if they are going to get the information which they need from others. Without communication we, as humans, would not be able to survive (70, p. 73).

Miller, Nunnally and Wackman (56) imply, even in the name of their book on couples communication, that good adjustment, or aliveness, is related to effective communication: Alive and Aware Improving Communication in Relationships. Their book, intended for use in couples communication training, is obviously intended to aid or improve marital adjustment by helping couples improve their communication patterns.

Lederer and Jackson (53), in The Mirages of Marriage, a monumental and pioneer effort to bring marital adjustment as a workable alternative to the public's attention, maintain that all behavior is communicative and that a couple must realize that whatever happens, they communicate. Only effective and positive communication will add to a good adjustment in the marriage (53, pp. 98-105; 276-284).

Concentration on communication as related to marital maladjustment began with research on schizophrenia. As early as 1956, Bateson, Jackson, Haley, and Weakland (10) became aware that maladjustment can be clearly correlated to
complex, multileveled communication between family members. They called this crippling, multimodal communication "double-bind communication". They showed how mixed, contradictory messages from some family members can become disabling and confusing to the identified patient in a family. They then demonstrated with dazzling clinical evidence how the double bind communication could bring about such severe maladjustment in families as to cause them to become "schizophrenogenic"; that is, families in which schizophrenia is likely to occur. A child is blocked off from affection on one side and from complaint or self expression on the other. He is trapped so that he is punished if he indicates or communicates love and affection and punished if he does not do so.

All four of these researches have developed ideas first identified in this research in unique ways. Haley (34) in 1959 went so far as to suggest that the thread that runs through most recurring marital problems is the breakdown of meaningful communication between marital partners. A year later Hey and Mudd (35) agreed with Haley and pointed out that confused perceptions seem to intensify and fuel marital discord.

Bardill (9) observed from his study that maladjusted married couples communicate less with increasing conflict and dissension. Arguments developed over even small tasks. Like Bateson, et al.(10), Bardill noted that for maladjusted
couples, contractions or binds existed between levels of communication for such couples so that their communications were ambiguous and often contradictory at various levels of communication.

Like Satir (70) and Bateson, et al. (10), Bolte (17) is sensitive to the importance of studying the couple system. He points out that the couple's marital relationship must be studied as a whole, else one will encounter symptoms without knowing their effect on a spouse or the spouse will be seen without a view of the symptoms and their effects. Bolte suggests too that one must study the verbal and the non-verbal communications of the couple if he is to fully assess their marital adjustment.

Taylor (77) collected data to show a significant relationship between marital communication and marital adjustment. In this interesting research, Taylor compared self perceptions to other's (mate's) perceptions and used the discrepancies in these self perceptions versus other's perceptions as a measure of marital communication. Well adjusted couples were shown to have few discrepancies while maladjusted couples had many.

Similarly, Elliott (28) studied communication and empathy with respect to marital adjustment. Using three tests of marital adjustment, including the Locke-Wallace Marital Adjustment Test (54), which was used in the present research, Elliott found no significant relationship between empathy
Katz (48) studied communication in relationship to connotative meaning in a married couple's communications. Katz's data showed that happily married couples share common connotative meanings and have agreement on relevant issues, while unhappily married couples do not share such meanings. Katz offers support in this research to the notion that marital adjustment is related not only to marital communication but also to shared meanings in the thoughts of couples. Landis (51) also offers support to the idea that effective communication patterns are a major requirement for satisfactory marriages.

Cardillo (20) studied the effects of teaching communication roles on interpersonal perception and self concept in disturbed marriages. The results of this study were interpreted as showing that improvement in a person's self-concept as a result of this skills training is related to increased accuracy of personal perception, and hence better marital adjustment.

Navran (60) has gathered a great deal of data to demonstrate that a significant relationship exists between marital communication and marital adjustment. He considers both verbal and nonverbal components of marital communication but points out a stronger correlation between marital adjustment
and verbal communication. The use of special (secret meaning) words by happily married couples was one striking finding. These private verbal codes appeared to indicate the precision and effectiveness of the close marital adjustment in happily married, strongly communicative couples.

Navran makes perhaps the strongest statement of anyone writing in this area. Concerning his research with the

Primary Communication Inventory, he asserts

The present study . . . suggests strongly that communication and marital adjustment are so commingled that any event having effect on one will have a similar effect on the other . . . the positive association between communication and marital adjustment has important treatment implications for marriage counselors; namely, that the entry to improve a marital relationship may lie in focusing the couple's attention on how they communicate (60, p. 183).

Moreover Navran goes on to assert that because of the close association between adjustment and communication, any event affecting the marital communication would have a concomitant effect upon marital adjustment.

Summary

In summary, marital adjustment does indeed appear to be closely related to marital communication. If a therapist improves one factor, it appears likely that he can improve the other. Moreover if a therapist can help a couple improve communication, he may be able to help a couple improve
the meaning of their relationship as a whole, an astonishing fact, in view of the possibilities of skill training that are almost immediately available to a therapist or marital counselor.


39. Ivey, A. E., "Basic Attending Skills: An Introduction to Microcounseling and Helping," a 1/2 inch videocassette, black and white, available from author, 72 Blackberry Lane, Amherst, Massachusetts, 01002, 1973 ($325.00).

40. ________, "Microcounseling: An Introduction," a 1/2 inch videocassette, black and white, available from author, 72 Blackberry Lane, Amherst, Massachusetts, 01002, 1973 ($90.00).


42. ________, The Clinician as Teacher of Interpersonal Skills. Let's Give Away What We've Got, Amherst, Massachusetts, Human Relations Center, January, 1973.


CHAPTER III

PROCEDURES, METHODS, AND INSTRUMENTS

The purposes of this study were to assess the effects of microcounseling training on the intimate communication between married couples; to examine the specific behavioral effects of teaching these skills; to examine the intimate-communication effects of this training; to determine what effects this training may have had on marital adjustment; and to examine any changes in meaning that such training may have brought about in the couples' marital communication.

This chapter provides a detailed account of the various procedures, methods and instruments that were used to carry out the purposes of the study. In particular it will present (a) the experimental procedure; (b) the procedure for obtaining training and testing the subjects; (c) the procedures used with the consultants; (d) the procedures used with the raters or judges of behavior; and (e) the procedures for analysis of the data generated by the study. Moreover, this chapter presents information about (f) the testing instruments used; (g) the manual developed for the couple-subjects, the consultants, and the raters to use; (h) the
video model tape developed for the subjects, consultants and raters to use; (i) the rating scale developed for the use by the raters; and (j) the setting, studio, and equipment.

The Experimental Procedure

When the subjects volunteered for the research study, they generally met with the experimenter first or talked to him by telephone. He assigned them to one of three consultants, giving the subjects a number. This number, G₁, G₂, or G₃, indicated to the consultant to which of the three groups the subjects belonged; that is, the three-hour microcounseling training setting, the nine hour setting, or the attention placebo control number setting. The experimenter selected this number by serial randomization; that is, the first couple went to G₁, the second to G₂, and so on.

The first meeting of the consultant and his couple-subjects for both the experimental and control groups included pre-testing with the three pencil and paper tests and the filling out of a demographic data sheet. Because videotaping and testing of the control group was necessary for behavioral comparison of their marital sharing and communication, these people were treated in almost exactly the same way as were their experimental counterparts. The control subjects were told that they would be videotaped and that this taping was being done to aid learning about marital communication. Using instructions similar to those listed
below for experimental couples, the control couples were told that, if they so desired, when the entire procedure was finished the consultant would be able to give them feedback about their communication and then make suggestions to them as to how they might improve their marital communication.

The experimental couples were treated very informally and were encouraged to be casual (as were the controls). The consultant, upon receiving their finished pencil and paper tests, would give them the following instructions.

We are here to help you develop your personal sharing communication. We will use videotape equipment to help us see exactly what goes on between you two. We have a room in which we want you to practice sharing with each other. Share whatever you wish concerning your marital relationship, especially what is going on in your marriage just now. You will share for a few minutes, and then we will meet to talk about your sharing and see what we can do to enhance your skill.

Following the videotaping of the first sharing practice, the experimental couples were taken to the consultation room (the video studio and control room) where they read the manual with the consultant and discussed the components of sharing behavior. Then they viewed the video model tape. During this viewing the consultant pointed out examples of the specific skill-behaviors manifested by the model couple and asked the subject-couple to do the same thing. As the consultation proceeded the subject-couple's own tape was run for their viewing with the same invitation for them to point out their use of the desired skills. Sometimes the consultant would point out where the couple could have used a
skill that they did not use, or ask them to say how they might have changed a particular statement or reaction so that it would be more like the skill behavior being taught. It was always intentional that the consultant not attend to negative components of the sharing behavior; instead, the consultant sought to draw out the positive, affirmative skills and desirable behaviors. This positive shaping of behaviors was intentional throughout the training procedure; such positive behavioral shaping is consistent with the positive shaping procedures of Ivey (9, 10). Each skill specified in the manual was identified, modeled, discussed, and practiced or rehearsed at least once in the consultation session. If the consultant, who took notes on the couple's tape session, felt the couple was weak in a particular skill, such as sharing of personal feelings, he could concentrate on that skill of sharing of personal feelings by pointing it out in the model several times during the course of the consultation.

At the end of this first consultation, which lasted approximately one hour, the subject-couple would take a short break and then be given the following instructions:

Now I want you to practice your new knowledge of basic sharing. This time please pay attention to expressing affectionate feelings and thoughts that you may have for each other while continuing the use of your basic sharing skills. As before, you will be given a few minutes to practice and then we will meet to talk about what can be done to enhance your skill.
A similar procedure to that specified above was carried out in the second consultation, but this time attention was drawn to affectionate expressions between the couple. A third cycle was then carried out in which confrontive sharing was shaped and then practiced. This fourth opportunity to practice was used as the post-test for the $G_1$ subjects. The $G_2$ subjects were rescheduled during successive weeks for a second and then a third similar three-hour procedure. Following the nine hours of consultation and practice, the fourth opportunity to practice on the third consultation session was used as the post-test for the $G_2$ subjects.

A summary of this experimental procedure can be seen in the following steps.

1. Meet couple-subjects, make introduction.
2. Give intake form, videotape release form, demographic data sheet.
3. Mark forms with group assignment and give pencil and paper tests.
4. Give couple instructions, take them into recording studio.
5. Take ten-minute videotape sample of their sharing behavior.
6. Return couple to control-consultation room to read manual on basic sharing.
7. View videotape model couple with the consultant, occasionally stopping the tape to point out skills or discuss specifics.
8. View videotape of subject-couple with the consultant who may stop the tape to point out and refine skills or ask the couple how they might improve. Identify each skill at least once.

9. Strategic planning to implement specific skills cited as good but needing improvement in order to offer better sharing opportunities.

10. Return to practice room to rehearse new skills.

11. Repeat steps five through ten again for affectionate skills, and again for confrontive skills. For G₂ couples a second and then third cycle like this is arranged.

12. Consultant retains first and last videotapes for data.


14. Appointment is made for follow-up four weeks hence.

15. At time of follow-up repeat pencil and paper tests.

16. Repeat ten minute video sampling again. Ask couple to "practice" again.

The control group, G₃, received the first session format less the manual, the videotape model, the behaviorally specific feedback, and the consultation on communication patterns. During one session the G₃ couples were tested and videotaped. Then there was an hour of counseling or neutral consultation about whatever the couple chose to do during the time. This time was even characterized as a "break" by the consultant to some couples. Then they were taped and tested again. Four weeks later they were tested and videotaped a third time. After the close of the last videotape
session the consultant had an opportunity to inform the
control subjects about the nature of the experiment. They
were offered the training in marital communication if they
wanted to have it. Two of the controls did make such a
request and received an abbreviated version of the training.

A schematic way of presenting the procedure is given in
Figure 1.

<table>
<thead>
<tr>
<th></th>
<th>G_1</th>
<th>G_2</th>
<th>G_3</th>
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<tbody>
<tr>
<td></td>
<td>(12 Subjects)</td>
<td>(12 Subjects)</td>
<td>(12 Subjects)</td>
</tr>
<tr>
<td>Pencil and Paper Tests</td>
<td>Three</td>
<td>Three</td>
<td>Three</td>
</tr>
<tr>
<td>Videotape</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-test</td>
<td>Ten Minutes</td>
<td>Ten Minutes</td>
<td>Ten Minutes</td>
</tr>
<tr>
<td>Consultation and Training</td>
<td>Three Hours</td>
<td>Nine Hours</td>
<td>Zero Hours</td>
</tr>
<tr>
<td>Videotape</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-test</td>
<td>Ten Minutes</td>
<td>Ten Minutes</td>
<td>Ten Minutes</td>
</tr>
<tr>
<td>Pencil and Paper Tests</td>
<td>Three</td>
<td>Three</td>
<td>Three</td>
</tr>
<tr>
<td>Four Weeks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time Lapse</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Pencil and Paper Tests</td>
<td>Three</td>
<td>Three</td>
<td>Three</td>
</tr>
<tr>
<td>Videotape</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Follow-up</td>
<td>Ten Minutes</td>
<td>Ten Minutes</td>
<td>Ten Minutes</td>
</tr>
</tbody>
</table>

Figure 1. - Summary of experimental procedures

The Procedure for Subjects

In the original proposal for this research project, it
was planned that subjects would come from the client flow
through the University Counseling Center of North Texas State
University. After the proposal was accepted, and for almost
four months following that acceptance, clients were sought in that manner, but sufficient subjects were not obtainable in this manner. Therefore, in consultation with the director of the counseling center and the major professor for this project, it was decided to solicit clients from the general population of the university community with the stipulation that at least one spouse would be a student of the university. An announcement was made in the university newspaper and a bulletin board poster was distributed around the university. The announcement and the poster invited persons interested in marital communication to participate in a research project for which they would receive free feedback concerning their marital communication. This poster was distributed through classes on human development, marriage and family, psychology, and counseling. In this way a satisfactory supply of clients was obtained. Copies of the advertisement and the bulletin board poster are included in the appendix. This publicity generated sizable student interest in the research project and it was necessary to put off several attempts by student reporters to write a news story about the experiment. A story was eventually published in the newspaper, but it did not appear until late in the summer session so that all data had been collected except two follow-up sessions. There was no apparent contamination from newspaper coverage in these two subject-couples.
In the process of shifting from counseling couples to the general population, the size of the sample was enlarged. The original twenty-four subjects became a sample of thirty-six subjects, twelve in each cell of the experimental design.

The subjects ranged in age from twenty-one to thirty-seven years. The mean age for males was twenty-nine; the mean age for females was twenty-seven and one-half. Education ranged from twelve to twenty years with the mean being seventeen years for the men and fifteen and six-tenths years for the women. As can be seen by these figures, a large number of graduate students took part in the study. The subjects had been married from one to seventeen years with a mean length of marriage being five and eight-tenths years. Income also varied widely from around $5,000.00 to more than $22,500.00. The mean income was $11,760.00. A surprising number of the subjects had been videotaped before coming to the present situation: seven of the men and six of the women had been videotaped for classes in speech and drama, psychology, counseling, business communications, and in work training settings. Only seven of the eighteen couples were completely videotape naive; that is, neither spouse had ever been videotaped. Several of the difficulties noted in this study in obtaining a homogeneous and reliable group were experienced by Peirce (20), who nevertheless drew what he felt were highly valid conclusions from the sample.
of couples that he obtained. His groups were small and not uniform, having come to a clinic for entirely different purposes. Pierce (20, p. 224-225) saw the uniform skill training which he carried out as creating a certain amount of homogeneity. Hickman and Baldwin (8), who developed the Semantic Differential test used in this study, also had difficulty in obtaining a homogeneous sample. Their referrals for counseling varied widely on such demographic items as age, education, income, and length of marriage. They simply received referrals from a conciliation court in Phoenix, Arizona, and did not attempt to control those dimensions of their sample.

The final eighteen couples who are in the study are more eager and determined subjects. In the course of the assignments of couples, and in the training procedure, five couples were lost or dropped out. Three others did not come to their first appointment for videotaping, one nine-hour couple dropped out after nearly two-thirds of the training was completed. Another nine-hour couple dropped out after three hours of training because the female gave birth to a child. In addition, two couples had children between the time of the training and the time of the follow-up session. One of these couples was G2 and one was a G3, fortunately. Because of this loss of original subjects, the order of randomization became more complex than simple serial randomization so that subjects were spread through the design one
time and then when one assignment through the design was completed, new volunteers were assigned to the spaces vacated by the dropouts.

The Procedure for the Consultants

The consultants were three advanced doctoral students in the Counseling Department of the College of Education, two males and one female. These consultants practiced for more than three and one-half hours in order to develop their consultation skills. Before beginning the specific task of the consultation training, each consultant had a copy of the dissertation proposal before him. This included a copy of the manual for couples entitled Sharing. A copy of this manual is in the appendix. All three consultants had had previous experience with microcounseling training, and the ideas in the microcounseling model.

Then the consultant training began; the experimenter reviewed the experimental procedure with the consultants; identified each step, explained the rationale of each step; and explored questions that the consultants might have. Next the consultants were briefed about the use of the videotape equipment and the methodology of specific usage of the studio, the lights, the timing equipment, the air conditioner, the furniture, and many other details of the program. Every attempt was made to rehearse the consultants so that patterns would be uniform and controlled. For
example, the exact placement of the chairs, the lamp, the end table, the ash tray, the tissues, and the camera was mapped out in a diagram which each consultant was asked to study. This was necessary because the studio was also used for a play therapy research project and furniture had to be arranged individually for each session with the couple-subjects. A short paper on the use and maintenance of video equipment and tape was read by each consultant because of the proneness to trouble of the equipment. Copies of these materials are in the appendix. It became apparent later in the experiments that this was a wise investment in training because the procedure prevented minor difficulties with equipment from developing into major breakdowns.

The consultants then worked through the programmed manual and the video model tape with the experimenter. They used the transcribed video model that occurs in the back of the manual for couples along with the actual videotape and attempted to identify every occurrence of each skill. They made notes at this time based on the experimenter's observations of the video model so that they could accurately identify the same instances of the manifestations of given skills on the video model. As with the subjects, these consultants were encouraged to use their positive assets and little attention was paid to their shortcomings. Following Ivey (9, 10), positive behavior shaping prevailed throughout.
Each consultant was assigned two couples in each of the three settings, G_1, G_2, and G_3. Thus, each consultant had twelve subjects, six couples. This means that each consultant worked approximately thirty-two hours not counting the training, the arrangement of the setting, and other tasks related to the development, handling and protection of the data.

The Procedure for Raters

Three advanced doctoral level graduate students, one from the Department of Psychology and two from Counseling in the College of Education, were the raters; one was male, two were female. These three raters were rehearsed on the same manual, model tape, and dissertation proposal that the consultants had used. In addition, a short "Rater's Handbook" was written to help these raters specifically identify and discriminate specific skills or behaviors to be rated, in much the same way that Ivey (9, 10) used a Procedural Manual for Supervisors in his book. A copy of this handbook is in the appendix.

Just as the consultants went through the manual and used the video model, so also the raters went through the first segment. Raters were asked to identify individually specific behaviors independent of the other two. They used the standard behavior rating sheet. After individual sessions with each rater on how to use the video equipment,
and how to identify each segment of tape to be rated, the experimenter conducted practice sessions in which all three raters attempted to rate two minute segments of the last two segments of the model. This procedure was gone over many times until the raters were able to rate independently three successive occasions of two minutes of tape (some segments were repeated in the practice sessions) with two or less errors per ten behaviors rated. This interrater reliability was checked again after the raters had had individual rating experience, at approximately the midpoint of the ratings using the same format. Given the standard set by the experimenter, these raters made two or less errors per ten items rated, yielding an interrater reliability of better than .80. In this later practice session, several times the raters made one or less errors (or disagreements with each other and/or the experimenter) in almost thirty independently rated behaviors.

The raters were assigned to rate tapes in serial fashion which did not match any other pattern. Judge I rated tapes 1, 4, 7, 10, 13, and 16; Judge II rated tapes 2, 5, 8, 11, 14, and 17; Judge III rated 3, 6, 9, 12, 15, and 18. They did not know which group the subjects on the tape represented, and they did not know the consultant who had worked with the subjects.
The raters counted thirteen specific behaviors using a rating sheet and measured each person's talk time using a stop watch. A copy of this rating sheet is in the appendix. The frequencies of each behavior (skill) were tallied on each person before the beginning of the training, after their training or attention placebo, and at the follow-up four weeks later.

Because each person was rated as a separate subject, the raters had to look at each tape twice, and because it was necessary to rate talk time separately from the verbal and nonverbal behaviors, it was necessary for each rater to go through the tape still another time. Thus the raters saw each tape four times, with breaks between each ten minute segment. This means that each rater did at least 24 hours of rating on his or her six tapes.

The Procedure for Analysis of Data

The criterion behaviors to be rated by the judges were divided into three groups, sharing behavior, affectionate behavior, and confrontive behavior. Affection and confrontation are considered two refinements of basic sharing behavior and thus are expected to occur much less frequently. The fourteen behaviors to be rated are in no way considered a taxonomy of marital sharing behavior. Rather, they represent some clinically derived perceptions of what behaviors are common in a particular kind of communication. There are
verbal and nonverbal components in all three categories. For statistical purposes, all behaviors, verbal and nonverbal, are counted together. They were also treated separately so that one can discriminate between learned effects in verbal and nonverbal behavior. Figure 2 gives a summary description of the behaviors that were studied.

**Table:**

<table>
<thead>
<tr>
<th>BASIC SHARING</th>
<th>AFFECTIONATE SHARING</th>
<th>CONFRONTIVE SHARING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal</td>
<td>Verbal</td>
<td>Verbal</td>
</tr>
<tr>
<td>2. Personal Feelings</td>
<td>Statements</td>
<td>Disagree</td>
</tr>
<tr>
<td>Expressed</td>
<td>8. Thoughts, Fantasies and Dreams</td>
<td>Statement</td>
</tr>
<tr>
<td>14. Face Each Other</td>
<td></td>
<td>13. Same Subject discussed</td>
</tr>
<tr>
<td>Nonverbal</td>
<td>10. Physical Closeness</td>
<td></td>
</tr>
<tr>
<td>4. Eye Contact (Breaks)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Smiling, Laughter</td>
<td></td>
<td></td>
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<tr>
<td>6. Tensing and Jerks</td>
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</table>

Figure 2 - A listing of criterion behaviors to be counted or timed by the behavior raters.

Each subject-couple generated thirty minutes of videotape in three ten-minute segments. Although the order of the sessions could not be randomized given the limits of videotape available to the present experiment, the couple-subjects were presented to the raters in the serial randomization order described above. The raters had no information
about the subjects that they rated except that there was a serial number on the outside handle of the tape box.

The raters gave total counts of the various behaviors so that each tape generated three whole scores (pre-test, post-test, and follow-up) in each of the three categories, basic sharing, affectionate sharing, and confrontive sharing. Moreover, the verbal and nonverbal scores were treated separately in the various categories as well as together with the whole body of data.

There were also three sets of scores from each of the two pencil and paper tests which are treated in the same manner as the data from the behavior ratings. These data are test scores which were expected to increase if the changes predicted actually occurred.

Groups of scores generated by the **Semantic Differential** were treated differently. Each score on the forty-eight scales used was converted into mean scores for the groups, G₁, G₂, and G₃. These mean scores were placed on a single profile sheet for each group. Thus a mean profile on each of the specified issues was generated.

To analyze the data generated by the behavior counts, a design using multifactor analysis of variance with repeated measures on one factor was used. Weiner's (25, pp. 518-521) model of a multifactor experiment with repeated measures on one factor was used. The statistical model is used for each item as shown in Figure 3.
<table>
<thead>
<tr>
<th>Treatment Group</th>
<th>Observation I Pre-test</th>
<th>Observation II Post-test</th>
<th>Observation III Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>G₁ Three-hour Treatment</td>
<td>11</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>G₂ Nine-hour Treatment</td>
<td>21</td>
<td>22</td>
<td>23</td>
</tr>
<tr>
<td>G₃ Control</td>
<td>31</td>
<td>32</td>
<td>33</td>
</tr>
</tbody>
</table>

Figure 3 - Statistical model for each item.

Figure 4 gives greater detailing of the concepts given in Figure 3. Each item to be tested is presented in the schematic diagram of the statistical procedure.
<table>
<thead>
<tr>
<th></th>
<th>I PRE-TEST</th>
<th>II POST-TEST</th>
<th>III FOLLOW-UP</th>
</tr>
</thead>
<tbody>
<tr>
<td>VBS</td>
<td>VBS</td>
<td>VBS</td>
<td></td>
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<tr>
<td>NVBS</td>
<td>NVBS</td>
<td>NVBS</td>
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<tr>
<td>S</td>
<td>S</td>
<td>S</td>
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</tr>
<tr>
<td>G₂</td>
<td>VA</td>
<td>VA</td>
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<tr>
<td>G₂</td>
<td>NVA</td>
<td>NVA</td>
<td>NVA</td>
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<td>A</td>
<td>A</td>
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<td>Tr.</td>
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<td>TT</td>
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<td>TT</td>
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</tbody>
</table>

|        | VBS        | VBS          | VBS          |
|        | NVBS       | NVBS         | NVBS         |
| S      | S          | S            | S            |
| G₃     | VA         | VA           | VA           |
| No     | NVA        | NVA          | NVA          |
| Tr.    | A          | A            | A            |
| Control| MAT        | MAT          | MAT          |
|        | PCI        | PCI          | PCI          |
|        | TT         | TT           | TT           |

Figure 4 - A schematic of the statistical procedure using multifactor analysis of variance with repeated measures on one factor.
The Testing Instruments

In addition to testing the training model developed here by observation of behavior, three short pencil and paper tests were used. These tests are the Locke-Wallace Marital Adjustment Test (Short Form), The Primary Communication Inventory by Navran, and a Semantic Differential by Hickman and Baldwin. Copies of all three tests are in the appendix. The tests, it was reasoned, provide additional measures of the effects of the treatment being tested in this study. The use of multiple measures seems to be very desirable and much needed in an area such as marital communication where so many uncontrolled factors impact the experimental process in unknown ways. Writers in the field, including Locke and Wallace (15), Navran (18), and Hickman and Baldwin (8) seem to be advocating such multiple measures testing.

The Locke-Wallace Marital Adjustment Test (Short Form) (15) is intended to measure overall marital adjustment. The relationship between marital communication and marital adjustment has been substantially demonstrated by Satir (21), Bateson, Jackson, Haley, and Weakland (2), Bolte (4), Hey and Mudd (7), Bardill (1), Taylor (24), Elliott (6), Katz (12), Landis (13) Cardillo (5), and many others. The Marital Adjustment Test was given to the subjects before and after their training and at the follow-up sessions with the assumption that if marital communication improved or changed
in any way it would show in the marital adjustment scores of the couples. If overall marital adjustment changed measurably, then one could reason that marital communication had likewise changed.

Locke and Wallace (15) assembled their test after they discovered several relatively independent factors in an analysis of a large volume of marital adjustment data but no single factor that could be called "marital adjustment" (14, 16). The pool of items used contained 540 separate questions about marital adjustment. The fifteen selected for the test had the highest level of discrimination, and did not duplicate other items while covering what the authors judged the major areas of marital adjustment. They used a sample of 236 middle class marriages to develop a test reliability coefficient of .90 using the split-half technique with the Spearman-Brown correction formula. Strauss (23, p. 183) in his book *Family Measurement Techniques: Abstracts of Published Instruments 1935-1965*, points out that the item validity of the test had long been established in previous tests. Locke and Wallace (15) themselves say that their main goal was to develop a short but reliable instrument for use with marital counseling. In the tests made by Locke and Wallace, the well adjusted couples were clearly separated from couples having poor marital adjustment based on opinions of outside authorities.
The Marital Adjustment Test contains fifteen forced choice items and is scored using a weighted linear measure which yields one overall score of marital adjustment for each person. The possible scores range from 2 to 158. A copy of the test is in the appendix.

The Primary Communication Inventory was developed by Navran (18). Being theoretically a behaviorist, he made an assumption opposite to that of Locke and Wallace; namely, he has assumed that if one can assess accurately communication behavior, he can indirectly assess marital adjustment. Therefore, he has constructed a test to allow the couple to make a self report concerning their marital communication behavior and assumes from results of this test that he has measured marital adjustment. The Primary Communication Inventory was tested by administering it to a group of couples claiming to be happily married (N=48) and a group of couples in marriage counseling claiming to be unhappily married (N=48) plus a nonselected group of persons, volunteers, who were members of a retail clerks' union in the San Fernando Valley, California (N=96 married men and 132 married women). The happily married couples scored significantly higher than the unhappily married couples with a critical ratio of 20.1 difference between the scores. The
nonselected retail clerks had intermediate scores ranging as predicted between the two polar groups. Navran concluded that his test was highly discriminatory of good marital communication.

The Primary Communication Inventory was then compared by Navran to another test that he developed, the Marital Relationship Inventory. When compared to this already validated test (18, p. 174), the Primary Communication Inventory had an extremely high correlation, \( r = .82 \). Thus Navran claims concurrent and content validity for his instrument. He unfortunately gives no data about test-retest reliability, however.

The Primary Communication Inventory (see appendix) was chosen for use in this project however, not only because it measures marital communication, but also because of several fine points related to that measurement. Navran (18) claims that the test has two additional properties which lend credence to its worth. First, the test not only asks that subject to assess his marital communication behavior items (1, 2, 3, 4, 8, 10, 12, 13, 14, 16, 17, 18, 20, 22, 24, and 25), but also the communication of his spouse (items 5, 6, 7, 9, 11, 15, 19, 21, and 23). Second, the test assesses both verbal and nonverbal behavior. The items that assess nonverbal behavior (items 7, 9, 11, 15, 18, 19, and 23) are partly about the spouse and partly about self. The other
items assess verbal behavior in both spouse and self. This test then provides a check on the behavior ratings done in the present project by permitting assessment of specific items. Navran (18) points out that the verbal items are more strongly correlated with marital relationship (adjustment) scores on his two tests, than are the nonverbal items, but both show very strong correlations (Verbal Primary Communication Inventory scores correlate .91 with Marital Relationship Inventory scores, while nonverbal Primary Communication Inventory scores correlate .66 with Marital Relationship Inventory scores.). Such specific assessment enhances the accuracy of measurement afforded in the present project and permits the couples to self-report on matters which will be independently judged by raters seeing the videotapes. These verbal and nonverbal items were treated separately as well as in a unit score in the data analysis for this project.

In his work with the Primary Communication Inventory, Navran (18) used a complex scoring system which weighted certain of the highly discriminating items differently than those items which do not discriminate so sharply. His scoring range was thus from 49 to 120. In this use of the test, a simplified uniform scoring method was used so that each item had equal value with a resulting scoring range of from 41 to 109. The three point difference in the range
seemed justified (from a range of 71 to a range of 68) since Navran himself adjusted his range of minimal happiness scores downward by three points when he was testing the instrument (18, p. 175).

The third testing instrument used in this project was a Semantic Differential developed specifically by Hickman and Baldwin (8) for use in a marriage counseling clinic where they attempted to assess marital communication. They used a programmed text to help develop new and better marital communication so that marriages in the divorce court might be reconciled.

The idea of a semantic differential type test was first developed by Osgood, Suci and Tannenbaum (19). The semantic differential grew out of studies on a synesthesia which seemed to show that diverse sensory modalities were linked biologically so that, beginning in a Hullian view of learning theory, Osgood could claim grounds for an "affective mediating system which is biologically determined and capable of some limited number of gross bipolar discriminations" (17, p. 18). The mediation of symbols takes the form of what Osgood calls the "dimensionality of semantic space" (19, pp. 34–52). In order to evaluate this semantic space which is theoretically infinite, Osgood developed a seven stage scale which is arranged between polar opposites of a given meaning factor. The semantic distance takes on meaning or is the
expression of meaning in what Osgood has identified as the primary components of meaning, namely three factors: evaluation, potency, and activity (19, pp. 36-37). These components or factors of meaning, then, are evaluated along continua between poles. For example, the meaning factor, potency, will be evaluated with such adjective pairs as large-small, strong-weak, heavy-light, thick-thin. By contrast, meaning factor, activity, can be evaluated along the lines of such adjective polar opposites as fast-slow, active-passive, hot-cold, sharp-dull. Each of these factors is present, Osgood claims, in any concept that has meaning to us. Take, for example, the concept of Myself. Each of us has meaning that can be measured in the semantic differential concept of Myself using these continua.

Hickman and Baldwin (8) used four concepts for their version of the Semantic Differential which were, in turn, used in the present project. Those four concepts were (a) communication, (b) understanding, (c) my relationship to my spouse, and (d) my spouse's relationship to me. A copy of this test is in the appendix. Each of these concepts was in turn evaluated on the three factors of meaning, evaluation, potency and activity. Using a seven point scale, the factors of meaning each had four adjective pairs; that is, evaluation was examined with good-bad, pleasant-unpleasant,
clean–dirty, fair–unfair; potency was examined with strong–weak, hard–soft, deep–shallow, wide–narrow; and activity was examined with fast–slow, active–passive, sharp–dull, hot–cold.

Literature about the validity and reliability of the semantic differential technique has mushroomed exponentially since Osgood developed it during the 1950's. In summary of a large body of research work in the areas of psychiatry and psychotherapy, Marks (17) notes that the various scales of the semantic differential type showed an overall test-retest reliability of .85. Osgood, et al. (19) have noted, however, that the conventional measure of reliability, the correlation coefficient, $r$, was not of great use with the semantic differential type of test, because it does not measure absolute differences between specific concepts measured. After developing his own method of testing the test-retest reliability of the instrument, Osgood has shown that there are average errors or variance of only about .75 scale units on most seven-point scales in the test. In other words, over time this is a remarkably stable and reliable instrument. Put still another way, if married couples, or any repeatedly tested subjects, do show a change consistently on their scores on the semantic differential, then it should be because an important change in the meaning of certain concepts has occurred. This means, of course, that changes in
the semantic differential scores of subjects of this project could be interpreted to mean that the skill training that they received concerning marital communication brought about changes in basic (and normally stable) concepts of their marital understanding, communication, and the relationship which they have.

Osgood, et al. (19) offer many examples to support the validity of their instruments. For example, Solarz (22) has shown that a hand-tapping response to certain words was very closely correlated with the activity factor as measured by the Semantic Differential. Osgood's evidence has much to support the contention that his instrument does indeed measure meaning. However, there is controversy that remains about so widely influential an instrument as the semantic differential (3, 17). The concept of semantic space and the concept of multidimensional distance remain extremely refined theoretical concepts that deserve and undoubtedly will receive farther research.

For purposes of this study the Semantic Differential will be scored in a manner different from that of Hickman and Baldwin (8) or Osgood, et al. (19). In place a method advocated by Marks (17, especially Chapter VI, "Each Concept Compared Separately Among Groups", pp. 64-69), the method involves the construction of a profile of the meaning held by a group by taking the mean scores of each item of the
test. These items mean scores are represented graphically with the polar words identifying each. This method permits comparisons both between groups and within groups on each item over time. In this manner the hypothesis of change in meaning will be tested.

The Training Manual

The fourteen page training manual to be used by the couples, consultants, and raters listed the behaviors considered important to basic sharing, affection, and confrontation. It has been written by the experimenter so that each micro-behavior would receive attention, definition, illumination, and rehearsal. Two copies of the manual were available to the couple when they came to the training sessions. The manual had a programmed format which used blank spaces in the text to emphasize important material. Words that fill in the blank spaces are immediately below in the text, printed in headline type. A ten page transcript of the video model tape was included at the back of each manual for the use of the subjects. This manual proved to be the most important tool used by the experimenter for training consultants, subjects, and raters. A copy of this manual, Sharing, and the typescript of the video model is in the appendix.
The Video Model

The video model of thirty minutes (three ten minute communication sessions) was made. In the tape an actor couple models basic sharing, then affection, and then confrontation in separate ten minute sections. This tape was used as a model for all experimental couple-subjects. It was used as the sample tape for the teaching procedures for both the consultants and the raters. A transcript of the tape is in the appendix. The actual video tape is available from the experimenter.

The Behavior Rating Scale

A behavior rating scale was developed by the experimenter. It lists the fourteen behaviors to be rated by the judges. It provides space for the timing of "Talk Time" and space for summary of scores to be used by the experimenter. These sheets were used for training of raters and later for their rating of the tape of the couples.

The Setting Studio and Other Equipment

Other instruments used in this study include a Sony VTR3600 recording machine, its companion camera and video monitor, and a similar Panasonic model which was compatible. There were twenty videotapes used to record the model and the sessions. Two stop watches were used to measure talk time. A ringing kitchen timer was used to control the
length of experimental sessions and for the raters to control the length of their sessions. Colored masking tape was used to mark beginning and ending of experimental sessions on the video tape.

Two adjacent rooms were used in Terrill Hall at North Texas State University. One room, which was also used for play therapy by others at the university, was a practice room for couples. The other room was the video control studio which had chairs and tables so that the consultant and his couple-subjects could work together and be tested. The practice room was visible to the control room through one way mirrors and had video and audiotape accessibility.

Summary

The separate treatment groups, G₁, G₂, and G₃, were developed by randomly assigning thirty-six persons, eighteen married couples, to the groups.

The thirty-six subjects, eighteen married couples, were volunteers from the student and general population around North Texas State University during the spring and first summer terms of 1976. Of all the couples, at least one spouse was a student.

Couples were assigned by serial randomization as they volunteered. Three consultants were used to facilitate the training of the couples and administer the various tests.
All three consultants were doctoral candidates in counseling at North Texas State University. The consultants were carefully trained for many hours before their meetings with the subjects.

Consultants taught married couples the marital communication skills of basic sharing, affection, and confrontation. To facilitate this training, the consultants used a micro-counseling format of training which involved taking a video taped sample of the couple as they shared, reading a manual about sharing; seeing a videotape model of the sharing of a model couple; seeing a videotape replay of the earlier session and critiquing that replay with plans to practice the specific skills identified. This format was repeated for each skill once for the G1 couples and three times for the G2 couples. The G3 control group received no training.

Three pencil and paper tests were used in this investigation: Locke and Wallace's Marital Adjustment Test, Navran's Primary Communication Inventory, and Hickman and Baldwin's Semantic Differential. Testing was administered to the subjects before and immediately after the training in microcounseling and then four weeks after the end of the training. The control subjects were only tested and videotaped. They received no feedback.

During training, the consultants made three videotape samples: one at the beginning, one of the last practice after all training was over, and one four weeks later at the
follow-up. These three segments which amounted to thirty minutes of video recording were the basic data for the viewing of the raters. They were randomized and given to the raters with only numbers on the outside tape box.

Raters were trained for many hours and attained an interrater reliability rating of .80 on three separate tests of their accuracy.

Data were compiled and submitted to the Computing Center at North Texas State University, where a multifactor analysis of variance with repeated measures on one factor was performed on the behavior ratings, the primary communication scores, and the marital adjustment scores. These data proved to be inadequate to test specifically the hypotheses as worded, so the data were resubmitted with instructions to do analysis of variance on these means by group and by test. At the same time the semantic differential data were submitted with instructions for the computer to do analysis of variance on each of the forty-eight items in the four concepts tested by the semantic differential. For all tests the .05 level of significance was set.


CHAPTER IV

RESULTS AND DISCUSSION

At the close of the experimental period, videotapes were rated, pencil and paper tests were scored, and results were tabulated. These results were submitted to the Computer Center at North Texas State University where the specified data processing was carried out. Before processing began, the .05 level of significance was chosen for all tests employed. Beyond the significance level specified, the Newman-Keuls Range Test was applied in order to indentify the location of the significant differences between the compared mean scores that developed when the multifactor analysis of variance was carried out. In order to meet the requirements of the hypotheses as they are worded in this project, it was necessary to add an additional one-way analysis of variance for each post-test and each follow-up test. After each, the Newman-Keuls Test was again applied. The results of this one-way analysis of variance are present in the data tables contained herein.

The purpose of this chapter is to present, analyze, and discuss the findings as developed in the ratings and tests. For clarity and order, the data developed will be presented
as they relate to the numbered hypotheses of Chapter I. The hypotheses, however, for purposes of this chapter, will be re-worded so as to present them in their null hypothesis form. Thus the testing results may be accurately applied to the specific hypotheses using statistical tests of significance.

Moreover, for purposes of clarity and conciseness, the numbered hypotheses are offered in pairs where one is the parallel of the other with respect to post-test and follow-up data. That is, since the hypotheses have parallel structures for tests at the post-test and then at the follow-up, these hypotheses are very similar and will be offered together. The data tables for these comparisons will thus be presented only once which will facilitate conciseness as well as clarity.

Hypothesis I and Hypothesis IV

Stated in a null form, Hypothesis I is: Immediately following the teaching of sharing via microcounseling, there will be no significant differences in the mean frequencies of basic sharing behaviors for the experimental and control groups. Specifically, in these comparisons, it is expected that the experimental groups will not yield the following order of magnitude in their ranked mean scores: $G_2$ will not have the largest mean scores, $G_1$ will not have the next largest mean scores, and $G_3$ (the control group) will not
have the lowest mean scores; that is, the order of mean frequency will not be $G_2 > G_1 > G_3$. This condition will hold for verbal and nonverbal tests of the behavior.

Hypothesis IV in its null form states: At the follow-up session one month after the end of training, the experimental group will not exhibit significantly higher mean frequencies of basic sharing behavior than the control subjects, and the ranked mean score order will not be $G_2 > G_1 > G_3$ in tests for verbal and nonverbal score comparisons of the behavior. The pre-test, post-test, and follow-up means for verbal sharing behavior are presented in Table I.

A second part of Table I presents the rank order numbers for the means of the three groups at the post-test and at the follow-up. If the rank order of these numbers (mean size) is to match the original hypothesis, then the column labeled post-test rank and the column labeled follow-up rank should read, from the top to the bottom, 2, 1, 3. When the rank order is any other way, the order section of the original hypothesis is not supported.

A third part of Table I presents the standard deviations of the means which occupy the parallel position in the first part of the table. This means that $G_1$ pre-test standard deviation is in the same relative position that $G_1$ pre-test mean is. This same format for presentation of data will be followed throughout this chapter.
Table I indicates considerable differences between the three groups. These differences, however, can be interpreted by the large differences in the standard deviations of the three groups, most importantly, $G_2$ is larger than others except for the standard deviation of the $G_1$ follow-up. Such wide standard deviations in the scores may account for some of the large amount of variance in the design. Also in Table I, it is possible to observe that the post-test and follow-up ranked means do not have the same rank order. While $G_2$
does have the largest mean at the post-test, it does not maintain its position to the follow-up. That test is lead by $G_1$. In both cases, it is necessary to affirm the null hypothesis since the order of the ranked means does not fit the original predictions. However, it should be pointed out that in both cases, the training group means are larger than the control group, and while the control group had decreasing mean scores across the design, the training groups both had increasing verbal skill scores across the design.

Table II presents the analysis of that variance for the post-test means of verbal sharing behavior. It should be noted that analysis of variance of all pre-test means was also computed. No significant differences between the groups were found on any of the pre-test means for any of the items. These data are not presented in tabular form since that was not required to test the various hypotheses.

**TABLE II**

ANALYSIS OF VARIANCE OF POST-TEST MEANS OF VERBAL SHARING SCORES

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Sum of Squares</th>
<th>df*</th>
<th>Mean Square</th>
<th>$F$*</th>
<th>$p$*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>25.1667</td>
<td>2</td>
<td>12.5833</td>
<td>0.2709</td>
<td>0.7644</td>
</tr>
<tr>
<td>Within</td>
<td>1532.8333</td>
<td>33</td>
<td>46.4495</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1558.0000</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*"df"—Degrees of Freedom; "F"—Ratio; "p"—probability. These abbreviations are used in the subsequent tables of this chapter.
Table II indicates that there is no significant difference between the means of the verbal post-test scores of sharing. The $F$-ratio of .2709 and the significance level of .7644 lead to the conclusion that any differences between the means probably is due to chance. The null hypothesis with respect to verbal sharing must be affirmed for the post-test. Taken together with mean ranking conclusions drawn from Table I, it is concluded that the Null Hypothesis I concerning verbal scores must be accepted.

With respect to the follow-up tests on the same area of concern, Table III presents the analysis of variance for the follow-up tests of sharing behavior, verbal.

**TABLE III**

**ANALYSIS OF VARIANCE OF FOLLOW-UP TEST MEANS OF VERBAL SHARING SCORES**

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>415.3889</td>
<td>2</td>
<td>207.6944</td>
<td>0.6844</td>
<td>0.5114</td>
</tr>
<tr>
<td>Within</td>
<td>10014.8333</td>
<td>33</td>
<td>303.4798</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>10430.222</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The data in Table III lead to a conclusion like that drawn from Table II; namely, that there is no significant difference between means of the verbal follow-up scores of
sharing behavior. The differences between the means, when compared, yielded an $F$-ratio of .6844 which is significant at the .51 level, indicating a great likelihood that the differences shown are due to chance. Again, coupled with the data from Table I above concerning the rank order by magnitude of the means, the Null Hypothesis must be accepted.

The nonverbal component of Hypotheses I and IV will be examined next. Table IV presents the means and standard deviations for nonverbal sharing behavior. The nonverbal component, like the verbal component of the behavior ratings made in this study, represents a composite of several micro-skills that were taught to the subjects. Unlike the verbal skills, however, the nonverbal skills may be things that a subject was taught not to do. For example, good communication between married couples includes looking at one another, or eye contact (See Sharing, the training manual in the appendix). Since eye contact cannot be easily counted, the raters counted the lack of the skill, that is, eye contact breaks. The number of breaks was subtracted from the total score in the nonverbal category. Several of the nonverbal skills taught were counted, thus, by their absence. This means that it is likely that the mean scores in the nonverbal tables will frequently be negative numbers even though there are several positive skills in nonverbal sharing, too.
### TABLE IV

MEANS AND STANDARD DEVIATIONS FOR NONVERBAL SHARING SCORES OF EACH GROUP ON PRE-TEST, POST-TEST, AND FOLLOW-UP RANKINGS WITH POST-TEST AND FOLLOW-UP RANKINGS OF MEANS

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Means Pre-Test</th>
<th>Post-Test</th>
<th>Follow-Up</th>
<th>Rank Post-Test</th>
<th>Rank Follow-Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>G₂</td>
<td>12</td>
<td>-20.0000</td>
<td>-18.5833</td>
<td>-15.7500</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>G₃</td>
<td>12</td>
<td>-17.3333</td>
<td>-16.1667</td>
<td>-12.5833</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standard Deviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>G₁</td>
</tr>
<tr>
<td>G₂</td>
</tr>
<tr>
<td>G₃</td>
</tr>
</tbody>
</table>

In Table II the presence of negative scores is due to the fact that two of the skill behaviors, eye contact breaks and tensing and jerks, were subtracted from the total nonverbal scores when they occurred. The large negative scores indicate much more occurrence of this behavior than was anticipated. However, the uniform decrease of these behaviors across treatments may indicate the lessening of nervous tension in the subjects across tests. The decrease in mean sizes is also supported by decreases in standard
deviation sizes indicating slight decrease in heterogeneity of the groups across treatments. In any case, it should be noted that the standard deviation is quite large, hence that the groups are quite heterogeneous throughout.

Table IV contains the rankings of the means of nonverbal sharing. Unlike the order of the rankings of the verbal scores in Table I, these data are mixed. The order is such that the G1 treatment group has, relatively, the largest mean on the post-test but not on the follow-up. Hence, with respect to the nonverbal portion of Hypothesis I, the null hypothesis must be accepted. And with respect to Hypothesis IV, again the null must be accepted. Unlike the verbal material, the nonverbal material produced by the subjects apparently did not change in any way other than by chance so far as order of the mean scores is concerned. No change can be attributed to either treatment.

There are differences between the means given in Table IV, however, and the analysis of variance of those differences at the post-test is given in Table V. This table gives the sum of the squares, the degrees of freedom, the mean square, the F-ratio, and the probability of the differences compared occurring by chance. Even though the negative scores were present in the means above, this comparison is validly made without regard to negative mean scores.
TABLE V

ANALYSIS OF VARIANCE OF POST-TEST MEANS OF NONVERBAL SHARING SCORES

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>520.7222</td>
<td>2</td>
<td>260.3611</td>
<td>2.1943</td>
<td>0.1274</td>
</tr>
<tr>
<td>Within</td>
<td>3915.5000</td>
<td>33</td>
<td>118.6515</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4436.2222</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The F-ratio of 2.1943 is significant at the .13 level, a significance figure far above the .05 level chosen for this study. In any case the means, as pointed out above, have a mixed configuration which indicates that the order of ranked means is not as predicted by the hypothesis. Hence, Null Hypothesis I for the condition of nonverbal sharing is not rejected. The differences in the post-test means probably can be attributed to chance variation.

Table VI presents data relevant to the parallel Null Hypothesis IV, nonverbal section, for the follow-up tests given to the subjects four weeks after the end of all the training. Again the sum of squares, degrees of freedom, mean square, F-ratio, and probability assessment remain valid in spite of the negative mean scores given in Table IV above. This condition will remain true for all the nonverbal means given in succeeding tables in this chapter.
Table VI

Analysis of Variance of Follow-up Means of Nonverbal Sharing Scores

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>71.0556</td>
<td>2</td>
<td>35.5278</td>
<td>0.2675</td>
<td>0.7669</td>
</tr>
<tr>
<td>Within</td>
<td>4383.1667</td>
<td>33</td>
<td>132.8232</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4454.2222</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The F-ratio of .2675 seen in Table VI and the significance level of .7669 again points to a high probability that one cannot reject the Null Hypothesis IV. The differences in the follow-up means appear to be quite random in their rank and in their size.

These data, taken together, lead to the conclusion that Null Hypothesis I and Null Hypothesis IV cannot be rejected in the case of either verbal or nonverbal sharing scores. The ordering of the ranks of the mean scores is nevertheless important and will be examined in the discussion section of this chapter.

Hypothesis II and Hypothesis V

Null Hypothesis II is: Immediately following the teaching of sharing via microcounseling, the experimental group will not exhibit significantly higher means frequencies
of affection scores than the control group and the order of ranked mean scores will not be \( G_2 \geq G_1 \geq G_3 \). This condition will hold for verbal, nonverbal and total score tests of the behavior. Hypothesis V stated in the null is: At the follow-up session one month after the end of training, the experimental groups will not exhibit significantly higher mean frequencies of affectionate behavior than the control subjects, and the order of the ranked mean scores will not be \( G_2 \geq G_1 \geq G_3 \). This condition will hold for verbal and nonverbal tests of the behavior.

The mean scores with their respective rankings and standard deviations for the pre-test, post-test, and follow-up of affection, verbal scale, are presented in Table VII. Table I on page 98 is similar to this table. As was the case with Table I, and also Table IV, this table gives three different kinds of data at once. The means given refer to the raters' tracking of the affectionate behavior shown by the subjects. It should be noted at the outset that the numbers in Table VII are much smaller than those in Table I, because the skill of affectionate sharing is much less frequent than the basic sharing skill. This same artifact of normal human interaction seems to mean that at least these subjects are normally more likely to share than they are to express affectionate feelings or thoughts. This is only interesting in passing by the material; it is in no way a question before this project.
TABLE VII

MEANS AND STANDARD DEVIATIONS FOR VERBAL AFFECTION SCORES
OF EACH GROUP ON PRE-TEST, POST-TEST, AND FOLLOW-UP
RATINGS WITH POST-TEST AND FOLLOW-UP
RANKINGS OF MEANS

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Means</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Pre-Test</td>
<td>Post-Test</td>
</tr>
<tr>
<td>G₁</td>
<td>12</td>
<td>1.1250</td>
<td>2.4167</td>
</tr>
<tr>
<td>G₂</td>
<td>12</td>
<td>0.7500</td>
<td>3.7500</td>
</tr>
<tr>
<td>G₃</td>
<td>12</td>
<td>1.0833</td>
<td>2.0000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Standard Deviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>G₁</td>
<td>1.5448</td>
</tr>
<tr>
<td>G₂</td>
<td>1.2154</td>
</tr>
<tr>
<td>G₃</td>
<td>1.6765</td>
</tr>
</tbody>
</table>

Table VII shows that the means did vary in the predicted directions. The means of the training groups did increase as expected from pre-test to post-test, and the means of G₂ did increase more than the means of G₁ and G₃. It should be noted, however, that the heterogeneity of the training groups also increased across treatments, while the standard deviation of the control group decreased slightly.

The order of the ranked means is as predicted by the original hypothesis for the post-test, but like the pattern
in Table I for verbal sharing, this rank order changed at the follow-up. The $G_1$ experimental group showed slightly larger means at this point than did the $G_2$ long term training group or the $G_3$ control group.

Table VIII presents the analysis of variance for the post-test means for verbal affectionate behavior.

**TABLE VIII**

ANALYSIS OF VARIANCE OF POST-TEST MEANS OF VERBAL AFFECTION SCORES

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>20.0556</td>
<td>2</td>
<td>10.0278</td>
<td>1.4962</td>
<td>0.2388</td>
</tr>
<tr>
<td>Within</td>
<td>221.1667</td>
<td>33</td>
<td>6.7020</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>241.2222</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From the $F$-ratio of 1.4962 and the significance level of .24, it is again apparent that the null hypothesis cannot be rejected. The mean scores are not significantly different even though they do give evidence of slight differences. The variation in verbal affection scores, it must be concluded, can be attributed only to chance. Null Hypothesis II is accepted with respect to verbal affection scores.
The data relevant to Null Hypothesis V, verbal section, are given in Table IX which gives the analysis of variance for follow-up scores on verbal affection.

**TABLE IX**

**ANALYSIS OF VARIANCE OF FOLLOW-UP MEANS OF VERBAL AFFECTION SCORES**

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>12.0556</td>
<td>2</td>
<td>6.0278</td>
<td>1.5041</td>
<td>0.2371</td>
</tr>
<tr>
<td>Within</td>
<td>132.2500</td>
<td>33</td>
<td>4.0076</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>144.3056</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The F-ratio value reflected in Table IX indicates that the means were not different enough to attain the .05 level of significance. The significance level of .24 is so large that the differences between the follow-up means must be attributed to chance. The rank order of the means, which indicates that both $G_1$ and $G_2$ follow-up means are slightly larger than the control group follow-up mean, is probably only due to random variation and not to the effects of the treatments administered.

Turning now to the nonverbal components of Hypothesis II and Hypothesis V, Table X will show the means and standard deviations for nonverbal sharing behavior.
TABLE X

MEANS AND STANDARD DEVIATIONS FOR NONVERBAL AFFECTION SCORES
OF EACH GROUP ON PRE-TEST, POST-TEST, AND FOLLOW-UP
RATINGS WITH POST-TEST AND FOLLOW-UP
RANKINGS OF MEANS

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Pre-Test</th>
<th>Post-Test</th>
<th>Follow-Up</th>
<th>Post-Test</th>
<th>Follow-Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>G₁</td>
<td>12</td>
<td>0.2300</td>
<td>6.1667</td>
<td>1.2500</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>G₂</td>
<td>12</td>
<td>3.4167</td>
<td>3.4167</td>
<td>1.9167</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>G₃</td>
<td>12</td>
<td>0.3333</td>
<td>0.5833</td>
<td>0.3333</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standard Deviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>G₁</td>
</tr>
<tr>
<td>0.6216</td>
</tr>
<tr>
<td>14.0054</td>
</tr>
<tr>
<td>1.7123</td>
</tr>
<tr>
<td>G₂</td>
</tr>
<tr>
<td>4.2525</td>
</tr>
<tr>
<td>2.2747</td>
</tr>
<tr>
<td>3.2322</td>
</tr>
<tr>
<td>G₃</td>
</tr>
<tr>
<td>1.1547</td>
</tr>
<tr>
<td>1.5050</td>
</tr>
<tr>
<td>0.4923</td>
</tr>
</tbody>
</table>

In Table X, the variation in the means is quite large even at the pre-test. At the post-test and follow-up, these variations remain large. The standard deviation of 14.0054 for the G₁ post-test indicates that this group at this point was very heterogeneous. The means of G₁ appear to grow across tests, but that is reduced in importance when the extremely large standard deviation is noted. The affection scores for G₂ actually reduce across the experimental continuum, and the mean scores of the control subjects do
not appear to change. Therefore, the rank of the means does not carry much weight even though in both post-test and follow-up positions the two experimental group means are larger than the control group means.

Table XI will test this variation for the nonverbal affection post-test section of Hypothesis II.

**TABLE XI**

**ANALYSIS OF VARIANCE OF POST-TEST MEANS OF NONVERBAL AFFECTION SCORES**

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>187.0556</td>
<td>2</td>
<td>93.5278</td>
<td>1.3782</td>
<td>0.2662</td>
</tr>
<tr>
<td>Within</td>
<td>2239.5000</td>
<td>33</td>
<td>67.8636</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2426.5556</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The significance level of .27 for the data in Table XI indicates that the differences between the means for the post-test means of nonverbal affection scores is not significant. Therefore, the Null Hypothesis II for nonverbal affection must be accepted. The rank order of the means pointed out above is not as predicted by the original hypothesis so that the actual numerical differences between the means in Table X are probably due to chance variation, and in this case, to the heterogeneous nature of the nonverbal affection post-test scores.
The parallel data for the follow-up test on nonverbal affection scores is offered in the analysis of variance in Table XII.

\[
\text{TABLE XII} \\
\text{ANALYSIS OF VARIANCE OF FOLLOW-UP MEANS OF NONVERBAL AFFECTION SCORES}
\]

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>15.1667</td>
<td>2</td>
<td>7.5833</td>
<td>1.6702</td>
<td>0.2037</td>
</tr>
<tr>
<td>Within</td>
<td>149.8333</td>
<td>33</td>
<td>4.5404</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>165.0000</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A similar conclusion must be drawn from the data in Table XII as was drawn from the data in Table XI. The F-ratio of 1.67 is not significant at the .05 level. The significance level of .20 indicates that the difference in the follow-up means is probably due to chance. Moreover, the ranking of the means, which in this case does fit the predicted order of the original hypothesis, must be attributed to chance.

Therefore, it appears that Null Hypothesis II and Null Hypothesis V cannot be rejected in the case of either verbal or nonverbal affection scores. The data are sometimes directional and sometimes quite random in their ranked mean
score form. Enough ordering of these means does appear, however, that mention will be made of that rank ordering in the discussion section of this dissertation.

Hypothesis III and Hypothesis VI

The third hypothesis, stated in the null form, is:
Immediately following the teaching of sharing via micro-counseling, the experimental groups will not exhibit significantly higher mean frequencies of confrontation behavior than the control subjects, and the order of the ranked mean score will not be $G_2 > G_1 > G_3$. This condition will hold for verbal and nonverbal tests of the behavior. Hypothesis VI, stated in the null, is: At the follow-up session one month after the end of training, the experimental subjects will not exhibit significantly higher mean frequencies of confrontation behavior than the control subjects, and the ranked mean score order will not be $G_2 > G_1 > G_3$. This condition will hold for verbal and nonverbal tests of the behavior.

Mean scores with their respective rankings for the pre-test, post-test, and follow-up of confrontation, verbal behavior, are presented in Table XIII. The skill of confrontation is the most difficult one taught in this program, and few subjects learned it well. The mean scores were correspondingly small, and sometimes quite variable as the data in Table XIII, and subsequent tables, show.
### Table XIII

**Means and Standard Deviations for Verbal Confrontation Scores of Each Group on Pre-test, Post-test, and Follow-up Ratings with Post-test and Follow-up Rankings of Means**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Pre-Test</th>
<th>Post-Test</th>
<th>Follow-Up</th>
<th>Post-Test</th>
<th>Follow-Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>G₁</td>
<td>12</td>
<td>0.9166</td>
<td>1.0833</td>
<td>0.3333</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>G₂</td>
<td>12</td>
<td>0.2500</td>
<td>4.0000</td>
<td>4.3333</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>G₃</td>
<td>12</td>
<td>2.0833</td>
<td>2.2500</td>
<td>4.0833</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

**Standard Deviations**

<table>
<thead>
<tr>
<th>Group</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>G₁</td>
<td>1.7299</td>
</tr>
<tr>
<td>G₂</td>
<td>0.6216</td>
</tr>
<tr>
<td>G₃</td>
<td>3.2879</td>
</tr>
</tbody>
</table>

Table XIII shows that the pre-test mean of the G₃ control group was larger than the means of the other two groups. Across tests the control group scores were more heterogeneous than the two experimental groups, although the G₂ experimental (long term training) group became more heterogeneous than the other two groups by the follow-up.

The mean scores for G₂ are the largest in both the post-test and the follow-up, but the G₁ group has smaller means than even the G₃ control group.
Therefore, the order of the ranked means is not as originally predicted, and the order provision of both Null Hypothesis III and Null Hypothesis VI is not rejected.

Table XIV presents the analysis of variance of the post-test means for confrontation verbal scores.

TABLE XIV

ANALYSIS OF VARIANCE OF POST-TEST MEANS OF VERBAL CONFRONTATION SCORES

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>51.7222</td>
<td>2</td>
<td>25.8611</td>
<td>1.3817</td>
<td>0.2812</td>
</tr>
<tr>
<td>Within</td>
<td>647.1667</td>
<td>33</td>
<td>19.6111</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>698.8889</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The F-ratio of 1.3187 does not reach the .05 level of significance, so the Null Hypothesis III is not rejected. Differences in the mean scores of confrontation behavior between the control group and the experimental group, though favoring the G₂ experimental group, must be attributed to chance on the post-test score comparisons.

Table XV presents the data for confrontation verbal scores on the follow-up mean scores.
TABLE XV

ANALYSIS OF VARIANCE OF FOLLOW-UP TEST MEANS OF VERBAL CONFRONTATION SCORES

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>120.5000</td>
<td>2</td>
<td>60.2500</td>
<td>0.9395</td>
<td>0.4010</td>
</tr>
<tr>
<td>Within</td>
<td>2116.2500</td>
<td>33</td>
<td>64.1288</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2236.7500</td>
<td>35</td>
<td>64.1288</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The familiar pattern emerges with respect to the data on the post-test of confrontation behavior. The F-ratio is not significant at the .05 level, so Null Hypothesis VI is accepted.

Table XVI presents the mean nonverbal scores for confrontation behavior along with standard deviations for each mean and the rank order of that mean. In this table one may notice extremely small numbers that sometimes go to zeroes. This is to indicate that in the opinion of the raters the particular behavior in question, or more accurately, the group of microskills specified, did not occur at all. Most striking in this regard is the fact that the G₁ group did not apparently manifest any of the nonverbal confrontation skills at any time, even though they were specifically instructed in these skills during their training. Confrontation between married couples is a difficult, and perhaps uncomfortable skill.
Table XVI is distinguished by the fact that at the pre-test for both experimental groups, there were no occurrences of the specified nonverbal confrontation behavior. For the $G_1$ experimental group, this condition prevailed for all three testing situations. Thus the ranking of means for the post-test and follow-up both give the $G_2$ (long term training) group the largest mean, 1 and 1.3, respectively. The predicted order of means is thus not present in these data, although the $G_1$ experimental group does have a larger mean than the $G_3$ control group.
Table XVII presents the analysis of variance for the post-test of nonverbal confrontation behavior.

**TABLE XVII**

**ANALYSIS OF VARIANCE OF POST-TEST MEANS OF NONVERBAL CONFRONTATION SCORES**

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>8.0000</td>
<td>2</td>
<td>4.0000</td>
<td>1.4348</td>
<td>0.2526</td>
</tr>
<tr>
<td>Within</td>
<td>92.0000</td>
<td>33</td>
<td>2.7879</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100.0000</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As Table XVII shows, the F-ratio of 1.4348 did not attain the significance level of .05. The Null Hypothesis VI as it applies to nonverbal confrontation behavior is not rejected. This decision, coupled with the order of the ranked means, indicates that the order of G₁ as largest mean is not significantly different from the control mean, and therefore the differences seen in the means in the table can be said to be chance occurrence.

Table XVIII presents the data for the analysis of variance for the nonverbal confrontation follow-up scores.
Table XVIII

Analysis of Variance of Follow-Up Test Means of Nonverbal Confrontation Scores

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>12.0556</td>
<td>2</td>
<td>6.0278</td>
<td>3.9067</td>
<td>0.0300</td>
</tr>
<tr>
<td>Within</td>
<td>50.9167</td>
<td>33</td>
<td>1.5429</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>62.9722</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In this table the F-ratio of 3.9067 is significant at the .03 level. This means that there is a significant difference between the means of the follow-up scores for nonverbal confrontation. While the ranking of the means is not in the order indicated by the predictions, and it could hardly expect to be, given the nonoccurrence of confrontation in G₁ at any point, nevertheless the G₂ experimental group mean is larger than the control group means. Moreover, the Newman-Keuls range test indicates that the G₂ mean is significantly different from both the G₁ and the larger G₃ mean. Therefore, it is concluded that the differences are probably due to the treatment given the experimental group, G₂. The Null Hypothesis VI, as it applies to nonverbal confrontation, is rejected.
Hypotheses III and VI are largely unsupported by the data. Only one of four possible places for generating significantly different means actually did so. Therefore, Null Hypothesis III is accepted and Null Hypothesis VI is accepted with the one stipulation that the nonverbal post-test is different from the other results.

This result, like those for the behavior ratings on basic sharing and affection, has directional quality about it that will be discussed farther in the discussion section of this chapter.

Hypothesis VII and Hypothesis X

Null Hypothesis VII is: Immediately following the teaching of sharing via microcounseling, the experimental groups will not exhibit significantly higher mean primary communication scores than the control group, and the ranked mean score order will not be $G_2 > G_1 > G_3$. Null Hypothesis X is: At the follow-up session one month after the end of training, the experimental groups will not exhibit significantly higher mean primary communication scores than the control group, and the ranked mean score order will not be $G_2 > G_1 > G_3$. Although the original hypotheses did not specify it, the Primary Communication Inventory offers a score pattern similar to the behavior ratings mentioned above.
so that this pencil and paper inventory was scored for a two-part test of verbal and nonverbal score means like the behavior ratings. These data are included in the following analysis.

Table XIX presents the means and standard deviations from the Primary Communication Inventory verbal scores. The ranks of the means are also listed.

**TABLE XIX**

MEANS AND STANDARD DEVIATIONS OF THE VERBAL PRIMARY COMMUNICATION SCORES OF EACH GROUP ON PRE-TEST, POST-TEST, AND FOLLOW-UP WITH POST-TEST AND FOLLOW-UP RANKINGS OF MEANS

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Pre-Test</th>
<th>Post-Test</th>
<th>Follow-Up</th>
<th>Pre-Test</th>
<th>Post-Test</th>
<th>Follow-Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>G₁</td>
<td>12</td>
<td>65.3333</td>
<td>65.5000</td>
<td>69.7500</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>G₂</td>
<td>12</td>
<td>71.0833</td>
<td>72.5000</td>
<td>70.5833</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>G₃</td>
<td>12</td>
<td>68.1667</td>
<td>68.8333</td>
<td>70.3333</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

**Standard Deviations**

<table>
<thead>
<tr>
<th>Group</th>
<th>Pre-Test</th>
<th>Post-Test</th>
<th>Follow-Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>G₁</td>
<td>8.8043</td>
<td>6.1570</td>
<td>5.0114</td>
</tr>
<tr>
<td>G₂</td>
<td>6.8816</td>
<td>7.9258</td>
<td>7.9368</td>
</tr>
<tr>
<td>G₃</td>
<td>12.6263</td>
<td>12.4596</td>
<td>11.1709</td>
</tr>
</tbody>
</table>
Table XIX indicates that the means of primary communication scores groups are substantially the same. It should be noted that the variability of the G_3 group is much higher than the other groups all across tests. The ranking of the means indicates that the G_2 experimental group had the largest mean at the post-test and at the follow-up test. However, this group had a larger mean at the pre-test as well. Moreover, the control group had the next largest means all across the tests. Hence the order provision of Null Hypothesis VII with respect to the verbal primary communication score is not rejected.

Table XX gives the analysis of variance for the post-test primary communication scores for each of the three groups.

**TABLE XX**

**ANALYSIS OF VARIANCE OF POST-TEST MEANS OF VERBAL PRIMARY COMMUNICATION SCORES**

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>160.8889</td>
<td>2</td>
<td>80.4444</td>
<td>0.9428</td>
<td>0.3998</td>
</tr>
<tr>
<td>Within</td>
<td>2815.6667</td>
<td>33</td>
<td>85.3232</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2976.5556</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table XX shows that the F-ratio of 0.9428 is significant at the .40 level, far above the acceptable .05 level of significance. This indicates that the differences in the means of the post-test verbal primary communication scores are most likely due to chance. The Null Hypothesis VII, with respect to the verbal primary communication scores, is not rejected. Moreover, the ordering of the means as indicated by the rankings in Table XIX is also probably due to chance.

Table XXI gives the analysis of variance for the follow-up mean scores for verbal primary communication scores.

TABLE XXI

ANALYSIS OF VARIANCE OF FOLLOW-UP TEST MEANS OF VERBAL PRIMARY COMMUNICATION SCORES

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>4.3889</td>
<td>2</td>
<td>2.1944</td>
<td>0.0309</td>
<td>0.9696</td>
</tr>
<tr>
<td>Within</td>
<td>2341.8333</td>
<td>33</td>
<td>70.9646</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2346.2222</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table XXI again presents a high probability that the differences in the follow-up means are due to chance. The significance level of .97 is so high that the Null Hypothesis X, as it applies to the verbal primary communication scores,
cannot be rejected. The ranked order of the means, which identifies the $G_2$ mean as the largest, is also to be considered a chance variable.

The nonverbal mean scores from the Primary Communication Inventory are presented in Table XXII with their respective standard deviations and ranks.

**TABLE XXII**

MEANS AND STANDARD DEVIATIONS OF THE NONVERBAL PRIMARY COMMUNICATION SCORES OF EACH GROUP ON PRE-TEST, POST-TEST, AND FOLLOW-UP WITH POST-TEST AND FOLLOW-UP RANKINGS OF THE MEANS

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Means</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Pre-Test</td>
<td>Post-Test</td>
</tr>
<tr>
<td>G_1</td>
<td>12</td>
<td>28.0000</td>
<td>28.3333</td>
</tr>
<tr>
<td>G_2</td>
<td>12</td>
<td>26.0833</td>
<td>26.7500</td>
</tr>
<tr>
<td>G_3</td>
<td>12</td>
<td>28.0000</td>
<td>27.5000</td>
</tr>
</tbody>
</table>

Standard Deviations

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Pre-Test</th>
<th>Post-Test</th>
<th>Follow-Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>G_1</td>
<td></td>
<td>3.3575</td>
<td>1.1152</td>
<td>2.6400</td>
</tr>
<tr>
<td>G_2</td>
<td></td>
<td>4.1661</td>
<td>3.0188</td>
<td>3.2474</td>
</tr>
<tr>
<td>G_3</td>
<td></td>
<td>4.8430</td>
<td>3.9197</td>
<td>3.6712</td>
</tr>
</tbody>
</table>
Table XXII indicates that the nonverbal primary communication scores of the G₂ group are the smallest all across the tests. While the variability is about the same for each group, the G₁ experimental group does have slightly larger mean scores, but these differences are very slight. The ranked order of the means is such that the G₁ experimental group has the largest mean at both the post-test and the follow-up. Thus the rank order provisions of Null Hypothesis VII and Null Hypothesis X are not rejected. It seems likely that the variations in the mean scores for the three groups are largely due to chance.

Table XXIII gives the analysis of variance for the nonverbal post-test primary communication scores.

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>15.0556</td>
<td>2</td>
<td>7.5278</td>
<td>0.8174</td>
<td>0.4503</td>
</tr>
<tr>
<td>Within</td>
<td>303.9167</td>
<td>33</td>
<td>9.2096</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>318.9722</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The $F$-ratio reflected in Table XXIII did not attain significance at the .05 level. Therefore, the Null Hypothesis VII with respect to nonverbal primary communication must not be rejected. The order of the means as they are ranked in Table XXII must be considered a chance ranking.

Null Hypothesis X predicts no significant differences between the primary communication scores on the follow-up means. Table XXIV presents the analysis of variance for the nonverbal follow-up test of primary communication scores.

TABLE XXIV

ANALYSIS OF VARIANCE OF FOLLOW-UP TEST MEANS OF NONVERBAL PRIMARY COMMUNICATION SCORES

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>16.7222</td>
<td>2</td>
<td>8.3611</td>
<td>0.8093</td>
<td>0.4538</td>
</tr>
<tr>
<td>Within</td>
<td>340.9167</td>
<td>33</td>
<td>10.3308</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>357.6389</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table XXIV gives parallel results to those shown in Table XXIII. The $F$-ratio is such that the level of significance is far above the specified .05 level. The Null Hypothesis X, with respect to nonverbal scores, must be accepted. The ranking of the means giving $G_1$ the largest mean is therefore not considered to be significant. Instead, the rank must be attributed to chance.
Null Hypothesis VII and Null Hypothesis X are both not rejected. It is concluded that there are no significant differences between the means of the scores generated by the three groups as they took the Primary Communication Inventory. It should be noted, however, that, as with the behavior ratings, nonsignificant differences in means at every point are in the direction of the experimental groups. This matter will be noted in the discussion section of this chapter.

Hypothesis VIII and Hypothesis XI

The eighth hypothesis, stated in the null, is: Immediately following the teaching of sharing the experimental groups will not exhibit a significantly higher mean marital adjustment score than the control group, and the ranked mean score order will not be $G_2 > G_1 > G_3$. The parallel eleventh hypothesis, stated in the null, is: At the follow-up session one month after the end of the training, the experimental groups will not exhibit significantly higher mean marital adjustment scores than the control group, and the ranked mean score order will not be $G_2 > G_1 > G_3$.

The pre-test, post-test, and follow-up mean scores for each group by treatment are given in Table XXV. Since the Marital Adjustment Test yielded only one total marital adjustment score, only one set of tables will be necessary to test Hypotheses VIII and XI.
TABLE XXV

MEANS AND STANDARD DEVIATIONS OF THE MARITAL ADJUSTMENT
SCORES OF EACH GROUP ON PRE-TEST, POST-TEST, AND
FOLLOW-UP WITH RANKING OF THE MEANS

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Pre-Test</th>
<th>Post-Test</th>
<th>Follow-Up</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>GI</td>
<td>12</td>
<td>95.1667</td>
<td>102.4167</td>
<td>104.1667</td>
<td>3</td>
</tr>
<tr>
<td>G2</td>
<td>12</td>
<td>113.8333</td>
<td>114.6667</td>
<td>114.6667</td>
<td>2</td>
</tr>
<tr>
<td>G3</td>
<td>12</td>
<td>112.5833</td>
<td>116.0000</td>
<td>114.5000</td>
<td>1</td>
</tr>
</tbody>
</table>

Standard Deviations

<table>
<thead>
<tr>
<th>Group</th>
<th>Pre-Test</th>
<th>Post-Test</th>
<th>Follow-Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>GI</td>
<td>26.4638</td>
<td>20.1154</td>
<td>17.2934</td>
</tr>
<tr>
<td>G2</td>
<td>20.1893</td>
<td>19.4344</td>
<td>24.1899</td>
</tr>
<tr>
<td>G3</td>
<td>30.2879</td>
<td>23.2809</td>
<td>23.8880</td>
</tr>
</tbody>
</table>

Table XXV reflects the fact that there are remarkably small differences in the mean marital adjustment scores at any point in the design. The G1 experimental group had consistently smaller means all across the design with the resultant last class in the mean rankings. On the other hand, this same group became more homogeneous as it moved through the tests. However, the G3 control group had a similar movement. The ranked order of the means at the post-test is such that Null Hypothesis VIII cannot be
rejected as it applies to order of the ranked means. At the follow-up test the rank is again not as predicted by the original Hypothesis XI, although the $G_2$ experimental group is slightly larger than the control. Again the Null Hypothesis XI cannot be rejected, and the variations in the mean scores cannot be attributed to treatment; it must be considered as chance variation.

Table XXVI, which can be seen on the following page, presents the analysis of variance for repeated measures comparing both the post-test and the follow-up mean scores to the pre-test scores and to each other.

This table indicates that there are no significant differences between the means of the groups at any point. The $F$-ratio of 2.567 and the significance of .08 indicates that some of the scores may be close to being significantly different from each other but they are not. This means that there are no differences between the means of the groups at the pre-test, post-test, or follow-up. The significance level of .22478 for the between groups comparisons indicates that there is no significant difference between the post-test of follow-up means. Hence Null Hypothesis VIII and Null Hypothesis XI must be accepted. This, coupled with the mixing of the ranked order of the means as seen in Table XXV, indicates that any differences of means must be attributed to chance.
## TABLE XXVI

**ANALYSIS OF VARIANCE FOR REPEATED MEASURES OF THE MARITAL ADJUSTMENT SCORES ON PRE-TEST, POST-TEST, AND FOLLOW-UP FOR G₁, G₂, AND G₃**

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>df</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Subject B (Groups)</td>
<td>35</td>
<td>52780.0000</td>
<td>2282.5278</td>
<td>1.5622</td>
<td>0.2247</td>
</tr>
<tr>
<td>Error B</td>
<td>33</td>
<td>48214.9444</td>
<td>1461.0589</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within Subjects A (Treatments)</td>
<td>72</td>
<td>5256.6667</td>
<td>180.2500</td>
<td>2.5671</td>
<td>0.0844</td>
</tr>
<tr>
<td>AB (Interaction)</td>
<td>4</td>
<td>261.9444</td>
<td>65.4861</td>
<td>0.9326</td>
<td>0.4506</td>
</tr>
<tr>
<td>Error W</td>
<td>66</td>
<td>4634.2222</td>
<td>70.2155</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>107</td>
<td>58036.6667</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Hypothesis IX and Hypothesis XII

Null Hypothesis IX is: Immediately following the teaching of sharing, the experimental groups will not exhibit a significantly greater change in their mean profile of meaning scores than the control group. The final hypothesis, Null Hypothesis XII, is: At the follow-up session, the experimental groups will not exhibit significantly greater changes in their mean profile of meaning scores than the control group.

When originally conceived, the use of the **Semantic Differential Test** was for the purpose of showing dramatic changes in mean scores, a dramatic difference between the post-test and follow-up means of the experimental group versus the control group. The data show that the change did not materialize as dramatically as had been expected.

Figures were used to present the data from the semantic differential because there were 432 mean scores generated by the individual items on the pre-test, post-test, and follow-up administrations of the test. Originally the computation was to have been done by hand, but computing 5184 raw scores into 432 was overwhelming. The computing center was asked to compute these scores which were also farther tested with the Newman-Keuls Range Test so that each group mean could be compared with its parallel in the other group and identified as significant or not.
The resulting data are presented in the form of four figures (presented on the following four pages) that follow the format of the original test. The semantic differential scales have, however, been arranged so that all are directional from right to left for social desirability, and they have been grouped into their three generic meaning groups, evaluation, potency and activity.

Figures 6, 7, and 8 present the mean profiles for twelve items each. Each experimental group (G₁, G₂, and G₃) is identified by its respective number. The two or three relative score sizes are roughly indicated by the relative location of the numbers on the continuum lines. When there is significant change in the means, an asterisk is placed to the left of the particular scale, and pre-test means are also presented in Roman numerals. Arabic numbers above the line indicate the relative position of post-test mean scores. Arabic numbers below the line indicate the relative position of follow-up test mean scores.

The overwhelming conclusion to be drawn from the four figures is that no significant change has occurred in the mean profiles. Looking at the profiles, it is immediately apparent that all six profiles in each concept are relatively uniform and, in fact, all four concepts seem to be remarkably alike. It appears that there is not a great deal of change in the profile scores no matter what treatment the group received.
<table>
<thead>
<tr>
<th>OUR MARITAL COMMUNICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluation</td>
</tr>
<tr>
<td><strong>Good</strong></td>
</tr>
<tr>
<td><em>2 1 3 II I 3</em>*</td>
</tr>
<tr>
<td><em>Bad</em></td>
</tr>
<tr>
<td><strong>Pleasant</strong></td>
</tr>
<tr>
<td>3 1 2 II I 3**</td>
</tr>
<tr>
<td><em>Unpleasant</em></td>
</tr>
<tr>
<td><strong>Clean</strong></td>
</tr>
<tr>
<td>3 2 1 II I 3**</td>
</tr>
<tr>
<td><em>Dirty</em></td>
</tr>
<tr>
<td><strong>Fair</strong></td>
</tr>
<tr>
<td>3 2 1 II I 3**</td>
</tr>
<tr>
<td><em>Unfair</em></td>
</tr>
<tr>
<td><strong>Potency</strong></td>
</tr>
<tr>
<td><strong>Strong</strong></td>
</tr>
<tr>
<td>3 2 1 II I 3**</td>
</tr>
<tr>
<td><em>Weak</em></td>
</tr>
<tr>
<td><strong>Hard</strong></td>
</tr>
<tr>
<td>3 2 1 II I 3**</td>
</tr>
<tr>
<td><em>Soft</em></td>
</tr>
<tr>
<td><strong>Deep</strong></td>
</tr>
<tr>
<td>3 2 1 II I 3**</td>
</tr>
<tr>
<td><em>Shallow</em></td>
</tr>
<tr>
<td><strong>Wide</strong></td>
</tr>
<tr>
<td>3 2 1 II I 3**</td>
</tr>
<tr>
<td><em>Narrow</em></td>
</tr>
<tr>
<td><strong>Activity</strong></td>
</tr>
<tr>
<td><strong>Fast</strong></td>
</tr>
<tr>
<td>3 2 1 II I 3**</td>
</tr>
<tr>
<td><em>Slow</em></td>
</tr>
<tr>
<td><strong>Active</strong></td>
</tr>
<tr>
<td>3 2 1 II I 3**</td>
</tr>
<tr>
<td><em>Passive</em></td>
</tr>
<tr>
<td><strong>Sharp</strong></td>
</tr>
<tr>
<td>3 2 1 II I 3**</td>
</tr>
<tr>
<td><em>Dull</em></td>
</tr>
<tr>
<td><strong>Hot</strong></td>
</tr>
<tr>
<td>3 2 1 II I 3**</td>
</tr>
<tr>
<td><em>Cold</em></td>
</tr>
</tbody>
</table>

Figure 5 - Mean profiles for $G_1$, $G_2$, and $G_3$ at post-test, and follow-up on each item in the concept "Our Marital Communication". Arabic numerals above line indicate post-test means. Arabic numerals below line indicate follow-up means. Roman numerals, when given, indicate pre-test means of significant items only. Asterisk (*) at left of item indicates significant differences deleniated further by Roman numerals on the item.
### OUR MARITAL UNDERSTANDING

**Evaluation**

<table>
<thead>
<tr>
<th>Item</th>
<th>Pre-test Mean</th>
<th>Post-test Mean</th>
<th>Follow-up Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>31/22</td>
<td>31/22</td>
<td></td>
</tr>
<tr>
<td>*Pleasant</td>
<td>13/32</td>
<td>13/32</td>
<td></td>
</tr>
<tr>
<td>Clean</td>
<td>21/32</td>
<td>21/32</td>
<td></td>
</tr>
<tr>
<td>*Fair</td>
<td>21/32</td>
<td>21/32</td>
<td></td>
</tr>
<tr>
<td>Strong</td>
<td>21/32</td>
<td>21/32</td>
<td></td>
</tr>
<tr>
<td>Hard</td>
<td>12/32</td>
<td>12/32</td>
<td></td>
</tr>
<tr>
<td>*Deep</td>
<td>12/32</td>
<td>12/32</td>
<td></td>
</tr>
<tr>
<td>Wide</td>
<td>32/1</td>
<td>32/1</td>
<td></td>
</tr>
<tr>
<td>*Fast</td>
<td>32/1</td>
<td>32/1</td>
<td></td>
</tr>
<tr>
<td>*Active</td>
<td>32/1</td>
<td>32/1</td>
<td></td>
</tr>
<tr>
<td>Sharp</td>
<td>31/2</td>
<td>31/2</td>
<td></td>
</tr>
<tr>
<td>Hot</td>
<td>31/2</td>
<td>31/2</td>
<td></td>
</tr>
</tbody>
</table>

Figure 6 - Mean profiles for G1, G2, and G3 at post-test, and follow-up on each item in the concept "Our Marital Understanding". Arabic numerals above line indicate post-test means. Arabic numerals below line indicate follow-up means. Roman numerals, when given, indicate pre-test means of significant items only. Asterisk (*) at left of item indicates significant differences delimited further by Roman numerals on the item.
Figure 7 - Mean profiles for G1, G2, and G3 at post-test, and follow-up on each item in the concept "My Relationship to my spouse". Arabic numerals above line indicate post-test means. Arabic numerals below line indicate follow-up means. Roman numerals, when given, indicate pre-test means of significant items only. Asterisk (*) at left of item indicates significant differences delineated further by Roman numerals on the item.
### MY SPOUSE'S RELATIONSHIP TO ME

#### Evaluation

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Post-test Mean</th>
<th>Follow-up Mean</th>
<th>Pre-test Mean</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>321</td>
<td>321</td>
<td>231</td>
<td>Fair</td>
</tr>
<tr>
<td>Pleasant</td>
<td>321</td>
<td>321</td>
<td>231</td>
<td>Unfair</td>
</tr>
<tr>
<td>Clean</td>
<td>321</td>
<td>321</td>
<td>2</td>
<td>Dirty</td>
</tr>
<tr>
<td>Active</td>
<td>321</td>
<td>321</td>
<td>2</td>
<td>Unfair</td>
</tr>
<tr>
<td>Strong</td>
<td>321</td>
<td>321</td>
<td>21</td>
<td>Weak</td>
</tr>
<tr>
<td>Hard</td>
<td>321</td>
<td>321</td>
<td>132</td>
<td>Soft</td>
</tr>
<tr>
<td>Deep</td>
<td>321</td>
<td>321</td>
<td>132</td>
<td>Shallow</td>
</tr>
<tr>
<td>Wide</td>
<td>321</td>
<td>321</td>
<td>132</td>
<td>Narrow</td>
</tr>
<tr>
<td>Fast</td>
<td>321</td>
<td>321</td>
<td>132</td>
<td>Slow</td>
</tr>
<tr>
<td>Active</td>
<td>321</td>
<td>321</td>
<td>132</td>
<td>Passive</td>
</tr>
<tr>
<td>Sharp</td>
<td>321</td>
<td>321</td>
<td>132</td>
<td>Dull</td>
</tr>
<tr>
<td>Hot</td>
<td>321</td>
<td>321</td>
<td>1</td>
<td>Cold</td>
</tr>
</tbody>
</table>

Figure 8 - Mean profiles for G₁, G₂, and G₃ at post-test, and follow-up on each item in the concept "My Spouse's Relationship to me". Arabic numerals above line indicate post-test means. Arabic numerals below line indicate follow-up means. Roman numerals, when given, indicate pre-test means of significant items only. Asterisk (*) at left of item indicates significant differences delineated further by Roman numerals on the item.
Closer examination of the figures, however, shows that there are eleven items in the four concepts which did have significant change somewhere in the profiles. In the concept "Our Marital Communication" the item, Good-Bad, shows change that is significant at the .002 level. The Newman-Kuels Test indicates that both the $G_2$ mean and the $G_1$ changed significantly during the experimental period. The difference is so large that it is likely that this change can be seen as a result of the treatment on the two experimental groups. The change is such that both post-tests and follow-up tests are to be considered significantly different from the pre-tests. This means that one item lends support to the original hypothesis.

In this same Figure 5, the Clean-Dirty item has a difference in means that is significant at the .01 level. In this case again post-test and follow-up means of both $G$ and $G_2$ are significantly different from their pre-test means while $G_3$ is not. The Null Hypotheses IX and XIII in this small instance are rejected. The differences in these means is probably due to treatment.

Again in Figure 5, the Fair-Unfair item has a difference in means that is significant at the .01 level. Again both post-test means and both follow-up test means are significantly different from their pre-test means while $G_3$ is not. As above, the Null Hypothesis is rejected and the differences in means is probably due to treatment for both experimental groups.
All three significant difference items are in the evaluation section of "Our Marital Communication". By contrast, the potency and activity sections in Figure 5 are without significant changes.

Turning to Figure 6, one will note that there are five items that show significant changes in the means. The Pleasant-Unpleasant item is the first; it is significant at the .045 level. In this case, only the post-test mean scores are significantly different from the others, but this effect is true for both $G_1$ and $G_2$. This means that significantly more change occurred for the experimental means between pre-test and post-test, but not at the follow-up. Hence, in this case Null Hypothesis IX can be rejected but Null Hypothesis XII cannot be rejected.

The Fair-Unfair item exhibits some change which is significant at the .001 level. Again both $G_1$ and $G_2$ means at both the post-test and the follow-up test are significantly different. They both change more than the $G_3$ control group means. Null Hypothesis IX and Null Hypothesis XII are again rejected.

Still in Figure 6, the Deep-Shallow item shows significant change. In this case, only the post-test means are significantly different from the others, but it is true that both $G_1$ and $G_2$ means show greater change than the $G_3$ means. In this case, Hypothesis IX is rejected, but Hypothesis XII referring to the follow-up is not rejected.
The Past-Slow item in Figure 6 also exhibits significant differences in the means at the .025 level. Post-test and follow-up means of both G₁ and G₂ are significantly different from their respective pre-tests while the G₃ means are not so different. Null Hypothesis IX and Null Hypothesis XII are both rejected for this item.

Also in Figure 6, the Active-Passive item is significant at the .003 level. The same pattern emerges; namely, both the post-test and the follow-up means of G₁ and G₂ are significantly different from their respective pre-tests, while G₃ means are not so different. Null Hypothesis IX and Null Hypothesis XII are both rejected for the Active-Passive item.

In the concept "Our Marital Understanding", significant changes occur in all three of the generic meaning subdivisions, evaluation, potency, and activity. "Our Marital Understanding" seems most affected by the treatment.

Figure 7 gives the means and their changes within the concept "My Relationship to My Spouse". Only one item in this concept changed significantly; that being the Pleasant-Unpleasant item which is significant at the .0501 level. The significant difference here is between the pre-test and post-test of G₁ only. The G₂ and G₃ means exhibit change, but it is just short of significance. Thus, in spite of the
significance on this one mean in one group, it appears that there is not enough change to warrant rejection of Null Hypothesis IX or Null Hypothesis XII in this case.

Figure 8, "My Spouse's Relationship to Me", shows only two sets of means with significant change. The Fair-Unfair item shows change that is significant at the .003 level. Here both the post-test and follow-up means of $G_1$ and $G_2$ are significantly different from their pretest means, and the group means are different from each other. Thus in this instance, the Null Hypothesis IX and Null Hypothesis XII can be rejected and the changes in the means may be attributed to the treatment.

Also in Figure 8, the Active-Passive item exhibits significant differences in the means. Both $G_1$ and $G_2$ means at both post-test and at follow-up are significantly different than the $G_3$ means. Therefore, the Null Hypothesis IX and the Null Hypothesis XII are rejected, and the assumption may be made that changes in the means are probably due to the treatment.

In Figure 8 one change occurred in the evaluation section and one change occurred in the activity section, while none occurred in the potency section.

Additional Data

The tests of the data presented so far are directly relevant to the hypotheses of this paper and represent the most stringent tests of the results. They involve, for the
behavioral data, the use of post-test and follow-up test means in comparison; that is, they are the result of multi-factor analysis of variance for repeated measures with one way analysis of variance of the resulting group means followed by range tests. The comparison of these post-test and follow-up test means does not permit the important comparison of means across tests (pre-test, post-test, and follow-up). Therefore, it was decided to submit some portions of the data which do make such comparisons at the pre-test, post-test, and follow-up. Like the data from the semantic differential, these data exhibit significant results at several points and deserve attention.

Table XXVII, on the following page, gives the three by three by three analysis of variance for verbal data on all three skills taught in $G_1$, $G_2$, and $G_3$ at all three tests, pre-test, post-test and follow-up.

This table indicates that there is no significant difference between groups (.99912). It indicates that there are significant differences between treatments ($p = .0000$) which was expected because the treatments were designed to be different and this issue was not in question. In this case the differences between tests are not significant ($p = .22268$) nor is the interaction of groups, treatments and tests.
### TABLE XXVII

MULTIFACTOR ANALYSIS OF VARIANCE FOR REPEATED MEASURES OF VERBAL PRE-TEST, POST-TEST, AND FOLLOW-UP FOR SHARING, AFFECTION, AND CONFRONTATION FOR G₁, G₂, AND G₃

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Subjects</td>
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<td></td>
<td></td>
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<tr>
<td>Rows (Groups)</td>
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<td>107</td>
<td>0.0772</td>
<td>0.0009</td>
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</tr>
<tr>
<td>Columns (Treatments)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rows-Columns</td>
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<td>11511.8642</td>
<td>131.7458</td>
<td>0.0000</td>
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<tr>
<td>Error B</td>
<td>8650.556</td>
<td>99</td>
<td>87.3793</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within Subjects</td>
<td>9958.000</td>
<td>216</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blocks (Tests)</td>
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<td>2</td>
<td>69.7901</td>
<td>1.5133</td>
<td>0.2227</td>
</tr>
<tr>
<td>Rows-Blocks</td>
<td>235.216</td>
<td>4</td>
<td>58.8040</td>
<td>1.2751</td>
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<td>Columns-Blocks</td>
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<td>0.4450</td>
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</tr>
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<td>Rows-Columns-Blocks</td>
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<td>46.2299</td>
<td>1.0024</td>
<td>0.4355</td>
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<tr>
<td>Error W</td>
<td>9131.278</td>
<td>198</td>
<td>46.1176</td>
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</tr>
</tbody>
</table>
Table XXVIII, found on the following page, gives analysis of variance data for the nonverbal component of the behavior ratings. It is like the data for the verbal test above in Table XXVII.

This table again indicates no differences of significance among groups ($p = .57259$). As with the table above, the treatments are very different as expected ($p = .0000$). Most important, however, is the fact that the tests (pre-test, post-test, and follow-up) are significantly different ($p = .01075$). There is also a significant difference in interaction for groups and tests ($p = .04$) and for treatments and tests ($p = .02$). Examination of the means of the nonverbal pre-test, post-test and follow-up scores indicates that the movement of the means is directional which means that change probably did occur due to treatment. On the basis of these results, a further analysis of data was done which indicated that the nonverbal post-test and follow-up scores are significantly different from the pre-test scores. This was true uniformly for affection and only sometimes for sharing and confrontation. This report makes reference to a three by three analysis of variance that was done for each of the twenty-seven items; that is, $G_1$, $G_2$, and $G_3$ for sharing, affection and confrontation in the verbal, nonverbal and total methods of handling the scores. These data will not be presented here. It is important only to point out that the comparisons across tests as seen in the table are significant.
### TABLE XXVIII

**MULTIFACTOR ANALYSIS OF VARIANCE FOR REPEATED MEASURES OF NONVERBAL PRE-TEST, POST-TEST, AND FOLLOW-UP FOR SHARING, AFFECTION, AND CONFRONTATION FOR G₁, G₂, AND G₃**

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>P</th>
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</thead>
<tbody>
<tr>
<td><strong>Between Subjects</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rows (Groups)</td>
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<td>107</td>
<td>79.0401</td>
<td>0.5604</td>
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<td>79.0401</td>
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<td>0.0000</td>
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<tr>
<td>Error B</td>
<td>503.586</td>
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<td>125.8966</td>
<td>0.8926</td>
<td>0.4714</td>
</tr>
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<td>99</td>
<td>141.0449</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Within Subjects</strong></td>
<td>4719.333</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blocks (Tests)</td>
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</tr>
<tr>
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<td>4</td>
<td>50.5448</td>
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<td>0.0422</td>
</tr>
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<td>0.0280</td>
</tr>
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<td>143.099</td>
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<td>17.8873</td>
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</tr>
<tr>
<td>Error W</td>
<td>3965.556</td>
<td>198</td>
<td>20.0281</td>
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</table>
Table XXIX, found on the following page, presents analysis of variance data for total scores on behavior ratings. These statistics have not been presented before, but the table has the same format as the two tables above, only the figures used in computation are the totals of both verbal and nonverbal components from the behavior ratings.

This table is similar to Table XXVIII in most respects. Again there is a difference between the means of the tests that is significant at the .001 level. As before, examination of the means indicates that the difference is directional in favor of treatment effects. Moreover, the groups-tests interaction is very close to significance at the .06 level. The same remarks apply to these data as to those in the nonverbal table above. The major point is that the total behavior rating scores are significantly different across pre-test, post-test and follow-up.

Table XXX, found on the page following Table XXIX, presents analysis of variance data for the Primary Communication Inventory. In this case the columns item in the table represents the verbal/nonverbal and total subscores on the inventory.

Table XXX offers similar results to those found in the two tables above, XXIX and XXVIII. This time there is a difference between pre-test, post-test and follow-up means that is significant at the .01 level. This means that there is a change in the means somewhere across treatments.
TABLE XXIX
MULTIFACTOR ANALYSIS OF VARIANCE FOR REPEATED MEASURES OF TOTAL
BEHAVIOR RATINGS ON PRE-TEST, POST-TEST, AND FOLLOW-UP FOR
SHARING, AFFECTION, AND CONFRONTATION FOR $G_1$, $G_2$, AND $G_3$

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
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<tr>
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<td>Rows (Groups)</td>
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<td>19.9105</td>
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<td>0.8107</td>
</tr>
<tr>
<td>Columns (Treatments)</td>
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<td>19.9105</td>
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</tr>
<tr>
<td>Rows-Columns</td>
<td>128.154</td>
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<td>0.6768</td>
<td>0.5106</td>
</tr>
<tr>
<td>Error B</td>
<td>627.160</td>
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<td>156.7901</td>
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</tr>
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<tr>
<td>Within Subjects</td>
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<td></td>
</tr>
<tr>
<td>Blocks (Tests)</td>
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<td>216</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Rows-Blocks</td>
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<td>161.2068</td>
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<td>0.1101</td>
</tr>
<tr>
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</tr>
<tr>
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<td>25.1975</td>
<td>1.1112</td>
<td>0.3521</td>
</tr>
<tr>
<td>Error W</td>
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<td>28.2716</td>
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</tr>
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<td>4487.278</td>
<td>198</td>
<td>22.6630</td>
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</tr>
</tbody>
</table>
### TABLE XXX

MULTIFACTOR ANALYSIS OF VARIANCE FOR REPEATED MEASURES OF TOTAL BEHAVIOR RATINGS ON PRE-TEST, POST-TEST, AND FOLLOW-UP FOR SHARING, AFFECTION, AND CONFRONTATION FOR $G_1$, $G_2$, AND $G_3$

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>$F$</th>
<th>$P$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between Subjects</strong></td>
<td></td>
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<tr>
<td>Rows (Groups)</td>
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<tr>
<td>Columns (Subscores)</td>
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<td>0.7598</td>
</tr>
<tr>
<td>Rows-Columns</td>
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<td>2</td>
<td>131547.8642</td>
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<td>0.0000</td>
</tr>
<tr>
<td>Error B</td>
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<td>99</td>
<td>207.2146</td>
<td>0.3634</td>
<td>0.8342</td>
</tr>
<tr>
<td><strong>Within Subjects</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Blocks (Tests)</td>
<td>3554.667</td>
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<td></td>
<td></td>
<td></td>
</tr>
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<td>Rows-Blocks</td>
<td>146.117</td>
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<td>73.0586</td>
<td>4.5513</td>
<td>0.0117</td>
</tr>
<tr>
<td>Columns-Blocks</td>
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<td>4</td>
<td>31.3827</td>
<td>1.9550</td>
<td>0.1029</td>
</tr>
<tr>
<td>Rows-Columns-Blocks</td>
<td>41.772</td>
<td>4</td>
<td>10.4429</td>
<td>0.6506</td>
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</tr>
<tr>
<td>Error W</td>
<td>62.914</td>
<td>8</td>
<td>7.8642</td>
<td>0.4899</td>
<td>0.8626</td>
</tr>
<tr>
<td></td>
<td>3178.333</td>
<td>198</td>
<td>16.0522</td>
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<td></td>
</tr>
</tbody>
</table>
Examination of these means indicates that the change is in the desired direction and that the primary communication scores increased across treatments. Further analysis of the specific mean scores for each group indicates that some of the treatments are probably responsible for the changes in the test means.

Discussion

Rejection of Hypothesis I, II, III, IV, V, and VI indicates that the use of a microcounseling training model apparently has little significantly identifiable effect on the verbal or nonverbal behavior of the couples who were the subjects of this research. It should be clear that this is not to say that there was no effect at all from treatment; only that the effect is such that it cannot be clearly discriminated by behavioral ratings of the videotapes by independent raters. This result is apparently contrary to the results of Ivey (5) at many points. The use of behavior rating scales has been one of the methods that Ivey pointed to with excitement and pride.

Perhaps one of the reasons for the different results in this research is the fact that almost all the studies published by Ivey (5), Miller, Morrill, and Uhlemann (6), and Sadker (9) have dealt with individuals, whereas the present project undertook to change marital communication which is vastly more complex than single counselor
communication. Marital communication is reciprocal with each party having an incremental influence on the other. Such a conclusion would likely be very reasonable to Satir (10) and Bateson, Jackson, Haley, and Weakland (2).

The fact that the hypotheses were rejected should not, however, cover the data that show that in the vast majority of instances (eight out of twelve to be exact) the two experimental mean scores on post-test or follow-up were ranked higher than the control means. This fact can be seen by examining Tables I, VII, X, and XIII. In the remaining four instances, only once did the mean scores for the control group outrank both the experimental groups. So many of these scores ranking as they do suggests that the treatment had some small effect, although it is not clearly perceptible and did not reach statistical significance. When this fact is seen in the light of the across-tests scores (Tables XXVII, XXVIII, and XXIX), it is clear that speculation about the effects of microcounseling must be continued. The complexity and hardness of the marital system makes communication training a very difficult matter. Hickman and Baldwin (4) report similar difficulties while using a programmed manual and various other techniques. However, because it is so difficult to change the communication skill of married couples in their marital relationship, the results of this study, though minimal, should be encouraging.
Frequently in the ranking of means, the rank order changed from post-test to follow-up, Table I, Table VII, and Table X, for example. Specifically, the $G_2$ group had the highest mean score at the post-test, but by the follow-up test, the $G_1$ group had risen to the top. This pattern can be explained if one notes that the $G_1$ group received three hours training in one evening while the $G_2$ group received nine hours training on three nights, each a week apart. The post-test was administered immediately following training. The short term training group ($G_1$), it could be speculated, might be somewhat more anxious and overwhelmed by the large volume of skills and feedback that they received. In this case they would do poorly at the post-test. Then, after a four week time lapse with personal discussion of the training that they received, the short term training group scored higher. They assimilated some of the feedback reasonably effectively; perhaps even better than the long term $G_2$ training group. It appears that the passage of time gives a marital relationship a chance to assimilate and incorporate important matters. Such a fact is contrary to the experience of Guttman and Haase (3) who indicate that training can be extremely rapid. Ivey (5) in his book makes the claim that microcounseling is very rapid and offers an advantage because it is so rapid. Perhaps married couples cannot be trained as rapidly as individual counselors.
Concerning the question of whether or not married couples can be trained rapidly, Azrin, Naster and Jones (1) point to their behavioristic system of training couples programmatically. Their results are also contrary to the speculation that it takes time to train a marriage system. In fact, the title of their article includes the word "rapid".

The fact that the data on the verbal and nonverbal ratings of sharing, affection and confrontation is differential at times, and is dramatically different in Tables XXVII and XXVIII indicates that perhaps the training had slightly more effect on nonverbal than on verbal communication. In view of the research of Scheflen (11) and Rosenthal (8) such changes, though minute, could be very important and could indicate that more research in the area of influencing nonverbal communication between married couples is desirable.

The Hypotheses VII and X were also rejected. There was no significant difference between the verbal and nonverbal post-test means of primary communication scores. The order of the ranked means was not as predicted by the hypotheses. The Primary Communication Inventory has been proclaimed by its developer, Navran (7) as a direct sampling of marital communication which in turn indirectly assesses the marital adjustment of the couple. The self report style gives sample situations to which married couples respond. It was expected the such a self report might give a different view
of the changes which occurred in the relationship or adjustment of the couple as a result of microcounseling. This change did not apparently occur in the view of the couples any more than it did in the view of the independent raters. The data in Table XXX indicate that some changes did occur, but they were not apparently large enough to be recognized and indicated clearly on the tests by the couples.

Hypotheses VIII and XI were also both rejected. The data in Table XXV represent the group means in a second self report type test which measures the marital adjustment by asking directly about it with several different questions. Apparently the couples did not perceive themselves to have improved in their marital adjustment over time. As with the Primary Communication Inventory, if couples did feel that they improved through treatment, they did not seem to say so on the Marital Adjustment Test.

Hypotheses IX and XII were both rejected, but there is some contrary evidence. Most notable is the change in evaluation items with significant change. Thus it appears that experimental couples saw their marital communication to be better, cleaner and more fair after their training than before. They also apparently felt that their marital understanding was more pleasant and more fair.

In the concept of "Our Marital Understanding" there was an increase in the potency item Deep-Shallow. Couples appear to have felt that their marital understanding was
deeper after the training than before. In the same concept there were also increases in the activity items Fast-Slow and Active-Passive. Experimental couples saw their marital understanding as having more speed and being more active after their training than before.

In these cases, these attitudes must be questioned in terms of Hawthorne effect; that is, the effect of attention only. Is it just possible that couples who receive any training, or who pay any self conscious attention to their marriages will think that their communication is better, cleaner and more fair than couples who do not pay attention to their marital communication. By the same token, it may be that couples who do any kind of training or give any kind of self conscious attention to their marital understanding will feel that it is thus deeper, faster and more active. Such a result is congruent with that of Azrin, Naster and Jones (1) who reported that couples who went through their program of creating marital happiness experienced a 96% generalization of the happiness to other areas than the area of concentrated training.

Now attention must turn to the overall effects of the microcounseling paradigm on marital communication. It appears that there are some small effects of microcounseling as a training technique, but the largest conclusion is that the effects that microcounseling training had on marital communication, as both were dealt with in this study, are
negligible. One should note that it is likely that not all assumptions made about the present design can be assumed. For example, since there was evidence of considerable heterogeneity within the various groups at some points, the assumption of homogeneity of the sample may not have been operationally or actually met. While no marital bias is apparent (see pp. 12-13), it is possible that several kinds of marriages (strong, weak, happy, discordant) were present in the sample. A wide range of marital adjustment and primary communication scores were in evidence in each group. This heterogeneity is underlined by the fact that couples were not matched on socio-economic variables as was originally planned because it was so difficult to obtain subjects. Other assumptions, like homogeneity of consultant training, could also be questioned. An incredible amount of time was invested in the preparation of materials for the purpose of mimicking the microcounseling design for counselors and applying it to married people in their marital communication. The cost in manpower and technology is probably unfeasible as the design now stands. This does not mean that the design and the technology could never be made effective. In fact, important beginnings have been made in this research.
CHAPTER BIBLIOGRAPHY


CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The present investigation involved the examination of the effectiveness of two forms of microcounseling training on selected marital communication skills. The purposes of the study were

1. to assess the effects of microcounseling training on the intimate communication between married couples (a) of feelings, thoughts, beliefs, (b) of the expression of affectionate feelings, and (c) of the expression of confrontive feelings;

2. to determine whether the teaching of skills in the microcounseling style can have any specific behavioral effects on the actions of each individual in training;

3. to assess whether this change has any effects on the intimate sharing behavior of the couple;

4. to determine whether this skill training has any effect on the marital adjustment of the couple; and

5. to examine the changes in meaning that the learning of these skills has produced for persons in the microcounseling training.
Three separate treatment groups, $G_1$, $G_2$, and $G_3$, were developed by randomly assigning thirty-six persons, eighteen married couples, to the groups. The following hypotheses were tested by the groups.

I. Immediately following the teaching of sharing via microcounseling, the experimental subjects, $G_1$ and $G_2$, will exhibit a significantly higher frequency of basic sharing behaviors than the control subjects, $G_3$. Specifically in these comparisons, it is expected that the treatment groups will yield the following order of magnitude in their scores: $G_2$ will have the largest scores with $G_1$ having the next highest scores, and $G_3$ making the lowest scores, that is, $G_2 > G_1 > G_3$. Moreover, this condition is expected to hold in both verbal and nonverbal comparisons of behavior.

II. Immediately following the teaching of sharing via microcounseling, the experimental subjects will exhibit a significantly higher frequency of affectionate behavior than the control subjects and $G_2 > G_1 > G_3$. As with the first hypothesis, this condition was expected to hold in both verbal and nonverbal comparisons.

III. Immediately following the teaching of sharing via microcounseling, the experimental subjects will
exhibit a significantly higher frequency of confrontation behavior than the control subjects and 
$G_2 > G_1 > G_3$, in both verbal and nonverbal comparisons of behavior.

IV. At the follow-up session one month after the end of training, the experimental subjects will exhibit a significantly higher frequency of basic sharing behavior than the control subjects, and 
$G_2 > G_1 > G_3$ in both verbal and nonverbal comparisons of behavior.

V. At the follow-up session one month after the end of training, the experimental subjects will exhibit a significantly higher frequency of affectionate behavior than the control subjects, and 
$G_2 > G_1 > G_3$ in both verbal and nonverbal comparisons of behavior.

VI. At the follow-up session one month after the end of training, the experimental subjects will exhibit a significantly higher frequency of confrontation behavior than the control subjects, and 
$G_2 > G_1 > G_3$ in both verbal and nonverbal comparisons of behavior.

VII. Immediately following the teaching of sharing, the experimental subjects will exhibit a significantly higher primary communication score than the control subjects and $G_2 > G_1 > G_3$. 
VIII. Immediately following the teaching of sharing, the experimental subjects will exhibit a significantly higher marital adjustment score than the control subjects, and $G_2 > G_1 > G_3$.

IX. Immediately following the teaching of sharing, the experimental subjects will exhibit a significantly greater change in their mean profile-of-meaning-scores than the control subjects.

X. At the follow-up session one month after the end of training, the experimental subjects will exhibit significantly higher primary communication scores than the control subjects and $G_2 > G_1 > G_3$.

XI. At the follow-up session one month after the end of training, the experimental subjects will exhibit significantly higher marital adjustment scores than the control subjects and $G_2 > G_1 > G_3$.

XII. At the follow-up session, the experimental subjects will exhibit significantly greater changes (direction not predicted) in their mean profile-of-meaning-scores than the control subjects.

Thirty-six subjects, eighteen married couples, were volunteers from the student and general population around North Texas State University during the spring and first summer terms of 1976. Of all the couples, at least one spouse was a student.
Couples were assigned by serial randomization as they volunteered. Three consultants were used to facilitate the training of the couples and administer the various tests. All three consultants were doctoral candidates in counseling at North Texas State University. The consultants were carefully trained for many hours before their meetings with the subjects.

Consultants taught married couples the marital communication skills of basic sharing, affection, and confrontation. To facilitate this training, the consultants used a micro-counseling format of training which involved taking a videotaped sample of the couple as they shared, reading a manual about sharing; seeing a videotape model of the sharing of a model couple; seeing a videotape replay of the experimental couple's earlier session and critiquing that replay with plans to practice the specific skills identified. This format was repeated for each skill once for the G₁ couples and three times for the G₂ couples. The G₃ control group received no training.

Three pencil and paper tests were used in this investigation: Locke and Wallace's Marital Adjustment Test, Navran's Primary Communication Inventory, and Hickman and Baldwin's Semantic Differential. Testing was administered to the subjects before and immediately after the training in
microcounseling and then four weeks after the end of the training. The control subjects were only tested and video-taped. They received no feedback.

During training, the consultants made three videotape samples: one at the beginning, one of the last practice after all training was over, and one four weeks later at the follow-up. These three segments which amounted to thirty minutes of video recording provided the basic data for the viewing of the raters. The segments were randomized and given to the raters with only numbers on the outside tape box.

Raters were trained for many hours and attained an interrater reliability rating of .80 on three separate tests of their accuracy.

Data were compiled and submitted to the Computing Center at North Texas State University, where a multifactor analysis of variance with repeated measures on one factor was performed on the behavior ratings, the primary communication scores, and the marital adjustment scores. These data proved to be inadequate to test specifically the hypotheses as worded, so the data were resubmitted with instructions to do analysis of variance on these means by group and by test. At the same time the semantic differential data were submitted with instructions for the computer to do analysis of variance on each of the forty-eight items in the four concepts tested by the semantic differential. For all tests the .05 level of significance was set.
The results of this investigation yielded no significant results that were immediately applicable to the twelve hypotheses advanced. Data from the semantic differential were mixed in that eleven of the forty-eight items yielded significant differences in their pre-test, post-test, and follow-up means. The other thirty-seven items did not show significant change.

Additional data derived from alternative methods of analyzing the data which came from the multifactor analysis of variance showed significant differences in the means of pre-test, post-test and follow-up means of nonverbal and total score behavior data. A similar computation for the primary communication score also showed significant differences on the pre-test, post-test, and follow-up scores. More extensive analysis of these data yielded mixed results in favor of the hypotheses in approximately the same proportion as the semantic differential results.

For these reasons, all twelve hypotheses were rejected with speculation that corrections in the design, or changes in the analysis might have changed the results.

Conclusions

The results of the current investigation suggest the following conclusions:

1. Microcounseling as used in this study apparently does not have significant effects on the marital communication
skills of sharing, affection and confrontation. Nonverbal sharing and affection seem more amenable to change and deserve more intense attention. Verbal sharing, affection, confrontation, and nonverbal confrontation are perhaps more difficult to control and will require more research.

2. When working with the complexity of a marital dyad, the microcounseling training model, as used in this investigation, requires time to allow the relationship to accommodate feedback given about the interaction by a consultant. The passage of time may also help a couple dispense with anxiety due to the over exposure of too much utilizable feedback.

3. From the point of view of practical applicability, it seems that unless this model is made more effective it will not be used extensively or widely. The fact that so much equipment and so much time is required to develop such small significant results makes use of microcounseling as a distinct methodology questionable. This is especially true in the field of marriage counseling where the need for things that work exceptionally well is so great. The time-cost-effectiveness ratio is far too low to justify use of microcounseling as it now stands even though the promise of the method, if reworked, seems very good.

Recommendations

The results of the current investigation offer a basis on which to offer the following recommendations:
1. The present investigation was much too ambitious with respect to the complexity of the skills taught. A reduction in the number and complexity of skills, and an increase in the time used to train the subjects would probably bring different results.

2. Programmed learning applied to marital communication skills would profit greatly from a comprehensive synthesis of all known data about just what are effective marital communication skills, and what are the behavioral components of each of these skills. It seems likely that a factor analytic study to weigh each skill for its relative importance and merit as a training module would be desirable.

3. Further research into the use of videotaped feedback and videotaped modeling of specific skills in marital communication seems indicated.

4. Various models of marriage communication, and marriage counseling in general are presented through the public media (television and motion pictures) all the time. Some maintain that these models have a profound effect on the public. Research into the possibility of teaching marital communication via the public media should be considered. Parts of microcounseling model show promise in this direction.

5. Exploration into group based marital communications training with a microcounseling adjunct deserves a serious research examination.
6. Specific attention to the nonverbal as well as the verbal aspects of marital communication appears to be a fruitful area of research.

7. For the truly ambitious researcher, research into marital and family communication patterns, developed by family units through their life style should be given serious consideration.
Counseling and Testing announces a married couples communication research project. Married couples who would be willing to study their communication patterns with a view to helping them toward better marital sharing are invited to participate.

Registration for the project begins immediately at Counseling and Testing, 321, New Union Building, and will continue until the small number of couples needed have been recruited. "Prompt registration will assure your place in the group," said Norman Bouffard, doctoral intern, and director of the project. For more information you may call 788-2177 or 788-2729. Participation, which includes videotaping, is without charge, and personal communication between spouses is held in strict confidence.

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ATTENTION

communications
feedback--free
Microcounseling To Aid Couples in Communication

By JEFF HENSLEY
Daily Reporter

Two married people sit before a television screen, watching intently as the characters discuss whether to hire a babysitter so they can go out for the evening. There's nothing unusual about the situation except that the couple on the screen and the couple in front of the screen are the same couple. They're not being entertained, they're learning about their patterns of communication.

Watching the videotape of their conversation is one part of a counseling technique being tested by Norm Bouffard, Dallas doctoral student.

A CLINICAL member of the American Association of Marriage and Family Counselors, Bouffard serves part time as a counselor for the Pastoral Counseling and Education Center, a branch of which is located in the First Presbyterian Church in Denton.

The particular application of the microcounseling model developed by Bouffard for his doctoral dissertation seeks to improve the communication skills of couples in either one three-hour session or in three three-hour sessions.

Several North Texas couples have participated in the study over several months through the Counseling and Testing Center located in the University Union.

In the three-session version, the methods and materials of the three-hour session are repeated on three separate occasions.

BILL ARNOLD, Denton doctoral student, who has conducted much of the research for Bouffard, said a couple using the microcounseling technique would be invited to discuss a topic for 10 minutes while being videotaped. The subject of their discussion is not as important as communication with each other.

After the taping session, the couple reads and completes a programmed manual on sharing, which Bouffard has written. In the programmed manual, five specific skills of sharing are defined and discussed. Among these specifically defined skills are eye contact and "sharing what you think," Arnold said.

Once the couple has completed the manual program, they view a 10 minute videotaped session of another couple who is demonstrating all the skills described in the manual. The learning couple is asked to point out each of the skills as used by the couple on the screen. A counselor is present to help with the task.

APPLICATION OF learned skills is utilized by taping another 10 minute talk. With help from the counselor, specific sharing instances are pointed out.

Sharing is one of three "modules" of the program. Affection and confrontation are the other two. Each is broken down into specific component skills.

Bouffard, who has not yet compiled his data, was reluctant to comment on the program's effectiveness so as not to bias his results. He did say he thought the method itself would be effective.

"I DON'T WANT people to think of this as a panacea, though," he said. "Some people look to meditation or T.A. (transactional analysis) in this way. I don't want them to think of the microcounseling methods in this way."

Arnold said, "People are pretty enthusiastic initially. Many people have the skills already. It's a matter of making them aware of basic communication skills involved and helping them to use them more effectively in their marriage."

Bouffard said the microcounseling technique originated from training and therapists and psychologists. Dr. Alan Ivey at the University of Massachusetts pioneered the approach.
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SHARING

There are many things that people do and say when they wish to share intimately. While the fine points of deep personal sharing behavior are quite individualized, and sometimes even unique, most intimate sharing involves some common skills. Almost everyone already has considerable ability to communicate, but most people can profit from knowledge of specific skills and practice in applying them. This manual is intended to help you identify and practice some of the basic skills which many people use in their marriage for sharing and communication.

There are three basic intimate sharing skills that this course seeks to teach: sharing, affection, and confrontation. For intimate couples who have ability to share as a base in their communication, affection develops naturally out of sharing and stands on it. In turn, confrontation arises from affection and stands on both sharing and affection. Confrontation is a refinement of affection, and affection is a refinement of sharing. Each rests on the other; all three skills are parts of intimate sharing. These three skills form a kind of pyramid with sharing as a base, and a most important skill. Next comes affection and then a
As you read through this book, you will notice that a particular example of each skill is described in a sentence or two. Sometimes details and examples are given to help illustrate the matter more clearly. Then you will be given a chance to identify the particular skill under study by filling in the blank in the text. Answers are on a line below the blank space at the margin of the text. Using a card to cover the answers until you have tried to identify the behavior will help you to practice thinking about the skills. Be sure to discuss with your spouse and with your teaching-consultant, what each skill idea brings into your head and into your feelings. You may also wish to explore how well you think you execute a particular skill, and get feedback from your spouse as to his/her opinion in each case. It is desirable for spouses to read this manual together so that they can have a continuing dialogue about what they see, what they experience, and how they are growing.
APPENDIX D—Continued

BASIC SHARING

Simple but personal conversation with each other is probably the most important factor in sharing. If you do have things to share, you need talk time, conversations that are personally meaningful with your spouse. It is likely that if you work at it, the amount of talk time in which you do have these meaningful conversations with your spouse will increase. In order to have a medium for sharing you will want more.

TALK TIME

It is also likely that each of you, as you increase talk time, will also want to share your various personal feelings and moods. Your spouse will probably want to know about your various personal feelings. At the same time that you share your personal feelings and moods, it is likely that your awareness of his/her personal feelings will be heightened. You will want to make responses to your spouse's personal feelings, especially when he/she expresses moods and feelings openly. You, too, will be free to express your important personal feelings. You will be free, for example, to express your hope, fear, joy, pain, excitement, power, weakness, freedom, fury, frustration, despair, and delight.
Your spouse will have this same broad freedom to express a great range of personal feelings. You will want to recognize and respond to this range of feelings in your spouse. In your sharing, there is expression of and response to

**PERSONAL FEELINGS**

The sharing of subjects and events that are important to you is a third dimension of sharing. It is the disclosure of personal concerns. This expression of personal concerns includes the right of both partners to discuss personal concerns not directly related to the marriage. This kind of sharing may include such personal concerns as the management and use of money, sexual desires and preferences, what you expect of each other as husband and wife, child-rearing practices and issues, the personal effects of illness, preparation for loss or death, and personal religious faith or philosophy of life. As in the sharing of personal feelings, mentioned above, you are likely to grow both in your expression of your personal concerns, and in your response to the personal concerns of your spouse. As your personal concerns are really heard and responded to, you will hear better and you will respond better. This means that in sharing you will increase your expression of and response to

**PERSONAL CONCERNS**
APPENDIX D—Continued

How you look is important to personal sharing. Eyes, and eye contacts, particularly, are keys to good communication. When your eyes meet the eyes of your spouse periodically so that each person knows that the other is paying attention, or making eye contact, each person can feel that his feelings and concerns are being directly shared. Looking into the eyes of your spouse goes along with openness toward being seen by him/her, and willingness to see him/her as he/she really is. Such seeing of each other means that you will make EYE CONTACT.

As you practice the disclosure of personal feelings and personal concerns, and as you become more nearly free to make eye contact, your sharing will probably be increasingly better. As sharing does get better, the amount of joy in the relationship will probably increase. This is a situation that is often marked by smiling and laughter; the fun increases! This is not the sneering smile of personal put-down, nor is it the exclusive laughter of discount and dismissal of one partner by the other. Smiling and laughter mark the shared breaking forth of mirth, enjoyment, and delight. Each person will enjoy himself more, and you can enjoy each other. There will be a growing common ground of enjoyment which shows itself in shared SMILING LAUGHTER.
APPENDIX D—Continued

At the same time that you are learning to enjoy your spouse with sharing, you will tend to become more calm and relaxed, less tense and fidgety. Although you are probably not completely still, you will most likely be able to act in a more relaxed manner which shows itself in less tensings and jerks in your movements. Whatever movements you do make while you share, you can be free and easy, allowing your body to move in a flowing, comfortable manner which matches the ebb and flow of the situation. You will show less ______ and _______.

TENSINGS JERKS

These basic styles of sharing can all be learned, but they require practice and feedback. You should now discuss each of the skills described above and explore its use as you wish with your spouse and your consultant before going back for a practice session.
As sharing between spouses increases, it seems only natural that the couple will develop affectionate, positive, loving feelings for each other. For most couples this affection takes the form best suited to their uniqueness so that there are a great variety of affectionate expressions. Whatever the variety of expression, basic skills of actions and words still form a common basis for expression of affection.

The most common expression of affectionate feelings is done with words, "I love you," "I find you delightful," or "I really do care very deeply for you." Direct affectionate statements such as these are a basic minimum, and the foundation for affectionate sharing. However, affectionate statements need not be limited to such broad, general phrases. In some cases affectionate statements may be more effective if you call attention to specific actions, qualities, habits, or attitudes that you especially appreciate in your spouse. Remarking personally on these specifics of your spouse in a particular situation where you appreciated his/her action or attitude may be a very affectionate statement. Whatever else you do to express affection, the feeling is most commonly expressed in words, saying what you feel in

AFFECTIONATE STATEMENTS
Couples who are affectionate with each other have a continuing desire to know about the object of their affection. His/her specific actions and deepest inner thoughts, fantasies, and dreams are important. "A penny for your thoughts," is one expression of such interest. So couples work to share these personal thoughts, inner dreams and personal fantasies. A word of caution is in order: not every inner thought, fantasy, or dream must be shared with a spouse; the desirable ones are the positive ones, the reflections of affection. Some angry and hostile dreams or fantasies may be better kept to oneself. Care must be taken not to become preoccupied with the weird, the destructive, and the hostile in thoughts and fantasies. But couples do strive to express very private parts of themselves which they know in fantasies and dreams. So private and important are these shared thoughts, fantasies and dreams, a couple may develop private-meaning words or expressions, personal codes, ways of communicating that have meaning only in this relationship. Conversations about important personal events, shared fear or excitement, personal shared sexual experience, and other private concerns include such code words. Shared thoughts, dreams and fantasies may be risky, and even embarrassing to one spouse or the other, but the risk is taken with delicious excitement for the sake of affectionate sharing. It is important then that affectionate couples share their
APPENDIX D—Continued

positive ________, ________, and _______ with each other.

THOUGHTS FANTASIES DREAMS

One of the exciting factors in the sharing of fantasies is that they need not be confined to the present tense for the couple. Spouses often develop the sharing of their fantasies and dreams by making plans for future events. The most desirable of such plans have to do with the projecting of times to relax and play, both together and with other people. This planning to play, and then the carrying out of desirable and enjoyable future activities is an expression of affection for the couple. They may plan a great vacation, a night on the town, a project shared with others. Whatever the activity that they expect to share, affectionate couples will be seen ________ ______ together.

PLANNING TO PLAY

Affectionate sharing conversations of spouses are often supplemented by various kinds of nonverbal activities. One of the most important of these affectionate actions is movement toward physical closeness. Physical closeness not only involves getting spatially close to your partner, it also involves a number of small personal actions. These actions are often touching one another gently, holding hands, grooming your spouse's hair or clothing, and petting or stroking one another. The use of physical closeness to
express affection may also be done with hugging and kissing. All these affectionate behaviors may lead onward to sexual interaction between a couple, but in the context of sharing it is important to note that such affectionate expression does not have to go beyond what is suggested here to be enjoyable and good. Sexual activity is another form of sharing, very important and vital to intimate sharing; it is simply not dealt with here. Couples can and do enjoy many kinds of physical closeness without sexual activity. Couples who share affectionate behavior do so in a number of ways that are generally called physi

PHYSICAL CLOSENES

Sharing of affection can be learned, but like the basic sharing behaviors learned earlier, affectionate sharing requires practice and feedback. You should now discuss each of these skills with your spouse and your consultant. Then, before going back to practice these new skills, review the basic sharing skills so that you will have the entire range of sharing skills clear in your memory.
As a relationship grows in strength and depth, and as a couple learns to share deeply and affectionately, it is likely that another important refinement of sharing will evolve. This refinement is the capacity for confrontation between spouses. Confrontation, or self-assertion, enables each spouse to define his/her separateness. It allows each to retain emotional boundaries while being close and affectionate, thus maximizing the capacity to share without fear of being absorbed into the other person.

Couples who do share a great deal and who are affectionate, become acutely aware of their real and important differences as persons. This awareness of real differences, for those who share intimately, need not cause anger or hostility. Nonhostile disagreement statements help to identify these differences. Such self assertion clarifies who each is as a separate person. In fact, for effective sharing, each spouse must be able and free to dialogue about differences in a nonhostile manner, making clear the nonhostile disagreement statements that are necessary to "be oneself". Often the disagreement between spouses involves the naming of persons, things, situations, and relationships about which the spouses actively disagree. Listing specific discrepancies in opinion, belief, or desire is an essential part of nonhostile disagree-
APPENDIX D—Continued

ment. Real power in personal sharing is not only affectionate, it may also be self assertive in a confrontive manner, a style which requires __________

NONHOSTILE DISAGREEMENT STATEMENTS

In the process of confrontive sharing, the nonhostile statements of particular disagreement will be enhanced if the person making the statement can specify who feels the disagreement. This means that the spouse who protests will want to increase the number of times that he/she makes "I-statements", declaring ownership of the disagreement and asserting his/her rights and needs. At the same time there will be less blaming of each other, less speaking of someone else when you are actually the dissident one. In other words, the number of "I-statements" will go up as the number of "You-statements" goes down. And as this happens, the amount of irrelevant fault-finding and blaming will also go down. This is another way of saying that self assertion using "I-statements" helps to lower guilty feelings between the partners. So it is clear that it is important to increase the number of __________.

| STATEMENTS |

One difficulty that some spouses who share their dis-
agreements discover with dismay subject change in the midst of very important discussions. One spouse will change the subject on the other in a disagreement so quickly that some important and valuable confrontations are made diffuse and even lost. Strong confrontive sharing requires that a disagreement not be avoided, and it requires that persons in a disagreement not leave the scene by changing the subject.

Same subject discussion allows couples to finish a particular matter and then get on to other important subjects between them. Each person stays with the same subject discussion, and with the spouse until some resolution is reached. In powerful confrontive sharing, couples will have ______.

SAME SUBJECT DISCUSSION

As with sharing and affectionate behavior, confrontive sharing has some accompanying physical aspects. Confrontive sharing is usually done by having the couple face each other. It is important that each spouse see the other's face in their confrontation. Also important in this case are things to avoid. A couple stays with each other, not only in same subject discussion, but also in not walking away from a disagreement. A couple stays to face each other. Confrontive couples do not turn their backs on each other, a trick used by some to stop sharing and turn the spouse into an enemy. A spouse does not have a temper tantrum, like a volcano splattering
the hot ashes of physical threat all over everyone. Most important in this process is the decision that a spouse will not use physical violence to settle personal disagreements, and he/she does not use threats of physical violence in any manner in confrontive sharing. If physical violence seems likely to erupt, confrontive sharing should be postponed until each spouse is in a more calm mood. Instead of tantrums, pouting, threats or withdrawal, the confrontive couple face each other while sharing under pressure. Each person, with his face, asserts his desires and wants, owns his separateness, stays with a disagreement until some resolution that is acceptable to both can be worked out. Sharing couples stay to share even hard confrontation, they square off and ___ ___ ___ during disagreement.

FACE EACH OTHER

Confrontation, a very important refinement of sharing for couples, can be learned, but it, too, requires practice, and, very important here, feedback from your spouse. You should discuss very carefully these skills with your spouse. You should seek the best assistance of your consultant in this skill before going back to practice. You will want to review the entire program of skills which you have been studying and practicing now so that the full range of basic sharing, affectionate sharing, and confrontive sharing are yours.
SHARING BETWEEN JIM AND SALLY

A Transcription For Use As A Microcounseling Model

What follows represents a selection from three real conversations between a husband and wife. It is the same conversation that has been recorded on videotape for our use.

BASIC SHARING

S. How are we doing on money lately?
J. Ah, well, I don't know. With Christmas what will happen but we seem to be doing pretty well.
S. Good.
J. We seem to have evened out after everything from the summer.
S. Uh huh.
J. And ah, looks like we do well in summer and we got income tax coming up. And if you're gonna work this summer, you know, that's one thing. If you're not, then we need to prepare...
S. Uh huh.
J. for that. What are you thinking? Are you planning to work some:
S. I don't know. We haven't talked about it. I feel on the one hand I really would love some time to do some reading and restimulate myself after working on the play for so long.
J. Yeah.
S. So a summer of reading and a, and then some weaving really sounds great. I feel good about that. But on the other I don't want to have to keep straining on the money problem. It's...
J. Yeah.
S. It's not much fun. And at some point I think it would be great for both of us to get to go to England and see some plays and get with the Larrs and do this kind of thing.
J. Yeah, I'd really love to do that.
S. That would be great.
J. But that would really take some putting money away for a while
S. Uh huh.
J. And I can see where you want to take time off during the summer. You'll be pressing during the spring.
S. But everybody wants to take time off during the summer. So maybe that's not, you know...
J. It's worth thinking about.
S. What about the Fielding thing? How do you feel about it?
J. I am going to apply for that, and ah...
S. Do you want to do that?
J. Ah, well, I have very mixed feelings about that. I've been mixed all along. I like it, I am excited, you know, about the kind of program they offer, ah... it will be a long time a long push: two, three or four years to do that. It would take some constant time.
Sharing Between Jim and Sally—continued

S. Do you feel, ah, ready for a push on something like that right now?
J. Yeah, but it would mean I wouldn’t do much else and that would be where my focus is for the next three or four years.
S. Huh! Much else, what does much else mean?
J. Well, like I’ve been taking these things out two or three nights a week this fall. I think that would be consistent then.
S. Uh huh.
J. Also, if I am going to do that then I am not going to do much else at church, or...
S. I feel very strained at this point. Just even thinking about you taking two or three more years to be more strained just feels,... sounds really awful.
J. Yeah, well that is my mix... I’d like the degree. And I’d enjoy, in the long run, teaching, being able to go on a college campus and having all the credentials...Ah...
S. In the long run that might help with money but ah...
J. Oh yeah.
S. Also we have to think about what it would do to you physically. I think. For instance, now you have enough tension that your head is broken out. You get headaches periodically, you...
J. Ah, I don’t think that’s
S. You don’t think that’s...
J. No I don’t think that applies.
S. Why?
J. I think when I get headaches I get them from work and I know what kind of tension I put myself in. But that is not a long term thing. That is what happens that day.
S. Uh huh.
J. With particular people, I think, it is more than when it happens. I won’t do other things. I won’t be home watching tv if I am out at a group three nights a week.
S. You don’t watch tv anyway.
J. O.K., but I mean we’re talking about doing stuff, ah... spending more time at home, more time together, and I think that is part of the choice.
S. What if we have children? What if we have children, what kind of ah,...ah...
J. I’m feeling pushed, cause I think right now we’ve set up a schedule where you’re out, you know, many nights if you are on a show or on a crew.
S. Uh huh.
J. Ah, I think, for me the point is, do I want to set up that kind of schedule for myself which would match where you are?
S. Uh huh.
Sharing Between Jim and Sally—continued

J. Or, ah, you know, and put out the money for the degree. Or am I going to have a more leisurly pace, or a more diffuse— that's probably more like it—more diffuse.

S. Uh huh. Are you going to have a more leisurly pace or a more diffuse pace?

J. Well, O.K., am I going to take things more in my own terms, and be involved in a variety of different things, or focus all my time on activities that will go towards the degree?

S. Huh. What is your inclination, or how do you feel about it?

J. Ah, that is what I was saying at the first, that I have mixed feelings about it.

S. You have mixed feelings?

J. I am going to apply and see if I get accepted in the first round.

S. Huh.

J. And then, ah, go from there. And make more decisions then. Do you have any feelings about it?

S. Yes, I do. I feel, ah, I will, I feel very angry if it means pressured time because I find it very difficult, ah, to not feel some of the pressure that you feel. I think if it can become something that is really enjoyable for you, in a way, you know, if it can not be just a pressure, then you know, that can be really great. But if it is mainly a pressure towards a goal and you are not enjoying a process, then I think that would be tough. I want you to do what you want to do. I just don't, I just want to be sure that you are doing it because it is something you are going to enjoy, not because it is something that, ah, it is good to have at the bottom of your name, or in front of your name or whatever.

J. Yeah, well I know that I have the experience of going both ways. And ah, what I have decided is to apply, and to take it as something that, you know, that, if I do it, I need to keep doing it in terms of it being my enjoyment, what I want to get out of it.

S. Uh huh.

J. Not a pressure situation. I think it is my thing. I don't think it is yours. And ah, if you take problems from that then I wish you would work on your own problems with it and not put them off as if they were mine.

S. Do you hear me doing that?

J. Yeah.

S. How?

J. Ah...

S. The pressure?

J. Yeah.

S. OK.

J. That you take a lot of pressure if I am involved that much in something. But I don't hear where your connection with it is. May be there is one?
Sharing Between Jim and Sally—continued

S. Well one of my connections is that I do not, ah, that I don't, we don't then do things together in a relaxed way as much.

J. OK, what kinda things do you want to do together?

S. Well, things like...

J. I am feeling really defensive. I am feeling like you are pushing me on this and I know where I am on it. I know what I want to do with it.

S. I don't mean to be pushing. I'm not, ah, I don't want to push you in any other way than to say, is this really something that is good for you at this point?

J. OK

S. That is all. I wanted to say, I just want to question your motives about it. Is it just another degree? Or is it something that you really want? And...

J. OK, have you not heard me say that? Respond to that?

S. No, I have not really heard you. I have heard you say somewhat, I heard you say you have mixed feelings. That, ah, that you do want it, and ah...

J. What else have you heard me say, cause I feel like I answered that about three times.

S. Maybe I haven't, I'm not hearing you very well. I guess I am picking up a lot of tension. Maybe it is my own tension.

J. I am feeling a lot of tension. OK, ah, the Fielding program excites me. I like that program. I would like to be a part of that. I like the people. I would like to study with those people, I think I could learn a lot. In the long run I would like to have a Ph. D., ah, particularly because it is a credential and it gets in places. And, ah, if I could get one that would be accepted for ten dollars, then I would go buy one for ten dollars! But that isn't the way they come out. Ah, I think I would learn a lot in going through the kind of situations they have you go through to get the degree. Ah, I think I would enjoy spending some years teaching on a college campus, and I think you would do well on a campus. So it would be valuable in that way. I have enjoyed doing the Gestalt group. And some of the other things I am doing now, and that would be the type of activity that would go toward Fielding, so there are a lot of benefits in it, yeah...
Sharing Between Jim and Sally—continued

AFFECTION

S. I just want to talk to you about the ah, about your Christmas present to me.

J. The blue dress that's just like the other blue dress?

S. Yes, the blue dress that is just like the... I just wanted to ah, say that I really do appreciate it. You know, I think it is a very nice dress. But it just doesn't hang right on me, and ah, I like the fact that you gave it to me at this time, I did not give you any hints, though you did ask for them. I didn't say.

J. You were very quiet about it.

S. I said, no, I want you to pick out whatever you want to give me. Because I had so much fun finding something for you that I wanted to give you.

J. Yeah, and that is really a neat shirt. I like it.

S. And you, I think you look great in it. But I, ah, if this dress, one thing that I am concerned about is, ah, I don't want to control the gifts you give me. I want to receive it and enjoy it, so on the one hand, I can keep the dress, and enjoy it, and wear it, and accept it as a gift from you. However, I feel a little anger at the fact that it isn't exactly the image of what I want to look like. I feel kind of dumpy in it and it looks kind of, the skirt is a little long and the, it is just baggy. It just doesn't do on me, and I am afraid I wouldn't wear it. So I think if spent enough money on it that we can't, I can't get something else...

J. Well, I enjoyed getting it for you, and I liked the color. I think it is a pretty dress. Ah, but the main thing was to get you a gift that you would enjoy and wear and have fun with. I got it through a store where you can very easily send it back and there won't be any problem with that. I'd enjoy taking you on a shopping trip and get something that would do more for you. I don't, ah, I realized as I went shopping that there are a lot of women's clothes that I just don't pay any attention to. For example, you talk about the length, or the fullness of it. Well I just did not pay any attention to that. I found something that looked like a pretty color and that's what I got.

S. And the thing is, even for me, when I go out, I can never buy a dress just off the hangar, because you can never tell what it is going to do.

J. Yeah, I understand that.

S. Physically. So it is a very hard thing that you tried to do. But I appreciate it.

J. Well, I enjoyed it. If you want to send it back, we will send it back.

S. So you won't feel badly about it?
Sharing Between Jim and Sally—continued

J. No, particularly because it is so much like the one you got from Mother. You don't want two of the same dresses. I thought about going down and getting you something from this Guatemala place, but no, I changed my mind because I thought it was almost a copy of what you got me. So it is out of date.

S. That's alright. It could have been perfect, who knows? But in the future, just because I have taken this one back, I don't want to tell you how to give gifts to me, I mean I don't want to be in control of the gifts that you give me. If you see something that you want to get me, I want you to feel free to do it.

J. OK, and I don't see any problem with that.

S. OK, and I will do the same for you. That was really fun buying your shirt. I don't know when I have bought something that I was really excited about giving you.

J. I think I like that... the way you did the shirt, more of that kind of thing. That is, not having to put so much focus on "it's Christmas time", so it has to be this.

S. And, also, sometimes it is fun to sort of blow off, blow a wad of money on something. But usually, I think I enjoy presents when a lot of money hasn't been spent on...

J. Yeah, I do, too.

S. Like the Christmases when we decided to give each other something little, like pajamas, or... it's really neat. I enjoy a pair of pajamas as much as I enjoy...

J. One thing that I looked for you was a pair of warm socks.

S. Oh really? Didn't you find any?

J. No, I couldn't find any just right... Are you tense? Do you want a neck rub?

S. Oh really? Didn't you find any?

J. No, I couldn't find any just right... Are you tense? Do you want a neck rub?

S. Yeah

J. I like the way your red skirt looks on you. You like it?

S. Uh huh.

J. Do you like corduroy?

S. Are you looking for another gift?

J. No.

S. That's great... I am looking forward to tonight. That will be a fun trip. Do you want to do it tonight?

J. Go shopping?

S. Yeah.

J. Might as well go out while the sales are on.

S. That will be great.

J. We could go eat some place.

S. That would be fun.

J. Let's do. Leave work, then go get something to eat and then go shopping.

S. That would be super!

J. Then we've got a party tomorrow night.

S. Yeah, and there is another party at Randy and Rhonda's house. A New Year's Party.
Sharing Between Jim and Sally—continued

J. New Year's Day?
S. Yeah.
J. Fine, we will watch the games. We wanted to do that last year. That is pretty much where everybody goes, over there... Where that guy had his wreck.
S. Yeah.
Sharing Between Jim and Sally - continued

CONFRONTATION

S. What are you going to do today?
J. I thought when we got through here I would clean up a little bit, do a little reading and kind of prepare for my course this semester.
S. How would you like to rake some leaves?
J. That really is not what I had in mind. It is a little cold out today. I had other things planned.
S. Obviously. You always have other things planned.
J. Than raking leaves?
S. Right.
J. That is probably true.
S. Well, I raked them last month. About half of them are left this time...And it was fun
J. That's neat.
S. But this time, I would really like some help. So... I... will you rake some leaves?
J. Some leaves? Yeah, I'll rake some leaves.
S. No, what I have in mind. I would like to get all the rest of the leaves up. There are a lot of reasons. For one thing, it's not very sanitary. We have dogs, and it is very hard to clean up after the dogs when you have all these leaves around. So I would really like to get those big piles you raked over next to the garage up, so when we go out there, it looks sanitary.
J. You want to get all the leaves up out of the yard?
S. Yes, except a few in the gutter.
J. Get them all. You don't want to do mulch?
S. That is right. Well, we could do mulch, but if we do that, we need to buy some chicken wire and make a good compost in the back where it can't be seen. It just doesn't look good.
J. Why do you want to leave them in the gutter?
S. A few in the gutter because Josie likes to sleep there. It really can be fun. Raking leaves can really be fun. We can work together, and it would be great. Then I want to bag them up and put them in the front yard.
J. OK, well I know we have to do some more raking on the patio.
S. What have you got against it?
J. I don't have anything against it. I just don't enjoy raking leaves. If I were going to list twenty things to do in an afternoon, raking leaves would be number twenty! Or doing any kind of yard stuff.
S. Didn't you ever do any yard stuff when you were a kid?
J. No. When I grew up we had a guy who did the yard, a very good job. It always looked very nice.
Sharing Between Jim and Sally-continued

S. I always did the yard. I used to go down to my neighbors' house. They had a huge yard, and they would get a bunch of kids from the neighborhood to come down, and we would do the yard work together. It was really fun. And we always got rewarded. They gave the kid that collected the most weeds or something ten cents. I used to get my ten cents. It was fun. I don't see why it couldn't be fun for us to do this together.

J. Maybe we could organize a group of kids into raking our yard.

S. Well the problem with us is that we don't get the mundane things in our life done.

J. Yeah.

S. Like with the tires. They've got a split on...we need to make some kind of a system for dealing with that. But right now, what we need to...I want you to help me rake the leaves.

J. I'm willing to help you with it. And I guess what I need on that is that...say this afternoon, I am willing to spend a couple of hours to really clean up the leaves in the yard. One place where I get so I don't like it is, I get started on one thing and then, well, the plants need to be repotted, the dog needs to be de-fleaed, then all of a sudden the day is...

S. Eaten up.

J. Eaten up doing that stuff.

S. Well, will you make a commitment for say two hours to rake the leaves?

J. I will make a commitment that you and I will go out this afternoon and do the leaves, rake 'em, bag 'em, box 'em; put them out, and be done with them. That's all!

S. Just the back yard leaves? Or all the leaves?

J. All the leaves.

S. All the leaves! Wow!

J. But then not to mess with them again. You know, if a few leaves fall, then let them fall.

S. OK, I will take care of the others. But there are hardly any left, if you look up in the trees.

J. I agree, though, that we need to find some better way to do the little household things.

S. We, we're just awful about that.

J. Yeah, I like the money system we have. We pay ourselves to do it.

S. Yeah.

J. We have been keeping up a list of things that need to be done, or doing much when we did put them down.

S. Yeah. I think I can speak for myself. I just don't value that. I have a stack of clothes that needs mending that is bigger, practically, than the stack of clothes that doesn't need mending.
APPENDIX D—Continued

Sharing Between Jim and Sally—continued

J. That's familiar to me. My mother used to take socks. She'd say, "Oh, Jim, those socks need a little knitting. Give them to me and I'll put them in my basket." And I once went and found a pair of socks that I probably hadn't worn for six years lying in the basket!

S. I can't believe your mother did that to you.

J. Yeah. So I don't let anybody take my favorite socks.

S. Right. But that's not the point. We were talking about things in general. I think, in general, if we had some kind of system, if we did continue to write things down and then if one or the other of us put their name by it... I'm going to do this... not everything that's put down by you, but... And also, I don't want to be the one that puts things down all the time.

J. Right.

S. I don't want to be the one who is always saying, "Jim, this needs to be done," Because that's not a pleasant position either.

J. And I don't like being on the other end of that. And I don't like... because I don't like doing a lot of these household things, I need some kind of a place where we have decided to communicate about those things. So it doesn't come up... I hate it if I'm, say, reading, and you mention something in the house that needs to be done. It really feels like an intrusion. But I know that it is needed, so... I would be willing to take some time each week when we decided to plan just to sit and talk about things that need doing.

S. Yeah, I think we definitely need to come up with that. Set aside, say an hour on Saturday.

J. Yes. What about some time tomorrow evening?

S. I don't know that I want to miss that play, either.

J. Maybe sometime on Saturday.

S. Yeah.

J. Before Saturday, though. If I'm going to do something, I want to do it on Saturday, I like to think ahead.

S. What about Friday night? That always seems like a house-cleaning-up time anyway. Friday night after work.

J. OK, sounds good.

S. Good.
APPENDIX E

CONSULTANT'S EXPERIMENTAL PROCEDURE SUMMARY AND REMINDER SHEET

1. Give intake form, video tape release form.

2. Assign couples to treatment group (know which treatment they are to receive).

3. Meet couple, give minimal introduction, give pencil and paper tests.

4. Give instructions (p. 29 of proposal), place couple in studio (studio is playroom; I suggest that you give the couple pencil and paper tests in the control room while you set up the playroom in order to create an informal and relaxed atmosphere; take care to allow each spouse privacy in preparing the pencil and paper tests, i.e., give them space separately at the two little tables in the control room).

5. Take ten minute sample of their sharing. While they are sharing you can set up control room for consultation. You simply allow the camera to run.

6. In consultation room (control room) couple reads manual on basic sharing. Be sure you refer at least once to each item in the manual.

7. View model tape by couple model; consultant may stop the model tape to point out examples of important items. Be sure you do this at least once for every item in the manual.

8. View the couple's videotape. Be sure you point out examples of successes at desirable behaviors, and when it is especially clear, examples of undesirable behaviors (I am assuming that we are going to reinforce positive behaviors more regularly and more effectively than we are going to punish undesirable ones).
9. Spend as much time as you need consulting on areas of improvement of the skills noted (Creation of a relaxed atmosphere which focuses on desired skills rather than personal faults and pathologies is our goal).

10. Return each couple to practice room to practice new skills.

11. Repeat steps 5-10 again for affection, and

12. Be sure you do not erase the first ten minute sample tape. If this is a t-1, be sure you keep the second ten minute sample. Please do erase the intermediate segments by videotaping over them. The final tapes will hopefully have only three ten minute segments with blank spaces in between (I will check this out too though). FOR t-2 at the end of the third session be sure you keep the ten minute segment.

13. Obtain second set of pencil and paper tests after last practice session.

14. Make a date for the follow-up session. Stress that it is like a 30 day check-up and will not involve more training. "I'd like to see how you are doing after this training has gotten cold." Stress that it is very important for the success of this project.

15. At the follow-up repeat the pencil and paper tests.

16. Take a final video sample by asking the couple to repeat their sharing practice once more.

CONCERNING PROCEDURES IN THE PLAYROOM–CONTROL ROOM AND "STUDIO"

Get key to room from Bill Arnold or from the secretary in the room marked FOODS there in Terrill Hall. The University Police have been notified by Dr. Robb to let us into Terrill Hall and they should also be able to let you into the studio if all else fails.
APPENDIX E—Continued

Key to cabinet which contains tapes and power cord to tape deck is taped to back, left hand side of the monitor (TV set). Be sure it is returned to that exact location. If you need new tape to stick the key in its place, there is some in the right hand drawer of the table on which the monitor sits.

Thread tape, plug in, turn on: Check camera, monitor, tape deck. Watch the two red lights on tape deck. Be sure they are NOT ON. Check pick-up mike in playroom by recording a short segment and tapping on the mirror.

Turn volume on monitor down. Turn *air conditioning* off in the playroom.

Record a two-minute blank space at the beginning of the sample.

See *Instructions for care of tapes in the materials box*. 
CONSULTANT'S USE OF TAPES

1. Thread and slip inward about fifty feet.
2. Cut a blank spot (about one to two minutes) at front of each ten minute segment.
3. Once a tape is in use mark "X" under number.
4. Keep all tapes in this box.
5. Record only one couple on each tape.
6. Record tape number B6 or B2 on each release form.
APPENDIX G

RATER'S HANDBOOK

Instructions: Although the subjects are married couples, each person is a separate subject for our purposes. You are to rate each individual's verbal and nonverbal responses for a ten minute period which is on the videotape between the tape marker flags (the red, green and yellow taped markers on the videotape). A timer has been provided for the specific measurement of time used between the flags.

Be sure you use a separate rating scale for each of the ten minute sessions (pre-test, post-test, and follow-up). Since there are three separate ten minute segments on each tape, and since you have two subjects on each tape, you will use six copies of the scale on each videotape.

For statistical purposes, no skill can be counted in two categories. Only one verbal and one nonverbal skill can be displayed by a subject at a time. Verbal and nonverbal skills are expected to be present at the same, or about the same, time however.

In addition to this information about the rating scale, it is assumed that you are thoroughly familiar with the couples' training manual, Sharing. It will likely be useful for you to re-read any portion of that manual if you are unsure of specific skills: what they are and how to recognize them. The video model of Jim and Sally with its marked, specified manuscript, is also immediately available to you.

Talk Time is measured by using the pause mechanism on your stop watch. While the subject is speaking, run the watch. Pause the watch when he (she) is silent, and then release it again when he speaks again. Be sure you never return the watch to zero. This viewing of the tape with a stop watch will also serve to familiarize you with the contents of the couple's sharing.

The various verbal skills are sometimes difficult to discriminate so that care must be taken to be clear about particular remark that a person makes.
Personal feelings have to do primarily with the subject's expression of his interior feeling states or his response to this kind of expression from the spouse. The use of the words "I feel" or "It feels to me like..." are often markers of expressions of personal feelings. The rater should be aware that a subject may actually say what he is thinking (report some topic or decision, hence, report some personal concern) when he says that he feels a certain way. Affectionate feelings can be discriminated from sharing of other personal feelings in that they are specific to the spouse. They are feelings "For you".

Personal concerns are expressions of matters of importance to the couple; it involves the sharing of data, information, expectations, beliefs and the like, or the subject's response to such expressions from his spouse. Here "I think" is an accurate description of the situation. Personal concerns are topical and informational in contrast to the affect-laden material of personal feelings or affectionate statements.

Affectionate statements, being a refinement of personal feelings, cannot be easily and absolutely distinguished from personal feelings statements. Affectionate statements as designated here, however, are those feelings with specific expressions of tender, vulnerable, caring, loving feelings from the subject to his spouse. It need not be limited to statements like "I love you" or "I care very deeply for you". Affectionate statements may point out actions and responses of the spouse that indicate strong positive feelings. This would include statements by the subject that he has been deeply moved or touched by the spouse or something the spouse did. The feelings are specific to the spouse and most often are reported as being present tense feelings.

Thoughts, fantasies and dreams are statements of the individual from his imagination in combination or connection with affections. Even though affectionate content of a dream may not be present, the dream should be personal, the thoughts and fantasies should have a personal reference. "I thought of buying you a yellow kite." or "I dreamed we ate a giant steak and had hot wine together". Fantasies include future projections of possible actions or situations with the spouse, e.g., "Sometimes I think about what it will be like when we can have a home of our own and get out of this apartment".
Planning to play refers to any kind of projection of recreation, adventure, vacation, or mutually shared and enjoyed experience. Such plans frequently develop from the sharing of thoughts, fantasies, and dreams.

Nonhostile disagreement statements are any expression of specific agreement that is direct, clear, and obviously intended to state a differential personal position on any personal concern that is brought up by either party. It may be simply the straightforward and specific statement of disagreement in a conversation between spouses. Personal concerns can be distinguished from the nonhostile disagreement statements by the presence of language which is clearly indicative of disagreement.

I statements involve the specific owning of the nonhostile disagreement statements by the use of the personal reference I.

Same subject discussion is the focusing on the issue at hand by Intention. It is the recall by the subject of the discussion to the important matter at issue between the spouses, and/or it is the rejection of diversions or attention diffusing devices employed by the subject or his spouse.

The nonverbal skills have to do with various actions which seem to be related to the verbal skills. They are manifest in the body language of the people rather than in the verbal behavior.

Eye Contact Breaks are to be counted when it is obvious and clear. Tiny jerks of the eyes cannot be considered. When the subject obviously looks away, that is an eye contact break.

Smiling and laughter is to be shared and obvious. It is not the tension-produced forced laughter that sometimes occurs when people are nervous. It is the mutual delight and mirth.

Tensings and jerks are any nervous twitch or other heightening of body tension. Shifting or moving repeatedly of some body part is such a behavior. Scratching, yawning, blinking, straightening of hair, preening, or drumming of the fingers are examples of jerks. The thumping of a foot on the floor, or jerking a leg from the knee also are considered such behaviors.
Physical closeness involves any touching that expresses closeness and affection, and/or moving toward or into the proximity of a spouse. Combing the person's hair, petting a spouse, hand holding, giving a neck or back rub, and the like are all examples of physical closeness.

Facing each other while disagreeing is a very specific act of looking directly and assertively into the face and eyes of the spouse in a disagreement. It is the use of the facial intensity to bring home a point and make it strongly felt.
APPENDIX II

BEHAVIOR RATING SCALE

Use one of these scales per person per session; that is, six for each tape rated.

TAPE Number

SESSION: Pretest  Posttest  Follow-up

Subject Sex  Male  Female

Talk Time: Minutes  Seconds  TOTAL in seconds

Verbal Skills

Personal Feelings

Personal Concerns

Affectionate Statements

Thoughts, Fantasies, Dreams

Planning to Play

Nonhostile Disagreement Statements

I-Statements

Same Subject Discussion

Nonverbal Skills

Eye Contact Breaks

Smiling and Laughter

Tensings and Jerks

Physical Closeness

Face Each Other in Confrontation

Notes and/or Comments

TOTALS

SV  SNV  AV  ANV  CV  CNV

COMBINED TOTALS

S  A  C

SESSION TOTAL

205
APPENDIX I

MARITAL ADJUSTMENT TEST

Check the dot on the scale line below which best describes the degree of happiness, everything considered, of your present marriage. The middle point, "happy," represents the degree of happiness which most people get from marriage, and the scale gradually ranges on one side to those few who are very unhappy in marriage, and on the other, to those few who experience extreme joy or felicity in marriage.

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<th>15</th>
<th>20</th>
<th>25</th>
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<td>Very unhappy</td>
<td>Happy</td>
<td>Perfectly happy</td>
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State the approximate extent of agreement or disagreement between you and your mate on the following items. Please check each column.

<table>
<thead>
<tr>
<th>2. Handling family finances</th>
<th>Always Agree</th>
<th>Almost Agree</th>
<th>Occasionally Disagree</th>
<th>Frequently Disagree</th>
<th>Almost Disagree</th>
<th>Always Disagree</th>
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<tbody>
<tr>
<td>3. Matters of recreation</td>
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<td>4. Demonstrations of affection</td>
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<td>5. Friends</td>
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<td>6. Sex relations</td>
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<td>7. Conventionality (right, good, or proper conduct)</td>
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<tr>
<td>8. Philosophy of life</td>
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<tr>
<td>9. Ways of dealing with in-laws</td>
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</tbody>
</table>

10. When disagreements arise, they usually result in:

- Husband giving in ________ Agreement by mutual give and take ________
- Wife giving in ________

11. Do you and your mate engage in outside interests together?

- All of them ________ Very few of them ________
- Some of them ________ None of them ________

12. In leisure time do you generally prefer to

- Be "on the go" ________ Stay at home ________
- Does your mate generally prefer to

- Be "on the go" ________ Stay at home ________

13. Do you ever wish you had not married?

- Frequently ________ Rarely ________
- Occasionally ________ Never ________

14. If you had your life to live over, do you think you would:

- Marry the same person ________
- Marry a different person ________
- Not marry at all ________

15. Do you confide in your mate:

- Almost never ________ In most things ________
- Rarely ________ In everything ________
APPENDIX J

PRIMARY COMMUNICATION INVENTORY

Instructions: Below is a list of items on communication between you and your spouse. In the columns on the right are five possible answers. Opposite each item place a check in the column which best represents the extent to which you and your spouse behave in the specified way.

<table>
<thead>
<tr>
<th>Item</th>
<th>Very Frequently</th>
<th>Frequent</th>
<th>Occasionally</th>
<th>Seldom</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How often do you and your spouse talk over pleasant things that happen during the day?</td>
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<tr>
<td>2. How often do you and your spouse talk over unpleasant things that happen during the day?</td>
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<td>3. Do you and your spouse talk over things you disagree about or have difficulties over?</td>
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<td>4. Do you and your spouse talk about things in which you are both interested?</td>
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<tr>
<td>5. Does your spouse adjust what he (she) says and how he (she) says it to the way you seem to feel at the moment?</td>
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<td>6. When you start to ask a question, does your spouse know what it is before you ask it?</td>
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<td>7. Do you know the feelings of your spouse from his (her) facial and bodily gestures?</td>
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<tr>
<td>8. Do you and your spouse avoid certain subjects in conversation?</td>
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<td>9. Does your spouse explain or express himself (herself) to you through a glance or gestures?</td>
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<tr>
<td>10. Do you and your spouse discuss things together before making an important decision?</td>
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<tr>
<td>11. Can your spouse tell what kind of day you have had without asking?</td>
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<td>12. Your spouse wants to visit some close friends or relatives. You don't particularly enjoy their company. Would you tell him (her) this?</td>
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<tr>
<td>13. Does your spouse discuss matters of sex with you?</td>
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<tr>
<td>14. Do you and your spouse use words which have a special meaning not understood by outsiders?</td>
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<td>15. How often does your spouse sulk or pout?</td>
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</table>
### PRIMARY COMMUNICATION INVENTORY—continued

<table>
<thead>
<tr>
<th>Item</th>
<th>Very Frequently</th>
<th>Frequently</th>
<th>Occasionally</th>
<th>Seldom</th>
<th>Never</th>
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</thead>
<tbody>
<tr>
<td>16. Can you and your spouse discuss your most sacred beliefs without feelings of restraint or embarrassment?</td>
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<td>17. Do you avoid telling your spouse things which put you in a bad light?</td>
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<td>18. You and your spouse are visiting friends. Something is said by the friends which causes you to glance at each other. Would you understand each other?</td>
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<td>19. How often can you tell as much from the tone of voice of your spouse as from what he (she) actually says?</td>
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<tr>
<td>20. How often do you and your spouse talk with each other about personal problems?</td>
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<tr>
<td>21. Do you feel that in most matters your spouse knows what you are trying to say?</td>
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<tr>
<td>22. Would you rather talk about intimate matters with your spouse than with some other person?</td>
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<tr>
<td>23. Do you understand the meaning of your spouse's facial expressions?</td>
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<tr>
<td>24. If you and your spouse are visiting friends or relatives and one of you starts to say something, does the other take over the conversation without the feeling of interrupting?</td>
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<tr>
<td>25. During marriage, have you and your spouse, in general talked most things over together?</td>
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</table>
Instructions: The purpose of this study is to measure the meanings of certain concepts to married couples by having them judge these things against a series of descriptive scales. In this study, please make your judgements on the basis of what these things mean to you. You are to rate the concept on each of these scales in order; do not go back to change a previous mark.

Look at each concept at the top of each section. Then look at each scale in turn to see if the concept has a connection in your mind in any way with one end of the scale of the other. If there is no connection, or if the connection is equally strong on each side, put the cross (X) in the middle. If there is a connection more with one side than the other, put the cross (X) in the appropriate blank (i.e. in the ‘extremely’, ‘moderate’, or ‘slight’ position). Do not mark the cross (X) on the dots, use the blanks.

An example, with the positions named:

Good __________ X __________ Bad
Extreme Neutral Extreme
Moderate or Both Moderate
Slight Slight

OUR MARITAL COMMUNICATION

Good __________ Bad
Cold __________ Hot
Fast __________ Slow
Hard __________ Soft

Unpleasant __________ Pleasant
Fair __________ Unfair
Weak __________ Strong
Wide __________ Narrow
Shallow __________ Deep
Dull __________ Sharp
Active __________ Passive
Dirty __________ Clean
Scales—continued

OUR MARITAL UNDERSTANDING

Good _________ Bad
Cold __________ Hot
Fast __________ Slow
Hard __________ Soft
Unpleasant ___________ Pleasant
Fair __________ Unfair
Weak __________ Strong
Wide __________ Narrow
Shallow ___________ Deep
Dull ___________ Sharp
Active __________ Passive
Dirty ___________ Clean

MY RELATIONSHIP TO MY SPOUSE

Good __________ Bad
Cold __________ Hot
Fast __________ Slow
Hard __________ Soft
Unpleasant ___________ Pleasant
Fair __________ Unfair
Weak __________ Strong
Wide __________ Narrow
Shallow ___________ Deep
Dull ___________ Sharp
Active __________ Passive
Dirty ___________ Clean
Scales—continued

MY SPOUSE'S RELATIONSHIP TO ME

Good ___________ Bad
Cold ___________ Hot
Fast ___________ Slow
Hard ___________ Soft
Unpleasant ___________ Pleasant
Fair ___________ Unfair
Weak ___________ Strong
Wide ___________ Narrow
Shallow ___________ Deep
Dull ___________ Sharp
Active ___________ Passive
Dirty ___________ Clean
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