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THE EFFECT OF DIFFERENT METHODS OF RECORDING COUNSELING INTERVIEWS ON VARIOUS DIMENSIONS OF CLIENT BEHAVIOR AND CLIENT-MEDIATED COUNSELOR BEHAVIOR

DISSertation

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

Charles Joseph Gelso, B.S., M.S.

* * * * * *

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1970

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CHAPTER I

INTRODUCTION

There are many ways in which counseling and psychotherapy research may be categorized. One common procedure is to classify such studies as either process or outcome research (Kiesler, 1966). The traditional distinction between process and outcome research has been explained by Luborsky (1959) who suggests that process research occurs when the investigator's principal concern is with how change takes place, therefore focusing in the interchange between the client and therapist. On the other hand, the principal focus of outcome research is on the end point of therapy, to answer the question of what changes take place.

In a very global way, it seems accurate to say that the history of research in counseling has been an effort to describe and explain the counseling process and its outcomes. In this effort numerous variables have been studied. Much research has focused on the counselor himself, e.g., his personality and attitudes (cf. Patterson, 1968), his flexibility in taking varying roles in counseling (cf. Robinson, 1955), his background and training (cf. Carkhuff, 1969). A second broad class of research has examined the role of client variables in counseling process and outcomes. Variables such as client expectancies (Goldstein, 1962), problem
severity and type (cf. Robinson, 1950) and personality (cf. Whiteley, 1968) have received much attention. Recently, the effect of several dimensions (e.g., needs, values, expectancies) of client-counselor similarity on counseling process and outcomes has received increased attention (e.g., Mendelsohn, 1966, 1968; Cook, 1966). A fourth broad class of relevant variables is one which has received a paucity of theoretical and research attention. This class has been labeled "contextual variables" by Carkhuff and his associates (Carkhuff, 1969; Carkhuff & Berenson, 1967). It seems noteworthy that although Carkhuff (1969) has probably devoted more effort than any other theoretician or researcher in counseling toward explicating the effect of contextual variables on the counseling process and its outcomes, he has done no empirical work on the effect of such variables. In addition, he rarely is able to cite research by other investigators on the impact of contextual variables.

Contextual Variables in Counseling

It seems appropriate at this point to define precisely what is meant by contextual variables. Carkhuff (1969) indicates that, in general, "contextual variables refer to immediate or proximal setting variables, or variables that represent critical aspects of the context within which the helping process takes place [p. 64]." He further suggests that contextual variables may be divided into two major categories: (1) those involving physical dimensions and (2) those involving personal dimensions.
Physical contextual variables pertain both to (1) physical location and appearances and (2) immediate or proximal setting variables. Carkhuff (1969, pp. 64-65) indicates that the first group of variables describe the location of the helping setting within the community at large. This includes the internal and external characteristics of the setting. The second category of variables, which Carkhuff sees as more relevant to the helping process, pertains to the physical characteristics of the actual setting within which counseling occurs, e.g., the furniture (including the relative positioning of the counselor and client), lighting, decor and art, music, the presence or absence of tape recorders and other such devices.

The personal contextual variables are categorized by Carkhuff (1969, p. 65) into those that have to do with (1) people, (2) the arrangements surrounding the treatment program, and (3) the availability of different kinds of treatment. People variables involve the client's experience with all persons associated directly or indirectly with the helping agency. Arrangement variables are those such as fees and terms of payment, financial arrangements, appointment schedules, and other factors involved in the waiting experience (including experiences that occur in the waiting room itself). Finally, the third type of personal contextual variables pertains to the type and variety of treatment procedures which the agency can offer its clients.

Of the two major types of contextual variables discussed above (physical and personal), those pertaining to the physical context are most relevant to the present investigation. Thus, a brief examination
will be made of their relevance to counseling as judged by various authors in the field. A review of basic texts in counseling and psychotherapy suggests that rarely do authors give more than passing mention to the role of physical contextual factors. Tyler (1969), for example, suggests that the physical context may be important in making the counselee feel accepted during his initial interview. She states that, "An office that is not too bare, chairs that are not too hard, freedom from interruptions by either personal call or by telephone—all these things help create the right atmosphere [p. 50]."

Goldstein, Heller and Sechrest (1966) examine the role of contextual variables from a different perspective. They are concerned primarily with the use of contextual variables to maximize the transfer of the learnings derived by the client from the therapy situation to extra-therapy or real-life situations. Goldstein et. al. (1966, p. 226) hypothesize that if therapists wish to minimize transfer of learning they should conduct all of their sessions with a client in one office, thus insuring that whatever responses may be developed in the client would become very strongly attached to the therapy situation alone. In addition, the therapist would use furniture in his office that is distinctive and does not vary from session to session. He would have stimuli in the office that mark it off from other places, e.g., diplomas on the wall, bookshelves, filing cabinets. The striking point here is that the above features are quite typical of the setting in which therapy usually occurs. Finally Goldstein et. al. (1966) suggest
that transfer of learning may be optimized if, particularly after the early phase of therapy, the therapist conducts his sessions outside of his office, e.g., some interviews should be conducted in the patient's home, others in his place of employment, in automobiles, in bars. Goldstein et. al. label this form of counseling "parkbench therapy."

Beier (1966) discusses the role of context from still another vantage point. His primary concern is with the communication process which occurs between the patient and therapist and with the analysis of the covert messages contained in a patient's verbalizations. Beier suggests that:

The physical setting of the therapist's office may also be of significance and may create feelings and expectancies which can be anticipated. A therapist who practices in his home with noisy children next door or in his university office with students or colleagues periodically disregarding the "do not disturb" sign may do well to consider what feelings this setting creates in the patient. Any other peculiarity of the physical setting, be it size of office, distance from town, or adequacy of seating facility---must be considered and then taken into consideration when information is to be decoded [p. 69].

Robinson (1950) views contextual variables such as privacy and comfortableness of the setting as influential in creating appropriate client motivation for counseling. In addition, Robinson suggests that counselor appearance (including dress, which may be considered a physical context variable) may be important in setting the stage for counseling and appropriately affecting client motivation. These variables seem particularly relevant in the early phases of counseling.
Finally, Carkhuff (1969), as indicated above, appears to pay much attention to the role of the physical context. He includes contextual variables as one of the four broad classes of relevant variables in his comprehensive model of helping process. (The other three classes are counselor variables, client variables and environmental variables, which are similar to contextual variables.) He believes that helper and helpee variables cannot be considered independently of the setting in which help-giving takes place (the context) and the helpee's natural environment (the environment). Carkhuff (1969, pp. 63-75) presents a number of propositions about the effect of contextual variables on the helping process. In summary, he proposes that the physical dimensions of the helping setting are influential in determining whether or not the helpee seeks help and becomes appropriately involved in counseling when he does seek help. Carkhuff points out that apparently little things in the physical setting may be experienced intensely in the moment by the client and, thus, may critically modify the counselor-client interaction.

In summary, contextual variables may be seen as one broad class of variables relevant to the counseling process and its outcomes. This class of variables may be categorized into those pertaining to the physical context and those having to do with the personal context. Although contextual variables are usually seen as important, there has been a paucity of research and conceptualization with respect to their role in and impact upon the counseling process. Several points of view regarding their relevance were presented above. The present
investigation is concerned with the effects of one such physical contextual variable: the tape recording of counseling interviews, using different forms of recording.

The Recording of Counseling Interviews

In the remainder of this chapter, a brief historical sketch will be made of the uses of tape recordings in counseling and psychotherapeutic interviews. In addition, the advantages of recording will be discussed and the research and thinking on the effects of recording will be reviewed. Finally, an analysis will be made of the methodological problems of existing research and of needed research in this area.

Brief History of Recording

The first electrical recording of psychotherapeutic interviews was done by Dr. Earl Zinn at Worcester (Mass.) State Hospital in 1934 (Gill, Newman & Redlich, 1954; Kogan, 1950). From a microphone in his office, wires were led to an adjoining room where one could listen through earphones and record on dictaphone cylinders. As one might expect, the quality of the recordings left much to be desired. Zinn taped a series of psychoanalytic sessions, primarily for research purposes. Apparently, however, he did not follow up his initial efforts.

It appears that the first reference to the uses and advantages of recording was made by Symonds (1939) over thirty years ago. In addition, there seems to be general agreement that the first systematic recording program in counseling was begun at the Ohio State University
in the early 1940's under the direction of Carl R. Rogers and Francis P. Robinson (Covner, 1942; Kogan, 1950). During this period, these psychologists began to direct a succession of studies, continuing throughout the 1940's, based upon the verbatim recording of counseling interviews. In fact, in 1950, Kogan (1950) indicated that up to that point most of the research which was based upon verbatim analysis of interviews was conducted at the Ohio State University and the University of Chicago (where Rogers had moved to).

Following the inception of the audio recording program at O.S.U., Rogers (1942) discussed the advantages of recording for both the scientific study and the practice of counseling and therapy. His following statement appears applicable, even today:

The use of these relatively new mechanical devices provides for the first time a sound basis for the investigation of therapeutic processes, and the teaching and improvement of psychotherapeutic techniques. Therapy need no longer be vague, therapeutic skill need no longer be an intuitive gift. Psychotherapy can become a process based upon known and tested principles. The recording program here described has given us a beginning understanding of the basic elements of therapy, has opened the door to highly significant research, and has enabled us to train psychologists to become much more adequate as therapists [p. 434]."

There were many technical problems which plagued the early recording efforts. According to Covner (1942), the only feasible method was to employ phonographic recordings using acetate-surfaced discs to record on. These usually were ten inch discs which took only about five minutes of recorded material. An extra turntable was necessary if continuous recordings of complete interviews were to be made. Around the mid-1940's the Ohio State group began to use
wire and tape recorders which, of course, were easier to operate, less troublesome mechanically, and provided better fidelity.

During the early years of recording, much concern was exhibited over the possible damaging effects of the client's and counselor's knowledge of being recorded on their interaction. This concern was exemplified by the fact that in the O.S.U. recording program clients were not always informed that their interviews were recorded. For example, Snyder (1946), in his investigation of the nature of non-directive therapy, did not inform any of the clients that they were being recorded. In Covner's (1942) study of counselors' reactions to being recorded, students and non-students who came for counseling at the Psychological Clinic were also not informed of the recording unless they happened to discover the hidden microphone. These two studies were conducted at the Psychological Clinic at O.S.U. A different policy seemed prevalent in the Educational Psychology Laboratory. All clients who sought counseling at this agency were informed that a microphone was concealed in the room and that their interviews might be overheard by the counselor's supervisor (Porter, 1943; Robinson, 1950).

The disagreement over whether or not clients should be informed appeared to be carried over into the early 1950's. Gill et. al. (1954), for example, indicated that if they were to see a patient for just one session, their policy was to not inform him of the recording. If, however, they planned to counsel the patient for more than one interview, he was so informed.
While the arguments for not informing a client of the recording procedure usually focused on client benefit (i.e., preventing him from becoming too upset), many counselors began to attack this procedure on ethical grounds (e.g., Kogan, 1950). Currently, whether or not to inform the client is no longer an issue in counseling and therapy since not doing so is viewed as clearly unethical by probably the overwhelming majority of counselors. Accordingly, informing the client of recording is now standard practice, either before or during the initial interview.

Judging from the research on counselor training and the counseling process, audio tape recording became an increasingly common practice during the 1950's. In the 1960's it appeared to be standard practice, particularly in agencies which train counselors (Ryan, 1969).

In addition, the 1960's witnessed the advent of video-tape recording. The use of video recording appears now to be increasing to a point where it too will soon become common. This form of recording has many advantages over audio recording. It permits research on non-verbal communication in counseling and therapy. Perhaps more important, it can be extremely helpful in counselor training programs. As Ryan (1969) indicates, video recording allows supervisors to help counselor trainees become aware of non-verbal cues that affect the counselor or the client. It also permits the detection of personal mannerisms of the counselor which may interfere with counseling.
The frequency with which video taping is currently being employed in counselor education programs is exemplified by Ryan's (1969) recent statement:

The counselor education staff [University of Maine] no longer feels bound to a campus practicum because local schools lack one-way vision rooms or facilities. Any office of 9x12 dimensions with a standard 110-volt outlet permits video taping. Counselor candidates are taping sessions in all sections of our state with the local schools' approval. The response and enthusiasm with which the new equipment has been received demands that the profession give increased attention to this medium for counselor education [pp. 128-129]."

It seems clear that recording procedures have greatly facilitated the training of counselors and research on the therapeutic process. That audio recording was an improvement over no recording at all appears self evident. In addition to the advantages of video over audio recording as indicated above by Ryan (1969), there is some crude empirical data to suggest that it aids in the training of counselors (Eisenberg & Delaney, 1970; Poling, 1968; Walz and Johnson, 1963). Also, some novel methods of using video procedures in the conduct of counseling have been proposed (Higgins, Ivey & Uhlemann, 1970; Kagan & Schauble, 1969; Kagan, Krathwohl & Miller, 1963).

Despite the advantages of recording over non-recording and video recording over audio recording, it is a disturbing fact that an extreme dearth of research exists on the effects of various recording procedures on the counselor, the client and their interaction. While very little research has been done in the effects of audio recording since its inception over thirty years ago, it appears that almost no empirical work has been done on the effects of video
taping. Thus, a procedure is beginning to be employed on a wide scale, particularly in counselor education, without any empirical knowledge of its effects. Such lack of research is criticized strongly by Carkhuff (1966) as follows:

Recording is used for many purposes—supervision, consultation, research, but some aspects of this are intolerable even though heard only by professional colleagues. Whether taped or not, the counselor serves for the purposes of the client and must be shaped by what is effective for the client, not what is effective for his colleagues. He must have full awareness of the effect of the tape recording upon both himself and the client [p. 471].

In the following sections, a review and analysis will be made of what little research has been conducted on the effects of recording. Along with existing research, a sample of the opinions of practitioners who have experienced being recorded will be presented. In addition, a methodological critique of the existing research will be made, along with suggestions of needed research.

Review of Literature

Perhaps because of the many helpful aspects of audio and video taping in counselor supervision, counselor educators seem to assume that such recording has little or no impact on the therapeutic situation (Roberts & Renzaglia, 1965). More specifically, as Van Atta (1969) implies, there is a general tendency among educators and practitioners in the various helping professions to admit that being recorded may be threatening to the counselor but not to the client, other than very temporarily, i.e., the threat quickly dissipates in the client.
Bergman (1966), for example, suggests that as long as the background factors (e.g., microphone and camera) remain unchanged and undisturbed during the course of therapy, the patient adjusts to them. To the therapist, however, Bergman (1966) and others (Gill, Newman & Redlich, 1954; Carmichael, 1966; Jackson, 1966; Redlich, Dollard & Newman, 1950) indicate that these same paraphernalia represent a greater threat. The counselor's supervisor and/or colleagues are usually hearing and/or viewing the therapeutic transaction and, in the process, evaluating the counselor. As with the client, however, there appears to be a prevalent belief that the counselor's anxiety over being recorded eventually dissipates, although at a slower rate than is the case for clients.

The above argument seems sensible. However, particularly with reference to the client, a critical question centers upon just how soon this "mike fright" does dissipate, or at least reduces to a point where it does not interfere with the therapeutic process. This question is particularly relevant to the counseling profession (as opposed to psychiatry and clinical psychology), since in most counseling agencies clients are typically seen over a short period of time (Clark, 1966; Nugent & Pareis, 1968). It should be noted that the above opinions have been stated by professionals working in psychiatric settings. Practitioners in counseling settings (e.g., counseling centers, counselor training programs) have been quite silent on this issue, although they seem to have done about as much research as other professionals.
What are the results of the research itself on the effects of various recording procedures on the counselor, the client and their interaction? In the earliest study on the effects of recording, Covner (1942) sought to determine, through a questionnaire, the reactions to audio recording of experienced and inexperienced (graduate students) counselors. Covner found that only 20 percent of the counselors exhibited what he considered undesirable reactions (e.g., being less attentive to the client, self conscious and nervous about recording, disturbed only when certain that a recording was being made\(^1\)), and such reactions were even less frequent among experienced counselors. Covner's criterion of what constitutes a negative reaction, however, may be questioned. If those counselors who felt "more conscious of techniques and more careful during every interview" because of the recording procedure are included in the "negative reaction" group, than almost 40 percent of the counselors were negatively affected by recording, and 3 out of the 10 experienced counselors were so affected.

While the above study has many obvious and serious limitations, it appears to be the only formal research on the effects of recording on the counselor alone. Additional evidence is of an even less formal variety. For example, Redlich et al. (1950) noted that in their research projects which involved audio taping the psychiatrists involved were initially very resistant to the recording procedures,\(^1\)

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\(^1\)Counselors in this study were not always told when their interviews would be recorded.
showed dislike for their own recorded voices, and displayed "unconscious objections," e.g., forgetting to turn the recorder on, inadvertently erasing tapes. The authors felt, however, that the therapists quickly (how quickly?) adjusted to the situation. More recently, Carmichael (1966) had one therapist introspect on his awareness of being recorded (audio and video) after each of 19 sessions and 6 months after the 19th session. The therapist was found to be usually aware of the camera and an inverse relationship was found between the intensity of his awareness and his satisfaction with the particular session. In general, being recorded appeared to be a strain on the therapist. On an experiential basis, Carmichael (1966) suggests the threat of recording when he indicates how difficult it was for him and his colleagues to get therapists to participate in their research. Most of those who were approached were friendly to the idea, but gave an assortment of excuses for not being a therapist-subject in the project.

What research has been done on the effects of various recording procedures on the client's responses to and evaluations of counseling and psychotherapy? As will be seen, the studies which have been conducted yield conflicting results. In the first such study (Kogan, 1950), 4 experienced caseworkers conducted 61 initial interviews in a family service agency. The criteria in this study were patients' reactions to their interviewers' requests to record the sessions, and the opinions of the interviewers themselves. None of the patients' refused his interviewer's request. In addition, the interviewers felt
that any initial tension over recording quickly disappeared. Kogan, thus, concluded that there is little evidence of overt resistance by patients to recording. It should be noted that prior to this the interviewers asked 36 new clients if they could record their interviews, and only 1 refused. When counselors asked their old clients, however, they got much more negative responses (type and proportion not presented in the study). This "side finding" presents the possibility that lack of overt resistance in new clients may be due to a compliance factor. This possibility is consistent with the informal findings of Gill et. al. (1954) who indicate that only after the initial phase of therapy did patients in their project raise objections to the recording procedure. Gill et. al. suggest that early in therapy such feelings are latent.

Harper and Hudson (1952) recorded all 15 initial interviews that took place during a designated time period at a marriage counseling agency. At the beginning of his sessions each client was asked by his counselor for permission to record for the aid it would give the counselor. Midway through the interview the counselor turned off the recorder, indicating that he had all the information that he would need on tape. Actually, the entire interview was taped by a recorder in an adjoining room. This allowed the investigators to compare clients' responses when they were aware of being recorded with those when they were unaware. Of the 15 clients, 12 agreed without question to the counselors' requests to record, and the 3 remaining clients agreed after questions pertaining to confidentiality were satisfactorily answered.
Four independent judges listened to and compared the segments of each interview which the clients knew were recorded with the segments which the clients did not know were recorded. They were not able to detect differences between these segments in clients' verbal behavior. The authors tentatively concluded that client anxiety due to recording may be in the minds of counselors. The design of this study, however, can be severely criticized since it lacks any quantification or objectivity. The judges simply listened to the tapes with no designated dimensions on which to rate client behavior. In addition, the authors did not indicate that the judges were "blinded" on the experimental condition (client aware vs. unaware of recording) under which they were rating, thus introducing the possibility of bias in the judges' opinion. Finally, clients' agreement to be recorded appears to be a poor measure of the possible effects of recording (e.g., whether it is anxiety provoking) due to the factor discussed above, i.e., client compliance. This point is important, since the authors seem to infer that client agreement is a relevant measure.

Lamb & Mahl (1956) conducted a study in which 3 therapists performed intake interviews with 39 patients (35 outpatients and 4 hospitalized patients). All interviews were audio recorded, although the microphone was not directly visible to the patients. At the beginning of each interview, the patients were told that their interviews would be recorded so that their therapists would not have to take notes and could listen freely and easily. If questions were
raised patients were reassured that the recordings would be confidential. The criterion in this study was whether or not patients manifested any overt reaction to the recording, both when the therapists informed them and during the interview.

Lamb and Mahl found that 60 per cent of the patients raised no objection to being recorded and did not bring the matter up again during the interview; 20 per cent raised initial doubts, but after being reassured about confidentiality did not again bring the matter up during the interview; 20 per cent refused or did bring up the matter of recordings again later in the session. In addition, no support was found for a "suppression-displacement" hypothesis which the authors entertained, i.e., an inverse relationship was not found between rated general hostility and hostility directed at the recording procedure. The authors concluded from these results that in the great majority of cases recording does not have a marked overt deleterious effect upon psychiatric patients in their initial interview.

In another part of the study, Lamb and Mahl found that a sizable proportion (43-58 per cent, depending upon how the data was tabulated) of psychiatrists and psychiatric residents at the Yale University Medical School who had recorded interviews felt that the recording affects their procedures. (Note that a selection bias is introduced here since only 56 per cent of the staff had done recording.) In addition, a similar per cent felt that recording affects patients in the initial interview and in long-term therapy, and that it
increases resistance in therapy. A positive relationship was found between therapists' feeling inhibited by recording and their feeling that it adversely affected patients, which appeared to support the hypothesis that, in fact, therapists' project their feelings of discomfort onto patients. The authors, in combining both parts of the study, concluded that therapists feel patients are bothered by recording much more than patients really seem to be bothered, and that possibly therapists are projecting their own discomfort onto their patients. Due to the client compliance factor discussed in reference to Kogan's (1950) study, however, this conclusion appears very questionable. Patients' overt resistance to recording may be a poor measure of its effects.

In a recent study by Graff (1968), 30 school counselors who were participating in an NDEA Institute each counseled 10 high school students. The counseling was conducted in the high schools at which the counselors were working as part of their institute experience. At the beginning of the initial interview, each counselor asked one-half of his clients (every other client in the order in which they came for counseling) for permission to audio tape the interview. These clients were told that this was customary procedure. Following the initial session, a receptionist asked clients to complete the Counseling Evaluation Inventory (CEI; Linden, Stone & Shertzer, 1965), a 21 item inventory consisting of 3 factors: Counseling Climate, Counselor Comfort and Client Satisfaction. When the scores on the CEI of the recorded vs. non-recorded clients were compared, no significant differences emerged on any of the factors.
In critiquing the above study, several points become relevant. For one, the author did not tell clients that their counselors would not see their CEI responses. Thus, it seems possible that any true differences between the 2 groups were masked by uniformly high scores due to clients' fear of their counselors seeing their responses. The CEI would appear to be particularly susceptible to such a problem, since most of its items rate very high on social desirability (Linden, et. al., 1965). Since the author does not present means on the CEI, however, it cannot be determined if the scores of both groups approach the ceiling of the test. Finally, Graff does not indicate whether or not clients were told what the tapes would be used for. Taping may have a different effect when a client believes that his counselor will be the only person to hear it as opposed to a situation where the client is informed that his counselor's supervisor will also listen to the tape. This latter situation, of course, is more typical of counseling conducted as part of a counselor's graduate program.

The 4 studies discussed above present essentially negative results. That is, they indicate that audio tape recording does not have an effect on clients, in terms of the dependent variables which were studied. Five additional studies have been conducted which yield essentially positive results. These will be discussed below.

Sauer and Marcuse (1957) administered the Thematic Apperception Test (TAT) to college freshmen who were among the highest and lowest of their entire class on manifest anxiety. Overt audio recording (Ss aware) was made during one of the 2 interviews and covert recording (Ss unaware) during the other. The order of the recording condition was counterbalanced.
Sauer and Marcuse found that high anxiety Ss responded faster to the TAT cards, emitted a greater number of words and talked at a faster rate under overt recording conditions. The same trends occurred with low anxiety Ss, but to a lesser degree. No difference between Ss under overt and covert recording conditions was found regarding the "clinical significance" of their stories. Finally, 26 per cent of the Ss reported experiencing more difficulty in giving stories under the overt recording condition, and 77 per cent of these reported such difficulty after the first interview. These results, as the authors indicate, are difficult to interpret. It seems likely that Ss verbalize more and at a faster rate when they are aware of being recorded because their anxiety rate increases. This interpretation is consistent with Kanfer's (1959) finding that verbal rate increases as a result of immediate, temporary anxiety. The finding that Ss revealed as much about themselves through their TAT stories under overt as compared to covert recording, however, would seem to support the use of recording in such test administration, although the reliability of judges' ratings on such a variable may be seriously questioned (cf., Little & Schneidman, 1959). Finally, the fact that most of the Ss who reported being inhibited by the recording did so after the first interview may suggest that the possibly inhibiting effects of recording are quite temporary.

Although the Sauer and Marcuse study appears to be much more sophisticated methodologically than the previously reported research, caution must be exercised in generalizing the results to the counseling
situation, since the effects of audio recording in a projective testing situation may differ appreciably from those in a counseling situation. This problem of extrapolation is even more evident in a neatly designed study by Wapner and Alper (1952) who found that the presence of an audience while an individual must make a correct decision increases the time it takes to make the choice. The time was found to be longest when the audience was unseen, shortest when there was no audience, and intermediate when the audience is seen. Wapner and Alper conclude that the threatening feature of being observed constrains or inhibits the subject in his problem solving ability. If the analogy between an "unseen audience" and counseling under supervision is accepted, the Wapner-Alper and Sauer-Marcuse studies, taken together, seem to suggest the hypothesis that recording may produce anxiety which increases verbal rate but inhibits cognitive problem-solving ability.

In a less formal but recent study, Carmichael (1966) had one therapist free associate about his therapy sessions after each of 19 interviews with a patient manifesting a character neurosis. In addition, the therapist observed sound films of the alternate sessions from 1 to 19 six months later, and immediately following these film showings he recorded his impressions and associations of what he had just seen and heard of the patient and himself in the therapeutic situation. The therapist and a colleague then compared and rated his impressions immediately after each session with those 6 months later on 10 relevant dimensions. Regarding the effect of recording on the
patient, the original therapist introspections indicated that he felt the patient had been largely unaware of the recording process. Six months later the therapist saw more evidence of the patient's awareness of the filming, and so indicated in his introspections. He recalled, however, that he had thought at the time of the interviews that the patient was exhibiting much awareness. The accuracy of this observation was supported by the discussion which the author and his associates had with the patient following the termination of filming. While this research has several very serious limitations, it suggests that counselors may forget quickly after their sessions the client's sensitivity to recording. This would seem to be particularly applicable to counseling conducted by graduate students, since in many programs they are required to record with all clients.

A recent study by Van Atta (1969) is directly applicable to counselor education. Subjects were 89 clients referred to the assessment division of a university counseling center after an intake interview. The Ss responded to a 9 alternative question designed to determine how their feelings during counseling might vary on an inhibition-excitation dimension due to various methods of being observed: TV camera, motion picture, one-way mirror, co-therapy, audio recording, no observation. In anticipating how they would feel while being counseled under these conditions Ss were to assume that they went to talk to a psychologist about (1) personal problems and feelings, (2) study problems, (3) career decisions.
The results indicated that clients anticipate feeling more inhibited when discussing personal feelings and problems than career decisions or study problems, regardless of the method of observation. Secondly, regardless of the problem type, the method of observation affects clients' anticipated feelings during counseling. Clients anticipate feeling least inhibited (most excited or stimulated) when not recorded or observed and most inhibited when being observed by TV camera, motion picture, and one-way mirror. Also, there was an interaction between problem type and method of observation. While visual methods of observing are anticipated to be most inhibiting for all problem types, clients anticipate these methods as being more inhibiting when discussing personal feelings and problems than study problems or vocational decisions. Finally, over one-fourth of the Ss indicated that they could not imagine discussing personal feelings with a psychologist if the interview were observed via one-way mirror, TV camera, or motion picture film.

The Ss in Van Atta's study were students who had not been counseled, and their task was to indicate on the Inhibition-Excitation Scale how they thought they would have felt and behaved under the conditions indicated above. Thus, it would be inappropriate to generalize the results in a straightforward fashion to the actual (vs. anticipated) effects of various methods of observation. Possibly the most applicable finding is that between 26 and 36 per cent (depending on the specific observation method) of the Ss indicated that they would not discuss personal problems in counseling when
observed by visual methods. Thus, counseling agencies which gain a reputation for such methods of observation may be eliminating a sizable minority of students from their clientele.

Along with Van Atta's study, a project by Roberts and Renzaglia (1965) had the most direct bearing on the design of the present investigation. It attempted to measure the effect of various audio recording procedures on both the client and the counselor. Eight graduate student counselors each counseled 2 clients for 3 interviews. Each of the 3 sessions was conducted with a different recording procedure (sequence randomly assigned): (1) tape recorder present and visible in the counseling room (TR), (2) microphone present and visible in the room but connected to a central recorder (MO), (3) not recorded (NR). In fact, the NR condition was recorded, although counselors and clients were led to believe that it was not.

Roberts and Renzaglia found that clients made a greater percentage of positive self-references when they knew they were being recorded (TR and MO) and a greater percentage of negative self references when they thought they were not recorded. Counselors tended to be less client-centered when they knew they were being recorded, although their training program advocated client-centered counseling. Recording conditions were not related to percentage of ambivalent or non self references in the client, client talk time, counselor talk time, and counselor-client talk ratio. Regarding the meaning of the effect of recording on counselor behavior, the authors hypothesized that without recording (NR) counselors were more client-centered
because they felt freer to implement their graduate school learnings (client-centered counseling). The fact that recorded clients (MO, TR) made more positive and less negative self references may have been a result of exposing themselves (negative self reference) on a relatively permanent record.

The Roberts-Renzaglia study appears to be a relatively well designed and executed investigation. Since along with Van Atta's (1969) study, however, it provided the major impetus for the design of the present study, its limitations will be analyzed in greater detail than those of the other studies. For one, this was a within subjects (repeated measures) design. It seems possible that the effects of recording may be inappropriately magnified by such a design. That is, the effects of recording may be accentuated after a client has had an interview in which he was not recorded. Conversely, the effect of not recording may be heightened after he is counseled with recording during his first or second interview. Counterbalancing procedures would not control for such effects. Such considerations would seem to suggest the greater appropriateness of a between-subjects design.

Secondly, this study has no control for client problem type. Van Atta's (1969) research suggests, however, that such a factor should either be incorporated into a factorial design (problem-type X recording condition) or held constant. A third and more serious limitation is that it does not appear that the counselors specified to the clients the purpose of the recording. (The counselors, who
were themselves deceived in the NR conditions, were told to request clients' permission to record, but the authors do not indicate how the counselors went about this.) Were the clients told that the counselors' supervisors and/or fellow graduate students would hear the tapes? Were they told that the tapes were only for the counselors? Were they told only that taping was standard procedure? Such information may well underly the possible effects of recording and, thus, needs to be specified.

A fourth limitation is that apparently the senior author made all of the ratings in the study himself. (This point is not made clear in the journal article but is clarified in the senior author's dissertation; Roberts, 1962). In addition, the researchers give no evidence that the senior author "blinded" himself on the experimental conditions of the interviews when he conducted his ratings. This factor clearly allows for the possibility of experimenter bias in the ratings.

Finally, this investigation confounded the effects of recording on the client with those in the counselor. The differences in client responses and in counselor responses across the 3 experimental conditions may have been mediated by one or the other. For example, recording may affect a counselor's behavior and the differences in his responses, in turn, may mediate differences across experimental conditions in the client's responses (or vice versa). This is a relevant consideration, since it suggests that the counselor or the client may be affected by the recording and he, rather than the
recording condition, may cause changes in the other party's responses. Thus, it appears important to tease apart the possible effects of various kinds of recording on the client from those on the counselor.

**Conclusion**

Ten studies have been summarized and critiqued in the above section, along with an overview of opinions on the effect of recording. What may be concluded from the empirical work on the topic? It is at once apparent that the results are somewhat contradictory, although a closer inspection reveals that at least part of the seemingly contradictory findings are a result of differences among studies in the dependent variables employed and the methodological sophistication. The 3 studies that go beyond the utilization of simple survey procedures, highly subjective dependent measures, or subject agreement with a request to record as a dependent variable yield positive results, at least in part (Roberts & Renzaglia, 1965; Sauer & Marcuse, 1957; Wapner & Alper, 1952), although only the Roberts-Renzaglia project applies directly to counseling.

The negative results contained in studies discussed earlier suggest several conclusions. For one, if audio recording does have an effect on client behavior the effect is not so powerful as to be detected by simply listening to and subjectively comparing clients' responses when they are aware of being recorded with those when they are not (Harper & Hudson, 1952). As Roberts and Renzaglia (1965) indicate, the effects, although important, may be too subtle to detect
without the use of objective measures or reliable rating procedures. Secondly, as has been indicated earlier, the effects of audio recording on clients are not so great that many patients will refuse their therapists' request to record or make comments about the recording procedure after they give their consent in an initial interview (Kogan, 1950; Lamb & Mahl, 1956). As Gill et al. (1954) suggest, criticisms of the recording procedure tend to be expressed only later in therapy. While patients or clients tend not to object to recording (at least audio recording), Van Atta's (1969) study suggests that a sizable minority of potential clients may not enter counseling to begin with when they know they are being observed through visual methods.

Thirdly, perhaps since clients tend not to overtly resist recording, the possible effects may not become immediately apparent to a therapist. He may become aware of such effects only after treatment has terminated (Carmichael, 1966). At least as of 14 years ago evidence suggests that a sizable proportion, perhaps a majority, of psychiatrists felt audio recording adversely affected clients. Since whether or not psychiatrists felt such recording disturbed clients was found to be related to whether or not recording self-admittedly disturbed the psychiatrists themselves, the possibility presents itself that at least some of the client disturbance was either a projection of the therapist or mediated by the therapist's anxiety-based responses (Lamb & Mahl, 1956). Yet Van Atta's (1969) very recent study indicates that university counseling center clients
anticipate being inhibited by both audio and video recording procedures, although moreso by video techniques.

Finally, the effects of audio recording may not be so great as to adversely affect high school students' evaluations of counseling and their counselors (Graff, 1968). Van Atta's (1969) research suggests, however, that at least when students serve as clients, the effect of recording may depend in part upon the nature of the student's problem, i.e., whether it deals with personal matters, vocational decisions, or study problems. It is possible that the effect of recording on clients' evaluations depends upon the nature and/or severity of their problems.

Regarding the affects of recording on the counselor or therapist himself, the early evidence suggests that at least a sizable minority of psychiatrists (Lamb & Mahl, 1956) and psychologists (Covner, 1942) are adversely affected by audio taping. Although to a lesser degree, this finding seemed applicable to experienced as well as inexperienced therapists. Recent evidence also suggests that audio and video procedures may adversely affect counselors (Roberts & Renzaglia, 1965; Carmichael, 1966). The methodological limitations of these 2 studies, however, preclude placing a great deal of confidence in the results.

In sum, the evidence appears to suggest that audio and video recording procedures do have some type of effect on both clients and counselors. The effect is not so gross or powerful, however, that it will be detected without the utilization of fairly sensitive and
reliable dependent measures, although few studies have used such measures. In addition, although recording does appear to have a "main effect" on certain dependent variables, evidence suggests that the effect of recording is complex and may interact with many other types of variables, e.g., the type of client problem.

Despite the fact that the recording of counseling interviews appears to have some type of effect on the counseling encounter, we know very little about the nature of this effect and the conditions under which it occurs. This lack of knowledge is a result of the very limited quantity and quality of research on the topic, despite the fact that recording of counseling and therapy interviews has occurred for over 30 years. The lack of quantity and quality of research is most apparent with respect to the effects of video recording procedures, a more recent phenomenon in counseling. Only 2 "studies" have been undertaken on the effects of video recording, one employing a simple survey procedure and the other relying on a single therapist's subjective reactions as the criterion measure.

**Needed Research**

What does past research and thinking about the effects of recording suggest for future research designs on this topic? Several points are salient.

First, it is important that the possible effects of recording on the client be teased apart from those on the counselor (and vice versa). For example, it is possible that behavioral differences in
clients under different recording conditions are due to the effects of recording on the counselor. Thus, it is possible that recording affects the counselor's responses, and these responses, rather than the recording procedure, affect the client. Appropriate research designs would study the effects of recording on the client with the counselor's behavior held constant across different recording conditions.

Secondly, some control should be employed for client problem type, personality type, degree of disruption, etc. Treatment by levels designs, as discussed by Scott and Wertheimer (1962), would be particularly helpful. Here, some client variable (e.g., problem type) would be incorporated into the design to reduce within group error variance and to determine if this variable interacts with recording condition in affecting certain dependent variables, although the "main effect" of this client variable would not be of particular interest. This suggestion could also be implemented with respect to counselor variables, e.g., amount of experience, personality type, theoretical bias.

A third point is that the possible effects of recording need to be studied across time. As indicated earlier, there seems to be a prevalent belief among counselor educators that the effects of recording (e.g., anxiety, inhibition) dissipate rather quickly, but no research has studied the accuracy of this belief. Early reduction or dissipation of adverse effects is particularly important to the counseling profession (versus psychiatry and clinical psychology).
since counseling (versus psychotherapy) usually is on a short-term basis.

Fourthly, future studies must specify exactly what clients are told about the recording, i.e., its purpose and how it will be utilized. This point is elementary, yet most of the past research on the effects of recording has either not informed the reader of what exactly clients were told or not presented uniform information to all clients. This point is critical, since the nature and magnitude of the effects of recording procedures may depend upon what clients think the recordings will be used for and what people will have access to them.

In addition, future research should give more attention than has been customary to the selection of criteria. The effects of recording need to be studied across a variety of criteria. Past research does indicate that overt (verbal) resistance to recording and the request to record does not occur. Thus, this variable probably needs no further attention.

Even greater attention and thoughtfulness needs to be exerted in the selection of criterion measures. Past research has employed such measures with little attention to reliability. Thus, it will not be fruitful simply to have judges listen to and compare tapes of clients who knew they were being recorded with those who did not. At a minimum, such tapes should be rated with the use of reliable scales. In addition, simple surveys should not be utilized as the sole criterion measure. If used, such measures should be employed along
with other more objective measures which actually do examine the counselor's and/or client's behavior, rather than his report of it.

Finally, research needs to examine the effects of video as well as audio recording. The only formal study on the effect of video recording surveyed students' anticipated feelings about being video taped. Research should not only compare video procedures with counseling done without recording but, also, the effects of video procedures with those of more standard audio procedures.

The points discussed in this section are only some of the more salient ones. As more research is conducted, one would expect additional needs to become salient.

The present investigation attempted to incorporate many of the above suggestions. It sought to examine the effects of 3 different methods of recording (video recording, audio recording, and minimum audio recording—a "quasi-control" group procedure which was substituted for a non-recorded control group) counseling interviews on an assortment of client variables. Clients' expressed problem types were classified into 2 groups to determine if this variable interacted with recording condition. In addition, the effect of the number of the counseling interview in which the client participated was studied to determine if it interacted with the recording condition in affecting the dependent variables.
The purpose of this chapter is to explore and clarify problems and issues related to the present research. The basis for the selection of the main and subsidiary independent variables will be given. Regarding the subsidiary independent variables, the rationale will be presented for employing the client problem classification which was used and the number of interviews which were analyzed. A discussion will be presented of criterion problems in counseling research, following which the basis for the selection of the criteria in this study will be examined. Finally, an analysis will be made of certain ethical issues which might be related to the present experiment.

The Selection of Independent Variables

The design of the present experiment may be appropriately labeled a "treatment-by-levels" design (Scott & Wertheimer, 1962, pp. 250-252). Such a design consists of one main independent variable (a treatment), the effects of which are of primary concern to the experimenter. In addition, it consists of one or more "subsidiary" independent variables which, taken alone, are of little or no interest to the experimenter. Such variables are employed to increase the power of a design, i.e., to reduce within-group error variance. Although the main effects of subsidiary independent variables are not
of interest, whether or not they interact with the main independent variable in affecting the dependent variable may be of considerable interest. Typically, the "levels" of a subsidiary independent variable represent naturally occurring selected groups of subjects (e.g., Ss in different diagnostic categories), although this is not a necessity.

In the remainder of this section, the rationale for the selection of the main and subsidiary independent variables will be presented. Literature pertinent to this selection will also be presented.

The Main Independent Variable

The main independent variable (IV) in this investigation was the "recording condition" under which counseling interviews were conducted. The question of what levels of this IV should the experimenter fix immediately presents itself. As indicated in the previous chapter, no experiment to date has compared the effects of video recording (sound-film) with those of audio recording (sound only), apart from Van Atta's (1969) survey study. Yet the need to do so exists, since it appears that video techniques will soon become common practice in counselor training programs (Ryan, 1969).

Ideally, such a design would also contain a control group which received counseling without recording or where recording was done without clients' awareness. The latter procedure would be preferable if the experimenter wished to obtain "in process" measures of client behavior. Although such process measures were desired in the present experiment, the ethical questions raised by misinforming
clients of the recording conditions (i.e., telling them that their interviews would not be taped when, in fact, they were; leading them to believe, through the absence of recording equipment, that interviews were not recorded) precluded the use of this procedure.

If the experimenter required process measures as part of his design, there appear to be 2 alternatives to the use of a "non-recorded" control group. One alternative would be to eliminate any control group and simply compare Ss who are (or think they are) being video recorded with those being (or think they are) audio recorded. A second alternative would be to use a "quasi-control group". Here Ss could be informed that only a portion of the session(s) would be audio recorded (as opposed to the entire session). The experimenter could then, in fact, tape only a portion of the session(s) and compare this portion with similar or identical portions of the sessions of Ss who expected to be video or audio recorded for the entire interviews.

Such a group would allow for clearcut interpretations of positive results, but the meaning of negative results would be ambiguous. For example, if the quasi-control group behaved differently than the experimental groups, it would seem safe to infer that video and audio (entire session) recording does have an effect upon client behavior. That is, it would be appropriate to generalize from the quasi-control group to a population which, in fact, was not recorded or aware of being recorded. However, if no difference emerged between the experimental groups and the quasi-control group, one could not
safely infer that recording had no effect. It is possible that recording just a few minutes of an interview has as great an effect as recording an entire session.

Despite these limitations, it was decided that such a control group would be preferable to no control group. Thus, 3 levels of the main independent variable were fixed: video recording, audio recording, and minimum audio recording (the quasi-control group). As will be explained in greater detail in the next chapter, all groups, in fact, were only audio taped for a portion of their sessions. The experimental treatment was the pre-set which was given to Ss about the recording condition, i.e., what they were led to believe the recording condition was.

A final issue regarding the main IV centers around what clients believe is the purpose of recording and who will have access to it. As indicated in the earlier critique of methodology of prior research on recording, this should be clearly specified, since what Ss are told is the purpose of the recording may well determine the effects of recording. In the present experiment Ss in all groups were told that the researcher would use the tapes to analyze counselor-client communication. This information was necessary, since, as will be discussed in the next chapter, Ss knew they were participating in an experiment. In addition, the 2 experimental groups were told that their tapes would be used for supervision, so that the counselor's supervisor could do a better job in supervising him. This information was given because the experimenter's primary interest was in the effects of recording in counselor training programs, where recording
is most frequently employed and where it is almost always employed for supervisory purposes.

**Subsidiary Independent Variables**

As indicated earlier, a subsidiary IV is one whose "main effect" is of little or no interest to the experimenter. It is utilized to (1) increase the power of a design (reduce error variance) and (2) determine if the effect of the main IV is similar across the various levels of the subsidiary IV (if not, interaction effects will emerge).

One of the subsidiary IV's in the present study was Ss' "problem type" as indicated by their self-report. The decision to incorporate such a variable led to the consideration of the various diagnostic classification schemes available in the counseling literature. These will be briefly reviewed below.

**Diagnostic Classification Schemes.** Probably the earliest diagnostic scheme in counseling was formulated by Williamson and Darley (1937). This scheme was "sociological" in that it described the common problem areas of college students without addressing itself to the causes of these problems. The problem areas were labeled financial, educational, social-emotional-personal, family, health, and vocational.

Bordin (1946) evaluated the Williamson-Darley scheme against 3 criteria for a sound diagnostic scheme: (1) Whether the scheme helps the counselor understand the causes of the client's problems, (2) whether the categories in the system are relatively independent, and (3) whether the system leads to differential treatment. Measured
against these criteria, Bordin found the Williamson-Darley scheme to be inadequate. He, in turn, proposed a scheme which, based on his counseling experience, seemed to satisfy the above criteria. The system consisted of the 5 following problem categories: Dependence, lack of information, self-conflict, choice anxiety, no problem (assurance needed).

Robinson (1950) indicated that systems which focus only upon the content and causes of the individual's problems are insufficient. They tell us little about the interaction of the client and counselor. Based upon his conceptualization of client-counselor interaction and a systematic research program, Robinson evolved 3 broad problem categories which were related to different counseling procedures and goals: Adjustment problems, problems in skill, and immaturity.

Modifications of the Bordin scheme were later presented by several investigators (Byrne, 1958; Callis & Clyde, 1960; Pepinsky, 1948). The Callis-Clyde system is noteworthy because it appears to be the first two-dimensional scheme. In addition to specifying constructs which purported to reflect the causal locus of a client's problems (e.g., self-conflict, interpersonal conflict), the Callis-Clyde scheme added a sociological dimension which consisted of the content of the client's problem, i.e., emotional, educational, vocational.

More recent diagnostic schemes have tended to be at least two dimensional. Robinson (1963) attempted to further conceptualize and elaborate upon his earlier scheme. His approach was based upon a blending of existing systems with his own thinking and research. In
his more recent scheme, one dimension consists of psychological concepts representing the causes of a client's problems. The second dimension indicates whether the client's problems are "remedial" or focus upon "developing strengths". The goals of counseling are related, as Robinson proposes, to whether the client has a problem to be remedied or is already functioning well and enters counseling so that he may attain an even higher level of adjustment.

Blocher (1966, 1968) has recently proposed a three-dimensional system for conceptualizing client variability, based upon his theory of human development and developmental counseling. A "life stage" dimension consists of the developmental stage which the person is at and the developmental tasks required of him at that stage. A "life space" dimension consists of the roles which the individual assumes and the relationships in which he engages. A "life style" dimension appears to assess how the individual copes with his life problems. Although this system may have much potential, Blocher does not clarify just how it would be employed in counseling or how it would affect counseling procedures.

Blocher (1966) has developed a second diagnostic system which is unidimensional in nature. The system is not based upon presumed causal bases but, rather, upon the person's level of effectiveness. Blocher (1966) defines level of effectiveness as "the degree of control that the individual can exert over his environment and his affective responses [p. 128]". He describes 5 such levels: Panic, inertia, coping, striving, mastery. The connection, if any, between this
scheme and Blocher's three-dimensional system is not clarified by the author.

Very recently Tyler (1969) has developed a novel classification system which appears to be more clearly related to counseling techniques and goals than are the earlier systems. The system is two dimensional in nature. First, the areas of client difficulty are labeled Work, Interpersonal Relations, and Aloneness. Then, based upon the adequacy of the possibilities which the client has available to him, his case can be classified as Choice (possibilities adequate, the client needs to either survey his possibilities or make a decision), Doubtful (possibilities cannot be evaluated without greater understanding which counseling aims to give the client), or Change (possibilities inadequate, the client needs help in either removing obstacles or creating new possibilities). Thus, diagnosing a case as either Choice, Doubtful or Change leads to different counseling objectives, i.e., those in parentheses. Tyler (1969, p. 70) also indicates the type of counseling activities that are appropriate for each objective.

In attempting to relate the existing diagnostic systems to the choice of a method of classifying client problem type in the present study, it became clear that all systems are too elaborate to employ in their entirety. That is, the adoption of any system would entail too many categories, so that the experiment would not be practicable. Also, the systems which present psychological constructs which presumably reflect the causes of a client's problems were not
acceptable for the present study, since making judgments about the cause of a client's problems requires fairly extensive diagnostic work. In addition, on an intuitive basis it would seem that the problem content would be more relevant to the effects of recording procedures than would the causes of the problems.

Thus, a system was desired which was at once meaningful (i.e., related to the effects of recording) and practicable. Based upon an examination of the content areas in the Williamson-Darley (1937), Callis-Clyde (1960), and Robinson (1950) schemes, it appeared that the most relevant areas were educational, vocational, and personal-emotional-social. Since Van Atta's (1969) survey suggested that the effects of various methods of observing counseling interviews did not differ appreciably according to whether the client's problem focused upon study problems (educational) or vocational decisions (vocational), the educational and vocational areas were collapsed into one category. In its final form, the subsidiary IV of client problem type was broken into 2 "levels" (categories): educational-vocational and personal-social (cf., Appendix A for the Area of Concern Form on which Ss selected the category into which their problems best fit).

Interview Sequences. A second subsidiary IV was employed in the present design, although not in all the comparisons. This IV was the "number of the counseling interview" with each client. The desire to incorporate this variable led to an examination of the literature on interview sequences, i.e., how the number of the interview in an interview sequence is related to client behavior.
Most of the research on the relationship between interview number and various dimensions of client behavior has been conducted by Carl R. Rogers and his colleagues and students. This is probably a result of the client-centered group's emphasis on the "process conception" of therapy (cf., Gendlin & Tomlinson, 1967).

In one of the early studies of client-centered therapy, Raimy (1948) analyzed 8 successfully treated cases and found no change in the per cent of negative or positive self references which clients made from the first to the second interview. The per cent of negative self references did, however, decrease from the second to the third interview. In addition, positive self references increased dramatically and negative self references decreased much from the next-to-last to the last interview.

More recent studies by the client-centered group (Tomlinson, 1962; Tomlinson & Hart, 1962; Walker, Rablen & Rogers, 1960) indicate that movement across several dimensions of therapeutic process occurs in interview sequences with both counseling center psychoneurotics and hospitalized schizophrenics. This research does not focus upon interview-to-interview changes but, rather, series of interviews occurring early and late in therapy. A major research project on inpatient schizophrenics, however, does indicate differences in patient experiencing and involvement across three therapy interviews (Kiesler, Mathieu & Klein, 1967). With successfully treated cases self-experiencing decreases slightly from the first to the second interview, but increases from the second to third interview to a
point beyond the initial level. With unsuccessful cases, this pattern reverses itself.

An early study by Lewis (1943) is also of relevance to the present investigation. Lewis categorized the remarks of 6 female adolescents during the course of counseling. Among his many findings is that remarks indicating "blocking" are frequent very early in an interview series but decline rather quickly.

In the present investigation it was decided that each client would receive 2 counseling interviews. This decision was largely based upon practical considerations, since increasing the number of sessions beyond this point would not have been feasible. However, the data reviewed above do suggest that clients behave differently across interviews on variables which may be related to the possible effects of methods of recording counseling interviews. This fact supports the possibility of an "interview number" x "recording condition" interaction. The possibility of such an interaction was a major reason for utilizing "interview number" as an IV in several of the comparisons.

In addition to the above considerations, "interview number" was employed as a subsidiary IV because, as indicated in Chapter I, the predominant belief among counselor educators appears to be that if recording does have an effect upon clients, this effect quickly dissipates or at least reduces to a point where it does not interfere with the therapeutic process. If this belief were true, an "interview number" x "recording condition" interaction would be expected to emerge on certain dependent measures. Thus, if various forms of recording
did have a differential effect on a variable such as client inhibition, this effect would be expected to occur in interview 1 but not during interview 2.

Criteria in Counseling Research

Prior to discussing the criteria which were used in the present study, an examination will be made of criteria in counseling research in general. Specifically, dimensions along which criteria vary will be clarified. Past and present writing in counseling has displayed much conceptual confusion in this area because of the tendency to indiscriminantly combine these dimensions. This section will culminate with a discussion of units of analysis employed for measurement of several of the dependent variables in this study.

Dimensions Along which Criteria Vary

After examining literature on criteria in counseling, it is proposed that 4 major dimensions may be employed to characterize how criteria vary. These dimensions are not orthogonal, but differ in the extent to which they correlate with one another. The 4 dimensions are here labeled (1) immediate-ultimate, (2) internal-external, (3) subjective-objective, (4) specific-global. The 2 terms used to characterize each dimension represent opposite ends of a theoretical continuum.

In addition to a tendency to confuse these dimensions, authors in counseling and therapy have tended to place inappropriate value judgments on which ends of the continua represent "better" criteria.
It is currently prevalent to believe that criteria are more appropriate if they are on the ultimate, external, objective, and specific ends of the above-mentioned dimensions (e.g., Whiteley, 1968, pp. 153-174, 184-203, 252-258). Contrary to this trend, it is here suggested that at which points on the above dimensions do the most appropriate criteria reside depends upon the nature and purposes of the research.

A major dimension along which criteria in counseling tend to vary is labeled the immediate-ultimate dimension. At the center of the continuum, criteria may be termed mediate. This dimension is probably best defined in terms of the degree of finality of the criteria. Ultimate criteria reflect desired end states or final goals of counseling. Such states tend to be conceptualized in highly abstract terms such as self-actualization, self-realization, human effectiveness, etc. (cf., Patterson, 1968), although the degree of abstractness itself may vary. Ultimate criteria, as implied, reflect client behavior outside of the therapy situation.

Mediate criteria are employed when the researcher wishes to measure the effects of counseling and does so by comparing within-counseling behavior before and after counseling (or comparing randomly assigned experimental and control Ss at the end of counseling only). Such criteria are presumed to be related to ultimate criteria. They are employed because they are easier to assess than ultimate criteria and/or they have theoretical significance in and of themselves. Examples of such criteria are seen in much of the research emanating from client-centered theory, e.g., client self-exploration, experiencing, manner of problem expression (cf., Rogers et.al., 1967; Truax &
Mediate criteria are also used when the researcher wishes to study *extra-therapy* behavior which represents first steps toward ultimate outcomes. For example, behavioral counselors have made extensive use of "information seeking" as a mediate criterion (cf., Krumboltz & Thoresen, 1969). In such cases mediate criteria are used because they are easier to assess.

Finally, immediate criteria are employed when the experimenter wishes to examine moment-to-moment client activities within the counseling interview. For example, if the researcher wishes to study the moment-to-moment, within-interview effect of responding to (vs. ignoring) clients' expressions of dependency (e.g., Schuldt, 1966) this effect would be an immediate criterion. Verbal operant conditioning studies frequently utilize such criteria, since they are interested in moment-to-moment changes in Ss' verbal responses as a function of experimenter reinforcement procedures.

It should be noted that disagreement would be expected regarding the point where many criteria should be placed on the immediate-ultimate dimension. For example, Robinson (1950) conceptualizes (1) increased feelings of well being and adjustment and (2) increased actual effectiveness in the environment as the 2 ultimate criteria of counseling effectiveness. In the present scheme, these criteria would probably be placed somewhere between the ultimate and mediate points on the continuum.

At which point on the immediate-ultimate dimension do the most appropriate criteria for research reside? The answer to this question
seems to depend, to an important degree, on whether process or outcome research is being conducted. (See p. 1 for the distinction between process and outcome research.) If the researcher wishes to examine the counseling process, criteria ranging from immediate to mediate are probably the most appropriate. This is particularly true when very specific process variables are being studied, in which case the use of anything beyond mediate criteria may serve only to mask the effects of the variable under study (cf., Robinson, 1950, pp. 25-26). If, on the other hand, counseling outcomes are being studied, criteria ranging from mediate to ultimate should be employed.

A second dimension along which criteria vary is labeled internal-external. Its defining feature is the extent to which criteria assess in-therapy vs. extra therapy behavior. The internal-external dimension is highly related to the immediate-ultimate dimension, since ultimate criteria must be external to the counseling interview situation. Also, immediate criteria tend to be internal. However, external criteria need not be and usually are not ultimate or nearly so, e.g., Krumboltz and Thoresen's aforementioned information-seeking behavior. Process research, by definition, nearly always employs internal criteria. There has been a tendency for outcome research also to use such criteria, since they are more convenient and, at times, have theoretical significance, e.g., client-centered researchers' use of "experiencing" and "self-exploration" as outcome criteria.

2There may be some awkwardness in viewing the internal-external variable as a quantitative dimension. Since criteria have an either-or quality on this dimension, this may be best viewed as a qualitative dimension containing 2 main categories: internal and external.
There has been a recent trend, however, to advocate strongly the use of external criteria in outcome studies (Krumboltz, 1968; Wellman, 1968). It would seem that the investigator should employ at least one external criterion in any outcome study, since change in extra-therapy behavior is clearly the goal of all counseling. A possible exception to this statement would occur when internal measures are used which have clearly and consistently been found to relate closely to external criteria.

A third dimension along which criteria differ is here labeled gross-specific. The defining feature of this dimension is the degree of inclusiveness of the criterion. Very gross criteria incorporate many behaviors, while very specific ones incorporate few (in fact, only 1 behavior in the most specific criteria). Examples of gross criteria which frequently appear in the literature are client self-exploration, grade point average, job satisfaction, annual income, and hospital release. Each of these criteria do consist of or require a large number of more specific behaviors. Examples of frequently employed specific criteria are client information-seeking behavior and positive self references (especially in verbal conditioning paradigms).

There has been much recent controversy on whether criteria should lean toward the gross or the specific side of the continuum. Krumboltz (1968) suggests that gross criteria are inappropriate because they depend upon such a multitude of factors that a few hours of counseling should not be expected to affect them. Truax (1968) labels this argument "apologist nonsense", indicating that since many
gross criteria are socially meaningful they are appropriate. Furthermore, society may not wish to buy a procedure which cannot affect such variables.

The fourth dimension is termed objective-subjective. An examination of the literature in counseling indicates that this dimension tends to be defined in 2 ways. On the one hand, the dimension is frequently defined by the extent to which criteria reflect observable behavior. On the other hand, it is possible to define it in terms of the degree of inter- and intra-observer agreement, i.e., reliability. There appears to be a tendency for behaviorally-oriented counselors to employ the former definition, while phenomenologically and dynamically oriented counselors tend to prefer the latter, probably because these theories focus upon internal, unobservable phenomena.

When degree of inter- and intra-observer agreement is used to define the objective-subjective dimension there is probably general agreement that criteria should be reasonably objective (reliable), since reliability sets the upper limits on validity. When the alternative definition is used, however, much controversy emerges. Since behavioristically-oriented theories (e.g., Krumboltz, 1966) currently are attracting many advocates, there does appear to be a trend for researchers in counseling to support the use of objective criteria (observable behavior; cf., Krumboltz, 1968; Whiteley, 1968, pp. 252-258).

It should be noted that those who advocate equating objectivity with observable behavior frequently fail to specify what is meant by
"behavior", e.g., is the reference to motoric behavior? verbal behavior? physiological behavior? gestural and postural movements? all of these?

Despite the controversy cited above, it is possible to attain some degree of rapprochement by employing the "inter- and intra-judge agreement" definition, since this seems to encompass the "observable behavior" definition. That is, if behaviors are truly observable they would yield very high inter- and intra-observer agreement, thus residing on the objective extreme of the dimension. If this combined definition is employed, however, the point on the dimension at which criteria are most appropriate for research becomes less clear. For example, a psychoanalytically-oriented researcher may "settle" for much less objectivity than would be obtained by employing certain observable behaviors as criteria, and he may do so because he prefers to deal with highly complex internal mechanisms which have greater clinical and theoretical meaning to him.

Criteria in the Present Research

What are the implications of the above analysis for the selection of criteria in the present study? Several years ago Robinson (1950) proposed that a variety of criteria should be utilized in assessing counseling outcomes, since the use of limited criteria and criterion measures will give an inadequate sample of client adjustment and may result in biased counseling procedures. Recently, Truax (1968) has re-introduced this notion, suggesting that studies employ multiple criteria so that we may acquire an overall picture
of the effects of counseling. The analysis of the dimensions along which criteria vary offers a structure which may help the researcher to determine which criteria he might use in any study. In the present study several criteria were employed. The selection of each was based upon clinical experience and an analysis of past empirical evidence. In addition, an effort was made to select criteria which did vary on the dimensions discussed above.

Specifically, 7 criteria were selected for the present investigation. These criteria vary widely on the global-specific and objective-subjective dimensions, and they range from immediate to mediate on the immediate-ultimate dimension. All criteria, however, were considered internal. Such internal criteria were utilized partly because of convenience and partly because the effects of the main IV on extra-therapy behavior are believed to be both subtle and highly complex. Thus, it may be premature to select external criteria with so little evidence on the effect of recording on within-counseling behavior. It would seem appropriate to await such evidence before employing external criteria.

The 7 criteria, along with the rationale for their inclusion, will be briefly presented. Client depth of self-exploration was employed because of the extensive evidence that it can be reliably rated and is associated with relevant process and outcome variables (Carkhuff, 1969; Carkhuff & Berenson, 1967; Truax & Carkhuff, 1967). Client talk time and counselor talk time were both employed because there is conflicting evidence on whether or not recording affects such
variables (Roberts & Renzaglia, 1965; Sauer & Marcuse, 1957). It was felt that the present design would provide valid evidence on whether, in fact, recording affects client talk time (which may, in turn, affect counselor talk time) in an actual counseling situation. In addition, there is evidence that amount of client talk is related to counseling outcomes for clients with adjustment problems (Carnes & Robinson, 1948).

Extent of client perceived inhibition and counselor perceived client inhibition were employed because recent evidence suggests that these criteria may be affected by recording procedures, particularly for clients with personal problems (Van Atta, 1969). Similarly, degree of client self-reported inhibition due to the manner of recording was employed because one prior investigation found that Ss in a projective testing situation reported inhibition due to recording (Sauer & Marcuse, 1957). Yet no counseling research exists where clients were simply asked if the recording inhibited them.

Finally, clients' evaluation of counseling (including the counseling climate, the counselor's comfort, and the client's satisfaction with counseling and its effects) was used as a criterion, despite the fact that Graff (1968) found that this variable was unaffected by recording. As indicated earlier, serious methodological limitations in Graff's study may have precluded positive results. In addition, Van Atta's (1969) aforementioned findings indicate the possibility that whether or not clients' evaluations of counseling are related to recording procedures is determined by the type of problem
which the client wishes to discuss, i.e., personal or educational-vocational.

Units of Analysis

For 4 of the 7 dependent measures (criterion measures) the unit of analysis in the present investigation was either each counseling session or both sessions for each client. That is clients and/or counselors made ratings of each interview or of both interviews combined on these measures. For the remaining 3 dependent measures, however, judges made ratings from the tapes of each interview. This procedure raised the question of which segment(s) of each interview should be employed for these ratings, since it was practically impossible (i.e., due to time expenditure) to have judges rate each entire interview.

One procedure could be to obtain brief (e.g., 3-5 minutes) time samples from various segments of each interview. Thus ratings in the dependent measures could be made of 3-5 minute samples from early, middle, and late segments of each interview. An alternative strategy would be to analyze a longer sample (e.g., 10-15 minutes) from just one segment of each session. This alternative would be more desirable if a certain segment of counseling interviews was found to be more critical or relevant to outcomes.

Research which might suggest which of these 2 alternative strategies is more appropriate is almost totally lacking. Early research (Allen, 1946; Robinson, 1949) indicates that a meaningful unit to employ in analyzing counseling sessions is a division into
topics of discussion. Such topics appear to be meaningful and highly cohesive units. It has been found (Allen, 1946) that each discussion topic tends to have 4 sequential steps: statement of problem, development of problem, making plans, and summary. Most relevant to the present discussion, Allen (1946) has found that the first units in an interview are usually not as complete as units in the middle and latter phases of the session.

In a more recent study Kiesler, Klein and Mathieu (1965) divided 40 minute therapy sessions into 5 eight minute segments and made ratings of modal and peak client "self experiencing" during each segment. Most relevant to the present design, the authors found that for clients diagnosed as "normal" very little experiencing occurred during the first 8 minute segment. However, the highest level occurred during minutes 8-16, and thereafter the level continually declined. For "psychoneurotics," on the other hand, experiencing steadily increased across the 5 segments.

The results of Allen (1946) and Kiesler et. al. (1965), taken together, indicate that, perhaps due to a "warming up" phenomenon, little movement occurs during the early minutes of counseling sessions. For "normal" clients, the peak of the hour occurs in the middle portion of the session (i.e., minutes 9-24 in 40 minute sessions), although the latter part of the session is also significant, particularly for clients diagnosed as "psychoneurotic."

In the present experiment, counseling sessions lasted between 30 and 40 minutes. Since each client received only 2 sessions,
counselors were asked by the experimenter to guard against being too prescriptive and inhibiting client exploration. They were told that the last 5-10 minutes of each interview should be used to "close up" the session and discuss referral if appropriate (after session 2). Since approximately minutes 20-30 were used to "close up" some of those sessions which lasted about 30 minutes, it would not seem fruitful to use the segment beyond approximately minute 20 for analysis.

When the research evidence and the considerations in the above paragraph were considered in combination, it appeared that the time segment lasting from about minutes 10-20 would produce the most fruitful analysis. In fact, this 10 minute segment was taped for all interviews and used for all dependent measures which entailed "in process" ratings.

Deception in Research

Deception in Psychological Research

Many psychological experiments involve presenting misinformation of some sort to the subjects who are utilized in these experiments. As Walster, Berscheid, Abrahams and Aronson (1967) indicate, the deception of subjects in psychological research generally serves 2 purposes. First, in many experiments the investigator's hypotheses would be obvious to the subjects if a false explanation of the purposes were not provided. Thus, subjects might deliberately try to assist or thwart what they felt were the experimenter's aims. A false explanation, on the other hand, generally eliminates this
problem. Secondly, deception permits the laboratory study of independent variables not otherwise accessible to investigation.

There has been some criticism over the years of the use of deception in psychological research (Baumrind, 1964; Kelman, 1967; Schultz, 1969; Vinacke, 1954). Reservations usually focus on the possibility that in some instances deception may have harmful effects on subjects, even when subjects are carefully debriefed following the experiment. Despite such criticisms, deception remains a widespread technique, and few if any viable alternatives to this technique have been developed (cf. Freedman's, 1969, critique of Schultz's, 1969, suggestion that role playing is an acceptable alternative).

Only a few studies have been conducted on the effects of deception (Brock & Becker, 1967; Frey, Gelso & Eggeman, 1967; Milgram, 1964; Walster et al., 1967). Taken together, the results suggest that debriefing may not erase the effects of misinformation which Ss are given about themselves. Evidence does not, however, corroborate the belief that deception "spoils" Ss for future research. Only when the tasks required of Ss in future experiments are similar to those which he performed in earlier experiments, and when debriefing following the earlier experiments is complete is the deception in future experiments ineffective. Finally, evidence does not support the contention that deceiving Ss produces negative attitudes in them toward psychological research and researchers.

Thus, very little is known about the effects of deception. It is likely that deception may have a harmful effect upon Ss, despite
debriefing; but this, of course, depends upon the nature of the deception. It behooves each experimenter to think through carefully the possible effect on Ss of his procedures, and to not employ misinformation which he feels may harm Ss. At the very least, risks must be carefully weighed in relation to expected gains (i.e., to psychology) from the experiment.

Deception in Counseling Research

Although research involving deception is common in many areas in psychology, an examination of the literature in counseling reveals that it is rare in this specialty. This is particularly true in research on actual counseling where real clients are being treated.

The aversion of many counselors to deception may be reflected in Tyler's (1965) criticism of the aforementioned study by Roberts and Renzaglia (1965) which examined the effects of recording on counselors and clients. The authors' procedures were cleared through the American Psychological Association and the administration of their university; and the permission of clients who were led to believe that their interviews were not recorded when, in fact, they were was obtained before their tapes were used in the research. However, Tyler criticized the research on 2 counts.

On practical grounds, Tyler felt that leading clients to believe that they were not being recorded when, in fact, they were is unwise because as clients and counselors become more aware of such procedures their reactions to counseling will change. Thus, "by the time the conclusions to which such experiments lead are clear the
process to which they apply may no longer be occurring anywhere [p. 16]." On ethical grounds Tyler criticizes the deception because she feels that it impairs the development of trust of counselors by clients, an essential element in all counseling.

Deception was used in the present experiment, since it seemed very doubtful that the results would have any meaning were it not employed. It was felt that the potential benefits of the procedures employed exceeded the possibility of any negative consequences, which seemed highly improbable to the experimenter. In addition, several features of the experiment seemed to minimize the cogency of Tyler's criticisms for the present research.

For one, in no case were Ss told that they were not being recorded when, in fact, they were. Two of the 3 experimental manipulations entailed informing Ss that they would be recorded in a certain manner or for a certain time period when, in fact, they were not. This procedure is consonant with the investigator's concept of ethics.

Secondly, Ss participated in this experiment, in part, to fulfill the research requirements of the introductory psychology course in which they were enrolled. During the debriefing the fact was impressed upon Ss that the deception that occurred in the experiment does not occur in counseling that is not part of an experiment, e.g., in the service agencies on campus. This fact was discussed at length with Ss, and, to the best of the experimenter's knowledge, they accepted this statement. In fact, during the debriefing sessions no S objected to the misinformation given to him as part of the experiment,
although they were given ample opportunity to do so. Several Ss suggested that a control group should have been employed, where Ss were told that they would not be recorded when, in fact, they were. Moreover, Ss seemed appreciative of the opportunity to receive counseling and at the same time fulfill their experimental requirements for introductory psychology.

Thirdly, there was no deception involved in the counseling process. The counselors' task was to be as helpful as possible to their clients. As will be seen in the Method section, the misinformation about the purposes of the project and the recording condition was given to Ss by the experimenter prior to the counseling sessions, and the counselors never gave misinformation to their clients. None of the Ss seemed to doubt this fact when it was presented to them during the debriefing session. In addition, as indicated by Ss' responses on the Counseling Evaluation Inventory which they completed immediately prior to the debriefing session, few if any of them mistrusted their counselors' honest intent to help during counseling.

Finally, a question may be raised regarding whether the counselors put forth their best efforts during their sessions, since they knew they were counseling as part of an experiment. The ethics of such an experiment could be seriously questioned if counselors did not put forth their best efforts. This point was discussed with all counselors prior to the project. Based upon this discussion and the experimenter's and other raters' observations of counseling through
audio tapes, this possibility seemed extremely unlikely. In fact, special precautions were taken to minimize the probability of such an occurrence, e.g., counselors were asked to take case notes after each session and all of them did so. This point will be discussed further in Chapter 4 (Limitations section).
CHAPTER III

METHODOLOGY

The purpose of the present study was to assess experimentally the effects of methods of recording counseling interviews on various dimensions of client behavior and client-mediated counselor behavior when clients believe that recording is being conducted for the purpose of counselor supervision. A second aim is to gather evidence on whether client-stated problem type and the number of the counseling interview interact with method of recording in affecting these behaviors. More specifically, the study sought to (a) compare the effects on various client behaviors and client-mediated counselor behaviors of 3 different recording conditions: video (sound-film) recording, audio (sound) recording, and minimum audio recording—a partial or quasi-control group procedure; (b) determine if "recording condition" interacts with client problem type (educational-vocational vs. personal-social) in affecting such behaviors; (c) determine if the number of the counseling interview (first or second) interacts with "recording condition" in affecting these behaviors.

Subjects and Subject Selection

Sixty students who were enrolled in an introductory psychology course at the Ohio State University were the subjects (Ss) in this
experiment. Since the procedure for recruitment and selection of Ss was novel, it will be described in detail.

At OSU students enrolled in introductory psychology are required to participate as Ss in psychological research totaling approximately 4 hours of time. To recruit Ss, experimenters usually post on a central bulletin board sign-up sheets which briefly describe the experiment, the criteria students must meet to serve as Ss, etc. Subjects contract for experiments by signing their names on these sign-up sheets adjacent to hours of the day which the experimenter lists as available and which are convenient to them (Ss). However, to preserve anonymity and exclude students who were not suitable for the experiment, a different "sign-up" procedure was employed in this study. A standard sign-up sheet was posted containing information about the experiment. However, students were instructed not to sign up for this project on the sheet. They were informed (on the sheet) that if they met the criteria for Ss they should sign-up by visiting E's office during designated times.

The experiment was advertised as a "Counselor-Client Communication Project." Under the "Criteria for Subjects" part of the sign-up sheet it was indicated that students should have "real, meaningful problems of an educational-vocational or personal-social nature [examples given] which you wish to discuss with and get help in solving from a trained counselor (2nd, 3rd or 4th year doctoral student in counseling psychology)." It was also indicated that Ss must be able to participate in 2 counseling interviews, one week apart, at the same time of the day.
At the time potential Ss visited E's office to sign for the experiment, they were asked if they recalled the "criteria for Ss" as indicated on the sign-up sheet. Regardless of their response, E reiterated these criteria, highlighting the fact that it was crucial that Ss be, in fact, real clients with real (vs. pretended or role-played) concerns or problems with which they desired help in solving. During this discussion potential Ss were also told that there were 2 main purposes to the project: (1) to give doctoral student counselors a greater opportunity to do counseling (and as a result to give clients legitimate help) and (2) to allow E to do research on counselor-client communication. These discussions lasted between approximately 10-20 minutes. (See Appendix "B" for the additional information which was transmitted to students during this session.)

If at the end of this discussion both E and the student felt that the student would be a suitable S, he was given the Area of Concern Form (see Appendix A) which contained examples of educational-vocational and personal-social problems. The S indicated on this form whether the problems which he wished to discuss were either predominantly educational-vocational or personal-social in nature.

In order to attain the 60 Ss which E required for the experiment, 72 students were interviewed in the above manner. Twelve of them decided that they would not be suitable Ss. In most such cases the student indicated that he had not read carefully the "Criteria for Ss" on the sign-up sheet and that, in fact, he did not have real, meaningful problems of the type specified that he wished to discuss.
with a counselor. At the conclusion of this interview, each S was given his counseling appointment hour.

The experiment was arranged so that there would be 30 Ss in each of the 2 problem classifications (educational-vocational and personal-social). Since approximately one-fourth more students indicated that their problems were primarily personal-social, this category was filled before the educational-vocational category. After the 30 Ss in the personal-social category was obtained, a different sign up sheet was posted asking only for students with educational-vocational problems.

The Counselors

The counselors were 9 doctoral students in counseling psychology at Ohio State University. Eight of the 9 counselors had completed at least 2 counseling practicums prior to the experiment. Four of the counselors had completed all 4 practicums required in the counseling psychology program and 4 were enrolled in their third practicum during the quarter in which the experiment was conducted. One counselor was enrolled in only his second practicum, but had 4 years of experience as a school counselor.

Instructions to Counselors

One week prior to the beginning of the experiment, E met with the counselors. During an approximately 1 hour session, several features of the experiment and the counselors' responsibilities in it were discussed. The counselors were informed that the purpose of the
experiment was to assess the effect of video and audio recording on client behavior, and it was made clear that counselor behavior (e.g., effectiveness) would not be rated by E.

Since it was imperative to hold constant differences in counselor behavior due to recording procedures (except as they might be mediated by the effect of recording procedures on clients), counselors were informed that a segment of all interviews would be audio recorded only. In addition, they were informed that the experimental treatment was the pre-set about the recording condition which E gave to each client (see Procedure section). The counselors were not informed of this pre-set by E; and they were instructed not to elicit this information from their clients, but, rather, to concentrate on helping their clients as they would in any counseling encounter. If a client verbally or non-verbally volunteered his pre-set to his counselor, E instructed counselors to deal with this as they would in any counseling situation. The counselors were also instructed to inform E when their clients revealed the pre-set, and this occurred in only 7 of the 120 interviews. In only 1 case did the client verbally reveal his pre-set to his counselor (client in video recording condition). In the remaining 6 cases the counselor thought the client non-verbally indicated his pre-set, i.e., by staring at the microphone or camera; but in 5 of these 6 cases the counselor's impression was incorrect. (In 4 instances the counselor thought the client non-verbally indicated that he was being video recorded, and in 2 instances
the counselor felt the client revealed that he was being audio recorded.)

The counselors were instructed to use their own counseling style during the sessions. They were warned against being too prescriptive in their approach just because of the time limits on the counseling. Possible referral sources on campus were discussed with counselors, and it was indicated that the last 5-10 minutes of their second interviews should be used to discuss referral when appropriate. (Cf. Appendix C for additional points made to counselors during this session.)

Procedure

Subject Assignment to Treatment Groups

Since Ss classified their problems as either primarily educational-vocational or personal-social and since 3 recording conditions were employed, 6 treatment combinations were contained in the experiment (i.e., 2 problem types x 3 recording conditions). Assignment to recording condition within each problem type (self-selected by Ss) was made on an essentially random basis.

Each counselor was assigned an equal number of clients in each problem type x recording condition treatment combination. Eight counselors counseled 1 client under each such combination, thus counseling 6 clients each. The ninth counselor interviewed 2 clients under each combination, thus counseling 12 clients.

At the end of the "sign-up" interview with E, each S was assigned a counselor and appointment time. The times during which
counselors were available had been collected by E prior to the sign-up interview. Each S was assigned a counseling hour which was convenient to him and for which a counselor was scheduled who did not have already scheduled the maximum number of clients with the problem type of that particular client, i.e., 3 of each problem type for 8 counselors and 6 of each for the ninth counselor.

As the next step, each S was assigned to 1 of 3 recording conditions. As indicated, counselors saw an equal number of clients under each condition. For each counselor, the order in which his clients within each problem-type category were assigned to recording conditions was randomized through a coin tossing procedure prior to the experiment. For example, counselor X's order might be Audio, Minimum Audio, Video; thus the first client that was assigned to him within each problem-type category would be placed in the Audio Recording conditions, the second in the Minimum Audio Recording condition, and the third client in the Video Recording condition.

In its final form the experimental design was completely crossed and balanced. Thirty Ss in each of 2 problem-type category (a total of 60Ss) were counseled under 1 of 3 recording conditions. Thus, 10 Ss were contained in each of 6 problem type X recording condition treatment combination cell.

**Recording Conditions**

As indicated earlier, the main IV in this experiment was the recording condition under which Ss were counseled. The 3 "levels" of this variable were Audio Recording (AR), Video Recording (VR) and
Minimum Audio Recording (MR). The treatment, in fact, was what the S was led to believe (his "pre-set") his recording condition would be. In fact, all sessions were audio taped for a 10 minute period, from minutes 10-20.

Subject Pre-Set

The Ss were instructed to visit E's office immediately preceding their first counseling interview. At this time E induced the pre-set about recording condition. The following responses were made to all Ss:

"Hello------. How are you doing? (usually light conversation). As I believe I mentioned when we first got together, what goes on between you and your counselor will be confidential. The only person the counselor will discuss the counseling sessions with is his supervisor, who is a qualified psychologist with a doctor's degree. Now, you will notice that there is a video camera and a microphone in the room. This is standard apparatus in these counseling rooms."

Immediately following the above information, differential pre­sets were given to Ss in the 3 different recording conditions. These were as follows:

MR Group:  "The video camera will not be used during your interviews. Just a few minutes of each interview will, however, be taped on the audio tape recorder. The taping will occur during the latter part of each of your sessions. It is strictly for my research on counselor-client communication, is completely confidential, and will definitely not be used beyond this point. Okay?"

AR Group:  "The video camera will not be used during your interviews. Each interview will, however, be taped on the audio tape recorder. This is strictly for my
research on counselor-client communication and for supervision, so that the counselor's supervisor can do a better job in supervising him. It is completely confidential and will definitely not be used beyond this point. Okay?"

VR Group: "The interviews will be taped on the audio recorder and filmed on the video camera. This is strictly for my research on counselor-client communication and for supervision, so that the counselor's supervisor can do a better job in supervising him. It is completely confidential and will definitely not be used beyond this point. Okay?"

A careful attempt was made by E to present each of the 3 pre-sets in an equally casual manner. Questions by S were dealt with in a reassuring way. In response to any questions, E attempted to clarify the pre-set, but did not add information to the pre-set that might alter it in any way. Following questions, if any, E escorted S to the counseling room and introduced S to his counselor.

Several aspects of the pre-set should be noted. In all 3 recording conditions Ss were told that their tapes would be used by E for research. Giving such information was felt to be necessary to maintain credibility, since Ss knew that they were participating in a psychology experiment and that experiments are conducted to gather research evidence. In addition, all Ss were told that their counselor would discuss the interviews with his supervisor. This information was necessary, since the generalization of the results to counselor training programs was desired. Even when counseling done as a part of counseling practicums is not recorded, counselor-trainees usually do discuss their cases with supervisors. The critical question centers
upon whether or not audio and/or video taping during counseling affects clients when they are informed that the counselor's supervisor will see and/or hear the tape. In addition to believing that they were being audio taped for just a few minutes, in this sense the MR group is a control procedure, since Ss in this group were not told that the counselor's supervisor would hear the tape. The Ss in the AR and MR groups, however, were so informed.

The Counseling

All clients participated in 2 counseling interviews spaced 1 week apart. Interviews generally lasted for 30-40 minutes, although a few went beyond the 40 minute limit which was suggested to the counselors by E. The counselors were told to use their own counseling style. Although styles varied widely, most of the counselors would classify themselves as eclectic.

All counseling was conducted in one 9 x 12 ft. office which was one of the standard rooms used for practicums in counseling psychology. The room contained a desk and 2 chairs. A small (4 inch) Concord microphone was situated at the desk at which the counselor and client sat. A Concord video camera which was connected to the wall was focused on a point approximately midway between the counselor and client as they faced each other during counseling. The camera was approximately 6 ft. from the 2 participants. Moreover, every effort

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3This description is given in detail because it would appear to be highly relevant to the effects of recording. For example, situating the video camera so that it directly faced the client and/or was a very short distance from the client would be likely to yield clearcut effects. Yet such effects could not be generalized to typical practicum counseling, since in practicum counseling an attempt is usually made to record or observe in an unobtrusive fashion.
was made both to render the recording procedures as unobtrusive as possible and to approximate as closely as possible the recording procedures in typical practicum counseling.

**Debriefing and Procedural Check**

Immediately following their second counseling interview, Ss were asked by E to complete certain questionnaires (cf., section on Dependent Variables and Their Measurement). Following this task Ss were completely debriefed by E. During the debriefing session E discussed referral sources with Ss, as had the counselors during the latter part of the second session if they felt it was appropriate. Sixteen Ss expressed a desire for continuing in counseling, and they were referred to various helping agencies on the OSU campus.

On the Mode of Observation Questionnaire (cf., Appendix G), Ss were asked to indicate the method with which they thought their interviews were recorded. This question served as a procedural check on whether or not Ss retained and believed their pre-set. Fifty-nine of the 60 Ss correctly recalled their pre-set about the recording condition under which they were counseled. In addition, 14 of the 20 Ss in the MR condition recalled that they were told the recording would occur during the latter parts of their sessions.

**Dependent Variables and Their Measurement**

Seven dependent variables and measures were employed to assess the effects of recording condition. The rationale for using each variable has been presented in Chapter II (pp. 52-55). The measures and measurement procedures will be presented below.
Inventory Ratings

Four of the dependent variables were measured through paper-and-pencil questionnaires which the Ss and/or counselors completed. These were completed either after the first and the second interview for each S, or after the second interview only.

Evaluation of Counseling. Immediately following their second counseling session Ss completed the Counseling Evaluation Inventory (Linden et al., 1965; cf. Appendix D), a 21 item questionnaire consisting of 3 factors: Counseling Climate, Counselor Comfort, Client Satisfaction. While the constructors of the Inventory did not define what each factor taps, this seems fairly clear from the items contained under each factor. Counseling Climate (items 1,3,6,9,11,14,17,19,21) seems to assess the extent to which the counselor is perceived by the client as being empathic, genuine and accepting. Counselor Comfort (items 2,7,10,13,15) appears to measure the extent to which the counselor is perceived as confident and "at ease". Client Satisfaction (items 4,5,8,12,16,18,20) assesses the extent to which the client feels satisfied with the counseling process and its outcomes. It was decided prior to the experiment that 2 items under the Client Satisfaction factor would not be scored (items 5 and 18), since they pertained to psychological testing and such testing was not done in the study. While extensive research has not been conducted on the CEI, preliminary evidence supports its reliability and discriminant validity (Linden et al., 1965) and partially confirms its factor structure when used with college students (Haase & Miller, 1968).
Inhibition-Excitation. Immediately following their second session, Ss responded to the Counseling Experience Form, a slight modification of a "scale" developed by Van Atta (1969) to measure the degree of excitation-inhibition experienced by clients during counseling. The "scale" consists of 9 statements which describe ways of feeling and acting during counseling. Statements were designed to represent gradations on an excitation-inhibition continuum, with statement 1 reflecting a high degree of excitation or stimulation (and very little inhibition) and statement 9 reflecting a high degree of inhibition or blocking (and very little excitation). Subjects responded to the Counseling Experience Form by selecting the one statement which best described how they felt and acted during their first counseling session and the one which did so for the second session.

The "scale" was slightly modified so that the counselors could make a judgment about how they perceived their clients as feeling and acting during both sessions (cf. the Client Experience Form in Appendix F). Immediately following each session, counselors checked on the Client Experience Form the 1 statement out of the 9 which they felt was most descriptive of their clients and returned the form to E.

Self-Reported Inhibition Due to Recording. Immediately following their second interview Ss completed the Mode of Observation Questionnaire (cf. Appendix G), which was constructed specifically for this experiment. This questionnaire consisted of 6 questions designed to assess Ss' opinions about various aspects of the recording procedures. In terms of the effects of recording procedures, the
central item on this questionnaire was item 2: "Rate the extent to which you felt inhibited in expressing personal feelings and/or problems by the type of recording which was made of your counseling sessions." Subjects rated this on a 5 point scale ranging from 1— not inhibited to 5— extremely inhibited. Ratings were made for both interviews combined.

In Process Measures

As indicated earlier, approximately minutes 10-20 of each interview were audio recorded. A recorder in an adjacent room was turned on ten minutes after the interview began. The recording was discontinued at the point after 10 minutes of taping (minute 20) where the party who was speaking at minute 20 stopped speaking (other participant speaks) or an idea being presented was expressed to the degree that it would be intelligible to a rater (E made this judgment). In fact, rarely did taped segments last more than a few seconds beyond 10 minutes. This procedure resulted in 10 minute taped segments from each of the 120 counseling interviews. All tapes were coded so that raters were not aware of the experimental conditions under which the counseling was conducted.

Talk-Time. Using stopwatches, the amount of time which counselors and Ss spent talking was rated for each 10 minute segment. The ratings were done by E. The counselor's and S's talk time was assessed simultaneously. With 1 stopwatch E assessed counselor talk time and with another he assessed S talk time. Research on talk time measured with a stopwatch indicates that it is highly reliable
(Carnes & Robinson, 1948; Roberts, 1962; Roberts & Renzaglia, 1965). In the present experiment an independent judge timed in an identical manner 10 randomly selected segments. The Product-moment correlation coefficient between E's and the independent judge's ratings was .96 indicating very acceptable inter-rater reliability.

Client Self-Exploration. The 10 minute segments were also rated on self-exploration, using Carkhuff's (1969) Helpee Self-Exploration Scale (cf. Appendix H). According to its author, self exploration reflects both "extensiveness of problem exploration" and "self experiencing." Sixty of the segments were rated by E and one rater, and the remaining 60 by E and a second rater (both graduate students in counseling psychology). The segments were organized so that each of the 2 sets of 60 consisted of an equal number of first and second interviews, and an approximately equal number from each recording condition and of each problem type within recording conditions.

Prior to the ratings all 3 raters were familiar with the writings of Carkhuff and his colleagues and students. The raters tended to be favorably disposed to the Carkhuff position on counseling and therapy (cf. Carkhuff & Berenson, 1967; Truax & Carkhuff, 1967). One of the raters had previous experience in rating for Carkhuff. Prior to the ratings each set of raters discussed the scale and practiced on five 10 minute segments.

The 2 raters in each rater set discussed their rating after listening to a segment. If they did not originally agree on the rating for any segment each presented his rationale. Then the raters
converged and made a joint rating for the segment. It was felt that this procedure would yield more valid results than would averaging independent ratings.

The research by the Carkhuff group indicates that ratings on the Helpee Self-Exploration Scale yield very acceptable reliability (i.e., usually ranging from the high .70's to the low .90's). In the present experiment one set of raters made semi-independent ratings prior to converging in their rating. The ratings were not completely independent, since the raters listened to tapes together and made observations about the counseling interactions while listening. The Pearson Product-Moment correlation between these 2 raters' semi-independent ratings was .82.

As part of another research project the second set of raters made semi-independent ratings of overall counselor communication, a global variable consisting of several facilitative conditions (Carkhuff, 1969). The Product-moment correlation between these 2 raters' judgments was .87. Since "overall counselor communication" and "helpee self-exploration" have many similar features and spring from the same theoretical system and since, on a subjective basis, the raters in this second set seemed to agree about as much in their semi-independent ratings of counselor communication and helpee self-exploration, it is assumed that the inter-rater reliability of this set was acceptable.

Finally, both sets of raters made ratings of the same 10 segments 1 month apart. The Product-Moment correlation between the final converged ratings of the 2 sets of raters was .92. Since E was 1 of the 2 raters in both sets, this coefficient is a confounding of inter- and intra-judge reliability. It does support, however, the reliability of the ratings.
Table 1
Summary of Dependent Variables

<table>
<thead>
<tr>
<th>Measure</th>
<th>Type of Measure</th>
<th>Interviews 1 &amp; 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In Process</td>
<td>Inventory</td>
</tr>
<tr>
<td>Client Excitation-Inhibition</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Counselor-rated Client Excitation-Inhibition</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Evaluation of Counseling</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Self-Reported Inhibition Due to Type of Recording</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Client Talk Time</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Counselor Talk Time</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Client Self-Exploration</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
For the purpose of clarification, the 7 dependent variables are summarized in Table 1. On this table the variables are classified according to whether they are "in process" measures (analysis made through tapes of the interviews) or inventory measures (analysis made through client and/or counselor ratings). They are also classified by whether interviews 1 and 2 were analyzed separately or combined in the analysis.

Hypotheses and Statistical Analyses

Separate hypotheses will be proposed in this section for each of the dependent variables. These hypotheses will be derived from research evidence and the opinions of professionals in the various mental health fields. The rationale for each hypothesis will be given as will the statistical procedures used to test the hypothesis.

Client Evaluation of Counseling

Evidence indicates that high school clients' evaluations of counseling are not affected by audio tape recording (Graff, 1968). However, Van Atta's (1969) study suggests that whether or not a client's evaluations of counseling are affected by recording depends on whether his problems are personal, educational, or vocational. Clients with personal problems anticipated being more inhibited by recording procedures than those with vocational or study problems. In addition, video methods of recording were anticipated to be more inhibiting than audio methods. The following hypotheses are based upon the premise that inhibition leads to attenuated evaluations of counseling.
Hypothesis I. Whether or not clients' evaluations of counseling are affected by recording procedures will depend on their problem type.

A. Overall, clients' evaluations of counseling will not be affected by different recording procedures.

B. For clients with personal-social problems video recording will produce the lowest evaluations of counseling, followed by audio recording and minimum audio recording in that order.

C. For clients with educational-vocational problems the different recording procedures will not produce differential evaluations of counseling.

Hypothesis I and its corollaries will be tested by a 3 x 2 analysis of variance (recording condition x problem type). If, as would be expected from the hypothesis, the interaction effect is significant (p<.05), the significance of the differences in means among the 3 recording conditions within each problem-type category will be analyzed with the Newman-Keuls method (Winer, 1962).

Client Excitation-Inhibition

Van Atta's (1969) findings indicate that potential clients' anticipated feelings during counseling vary on an excitation-inhibition continuum according to the method of recording and problem type. Video and audio recording, in that order, lead to anticipation of increased inhibition (decreased excitation or stimulation), regardless of problem type. The anticipated inhibition is greater, however, when potential clients anticipate discussing personal problems than vocational or study problems. In addition, as indicated in Chapter I, there appears to be a belief among counselor-educators that the effects of recording are highly transitory, i.e. they quickly dissipate.
Hypothesis II. Clients' feelings on an inhibition-excitation continuum will be affected by recording procedures. In addition, this effect will partly depend upon client problem type and the number of the counseling interview.

A. Overall, video recording will produce the greatest degree of client inhibition, followed by audio recording and minimum audio recording in that order.

B. The effects of recording indicated in "A" above will be greater for clients with personal-social problems than educational-vocational problems (recording condition x problem type interaction).

C. The effects of recording indicated in "A" above will be greater during clients' first interview than their second (recording condition x interview number interaction).

Hypothesis II and its corollaries will be tested by a 3 x 2 x 2 analysis of variance (recording condition x problem type x interview number). If the main effects of recording condition, the interaction effects of recording condition x problem type, and/or the interaction effect of recording condition x interview number are significant (p<.05), as predicted, the Newman-Keuls procedure will be employed to test the differences between specific means.

Counselor Perceived Client Inhibition-Excitation

Based on the rationale presented in the immediately preceding section, Hypothesis III will be identical to Hypothesis II, only it will be stated in terms of counselors' perceptions of clients' feelings on an excitation-inhibition dimension.

Hypothesis III. Counselors' perceptions of clients' feelings on an inhibition-excitation continuum will be affected by recording procedures. In addition, this effect will partly depend upon client problem type and the number of the counseling interview.
A. Overall, video recording will produce the greatest degree of counselor perceived client inhibition, followed by audio recording and minimum audio recording in that order.

B. The effects of recording indicated in "A" above will be greater for counselors of clients with personal-social problems than educational-vocational problems (recording condition x problem type interaction).

C. The effects of recording indicated in "A" above will be greater for counselors of clients during clients' first interview than their second (recording condition x interview number interaction).

Hypothesis III and its corollaries will be tested by a 3 x 2 x 2 analysis of variance. If the main effects of recording condition or the interactions between problem type and recording condition or interview number and recording condition are significant (p<.05), as predicted, the Newman-Keuls method will be employed to test the differences between specific means.

Self-Reported Inhibition Due to Type of Recording

If recording procedures inhibit clients, as predicted, it would be expected that clients being counseled under different recording conditions produce differential reports of the extent to which they were inhibited by the type of recording. Also, it would be expected that the extent to which these reports are affected by recording condition would vary with client problem type.

Hypothesis IV. Clients' reports of the degree to which they are inhibited by the type of recording which was made of their counseling sessions will be affected by the actual recording condition they are counseled under. In addition, this effect will partly depend upon client problem type.
A. Overall, clients in the video recording group will report being most inhibited in expressing personal feelings and problems by the type of recording made of their interviews, followed by those in the audio recording group and minimum audio recording group in that order.

B. The effects of recording indicated in "A" above will be greater for clients with personal-social problems than educational-vocational problems (recording condition x problem type interaction).

Hypothesis IV and its corollaries will be tested by a 3 x 2 analysis of variance. If the main effects of recording condition and/or the recording condition x problem type interaction effects are significant ($p<.05$), as predicted, the Newman-Keuls method will be employed to test the differences between specific means.

Client Talk Time

Research on the effect of recording on client talk time has yielded contradictory results (Roberts & Renzaglia, 1965; Sauer & Marcuse, 1957). Although contrary to Sauer and Marcuse's results with Ss taking the Thematic Apperception Test, experience suggests that in counseling (as opposed to a projective testing situation) clients will talk more when threat is minimized. This idea is supported by an early study by Carnes and Robinson (1948) in which it was found that clients with adjustment problems talked more during counseling when they had a good working relationship with their counselors. A significant relationship was not found, however, between working relationship and client talk for clients with skill problems.

In the Roberts and Renzaglia study client problem type was not employed as an independent variable. Thus, the inhibition of the talk time of clients with adjustment problems may have been obscured by clients with educational problems for whom recording was not inhibiting
of talk. Also, Van Atta's (1969) findings would lead to the expectation that clients with adjustment problems would be more inhibited by video than audio recording methods, and by audio more than minimum audio procedures. Finally, factors discussed earlier would suggest that the inhibiting effects of recording on the talk time of clients with adjustment problems would quickly dissipate.

**Hypothesis V.** Whether or not client talk time is affected by recording methods will depend upon client problem type and the number of the counseling interview.

A. Overall, client talk time will not be affected by different recording procedures.

B. For clients with personal-social problems video recording will produce the lowest amount of client talk, followed by audio recording and minimum audio recording in that order.

C. For clients with educational-vocational problems the different recording procedures will not produce differential talk time.

D. The effects of recording as indicated in "B" above will be greater for the first than the second interview (recording condition x interview number x problem type interaction).

Hypothesis V and its corollaries will be tested by a 3 x 2 x 2 analysis of variance design. If main effects or the predicted interaction effects are significant (p<.05), the Newman-Keuls method will be employed to test the differences between specific means.

**Counselor Talk Time**

Evidence indicates that counselor behavior is at least somewhat affected by client behavior (Robinson, 1950). Thus, Hypothesis V and its corollaries would suggest that counselor talk time would vary with recording condition. If such a variation occurs it would not be due
directly to recording condition, since counselors were not aware of their clients' pre-sets about recording condition. The effects on the counselor would be indirect, i.e., mediated by the effects of recording condition on the client.

**Hypothesis VI.** Whether or not counselor talk time varies with recording condition will depend on the problem type of the client and the number of the interview for the client.

A. Overall, counselor talk time will not vary according to recording condition.

B. For counselors of clients with personal-social problems video recording will indirectly produce the greatest amount of talk, followed by audio recording and minimum audio recording in that order.

C. For counselors of clients with educational-vocational problems, talk time will not vary with recording condition.

D. The effects of recording as indicated in "B" above will be greater for the first than the second interview in which clients participate (recording condition x interview number x problem type interaction).

As for Hypothesis V, this hypothesis will be tested by a 3 x 2 x 2 analysis of variance. If F ratios for the main or any of the possible interaction effects are significant (p<.05) the Newman-Keuls method will be employed to examine the differences between specific means.

**Client Self-Exploration**

Hypotheses II, III, and IV suggest that clients' feelings of inhibition vary with recording condition (i.e., VR>AR>MR), and that the extent to which different recording procedures produce feelings of
inhibition depends, in part, upon client problem type and the number of the counseling interview. It would be expected that client reported feelings of inhibition would be related (inversely) to the extent to which clients actually do explore themselves and their problems during counseling.

**Hypothesis VII.** Degree of client self-exploration will be affected by recording procedures. In addition, this effect will partly depend upon client problem type and the number of the counseling interview in which the client is participating.

A. Overall, video recording will produce the lowest degree of client self-exploration, followed by audio recording and minimum audio recording in that order.

B. The effects of recording indicated in "A" above will be greater for clients with personal-social problems than educational-vocational problems (recording condition x problem type interaction).

C. The effects of recording indicated in "A" above will be greater during clients' first interviews than their second (recording condition x interview number interaction).

Hypothesis VII and its corollaries will be tested by a 3 x 2 x 2 analysis of variance. If F ratios for the main effect of recording condition and/or the interactions of recording condition with problem type and interview number are significant (p<.05), the Newman-Keuls procedure will be employed to examine the differences between the appropriate specific means.
CHAPTER IV

RESULTS AND DISCUSSION

The 7 hypotheses proposed in the preceding chapter will be restated below, and the results which are relevant to each hypothesis will be presented. The presentation of the results will be followed by a discussion in which an attempt will be made to integrate and interpret the findings of the study. In addition, the limitations of the investigation will be examined and recommendations for further research will be proposed. A summary of conclusions will be given and the implications of the results for counselor training will be discussed.

H_1. Whether or not clients' evaluations of counseling are affected by recording procedures will depend on their problem type.

H_1A. Overall, clients' evaluations of counseling will not be affected by recording procedures.

H_1B. For clients with personal-social problems video recording will produce the lowest evaluations of counseling, followed by audio recording and minimum audio recording in that order.

H_1C. For clients with educational-vocational problems the different recording procedures
will not produce differential evaluations of counseling.

Table 2 presents the means and standard deviations on the *Counseling Evaluation Inventory* (CEI) of clients counseled under the 3 recording conditions. It should be noted that the higher the score on the CEI, the more favorable the evaluation of counseling. The means and sd's are presented separately for clients with personal-social problems and educational-vocational problems and for both problem types combined under the CEI total score and each of the 3 factors.

Inspection of Table 2 reveals that for the total score and the factor scores on the CEI, clients with personal-social problems who were in the VR condition evaluated counseling most negatively. This was followed by clients in the AR and MR conditions, respectively. It can also be seen that the opposite trend appears for clients with educational-vocational problems, although to a much lesser extent.

Tables 3, 4, 5 and 6 present separate ANOVA's for the total score and the 3 factors on the CEI. Table 3 indicates that, on the whole, clients' overall evaluations of counseling are not affected by the method of recording (cf. main effects for Recording Condition). The Recording Condition x Problem Type interaction, however, does approach significance (p < .10, > .05). As suggested by the means on Table 1 under Total Score, this interaction is in the predicted direction.

Table 4 (Counseling Climate) and Table 5 (Counselor Comfort) indicate that neither the main effects of Recording Condition nor the
TABLE 2

Means and SD's on the counseling Evaluation Inventory—Total Score Plus Factors

<table>
<thead>
<tr>
<th>Scale</th>
<th>Problem Type</th>
<th>Video</th>
<th>Audio</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Total Score</td>
<td>Pers-Soc</td>
<td>58.2</td>
<td>7.6</td>
<td>64.6</td>
</tr>
<tr>
<td></td>
<td>Educ-Voc</td>
<td>62.7</td>
<td>6.0</td>
<td>61.0</td>
</tr>
<tr>
<td></td>
<td>Pers-Soc &amp; Ed-Voc</td>
<td>60.5</td>
<td>7.2</td>
<td>62.8</td>
</tr>
<tr>
<td>Counseling</td>
<td>Pers-Soc</td>
<td>32.7</td>
<td>1.7</td>
<td>34.3</td>
</tr>
<tr>
<td></td>
<td>Educ-Voc</td>
<td>32.9</td>
<td>4.2</td>
<td>33.0</td>
</tr>
<tr>
<td></td>
<td>Pers-Soc &amp; Ed-Voc</td>
<td>32.8</td>
<td>3.2</td>
<td>33.7</td>
</tr>
<tr>
<td>Counselor</td>
<td>Pers-Soc</td>
<td>13.9</td>
<td>4.0</td>
<td>15.4</td>
</tr>
<tr>
<td></td>
<td>Educ-Voc</td>
<td>15.1</td>
<td>2.3</td>
<td>14.7</td>
</tr>
<tr>
<td></td>
<td>Pers-Soc &amp; Ed-Voc</td>
<td>14.5</td>
<td>3.3</td>
<td>15.1</td>
</tr>
<tr>
<td>Client Satisfaction</td>
<td>Pers-Soc</td>
<td>11.6</td>
<td>3.6</td>
<td>14.5</td>
</tr>
<tr>
<td></td>
<td>Educ-Voc</td>
<td>14.7</td>
<td>2.1</td>
<td>13.4</td>
</tr>
<tr>
<td></td>
<td>Pers-Soc &amp; Ed-Voc</td>
<td>13.2</td>
<td>3.3</td>
<td>14.0</td>
</tr>
</tbody>
</table>

N = 60; n per problem type x recording condition treatment combination = 10
### TABLE 3
ANOVA For Counseling Evaluation Inventory—Total Score

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (Recording Condition)</td>
<td>77.2</td>
<td>2</td>
<td>38.6</td>
<td>.72</td>
</tr>
<tr>
<td>B (Problem Type)</td>
<td>41.6</td>
<td>1</td>
<td>41.7</td>
<td>.77</td>
</tr>
<tr>
<td>AB</td>
<td>288.2</td>
<td>2</td>
<td>144.1</td>
<td>2.68*</td>
</tr>
<tr>
<td>Error (within)</td>
<td>2908.4</td>
<td>54</td>
<td>53.9</td>
<td></td>
</tr>
</tbody>
</table>

*p<.10, >.05

### TABLE 4
ANOVA For Counseling Evaluation Inventory—Counseling Climate Factor

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (Recording Condition)</td>
<td>9.6</td>
<td>2</td>
<td>4.8</td>
<td>.55</td>
</tr>
<tr>
<td>B (Problem Type)</td>
<td>38.0</td>
<td>1</td>
<td>38.0</td>
<td>4.36**</td>
</tr>
<tr>
<td>AB</td>
<td>38.2</td>
<td>2</td>
<td>19.2</td>
<td>2.21</td>
</tr>
<tr>
<td>Error (within)</td>
<td>467.2</td>
<td>54</td>
<td>8.7</td>
<td></td>
</tr>
</tbody>
</table>

**p<.05
### TABLE 5
ANOVA For Counseling Evaluation Inventory--Counselor Comfort Factor

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (Recording Condition)</td>
<td>14.5</td>
<td>2</td>
<td>7.3</td>
<td>.52</td>
</tr>
<tr>
<td>B (Problem Type)</td>
<td>.0</td>
<td>1</td>
<td>.0</td>
<td>.00</td>
</tr>
<tr>
<td>AB</td>
<td>10.4</td>
<td>2</td>
<td>5.2</td>
<td>.37</td>
</tr>
<tr>
<td>Error (within)</td>
<td>759.7</td>
<td>54</td>
<td>14.5</td>
<td></td>
</tr>
</tbody>
</table>

### TABLE 6
ANOVA For Counseling Evaluation Inventory--Client Satisfaction Factor

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (Recording Condition)</td>
<td>17.1</td>
<td>2</td>
<td>8.6</td>
<td>.93</td>
</tr>
<tr>
<td>B (Problem Type)</td>
<td>.1</td>
<td>1</td>
<td>.1</td>
<td>.01</td>
</tr>
<tr>
<td>AB</td>
<td>63.7</td>
<td>2</td>
<td>31.9</td>
<td>3.47**</td>
</tr>
<tr>
<td>Error (within)</td>
<td>497.3</td>
<td>54</td>
<td>9.2</td>
<td></td>
</tr>
</tbody>
</table>

**p<.05

**p<.05**
interaction effects between Recording Condition and Problem Type are significant statistically for these 2 factors. Although not central to the hypothesis, a significant (p<.05) effect of Problem Type is seen in Table 4, indicating that clients with personal-social problems evaluated the counseling climate more favorably than those with educational-vocational problems.

Table 6 does reveal a significant interaction between Recording Condition and Problem Type, indicating that the effect of recording condition upon client satisfaction with counseling depends upon the type of problem with which the client desires help. Since the F ratio for the AB interaction on the Client Satisfaction factor attained statistical significance, the differences between the means of the 3 recording conditions for personal-social and educational-vocational problem types were compared by the Newman-Keuls method of post hoc analysis. This procedure revealed that for clients in the personal-social category the VR condition differed significantly from both the AR (p<.05) and the MR (p<.05). Client satisfaction with counseling was less in the VR condition than in either of the other 2 conditions. As predicted, this result did not emerge for clients in the educational-vocational category. For this group, differences across recording conditions did not approach significance.

Taken together, the results presented above lead to a partial acceptance of Hypothesis I. That is, the hypothesis was supported for the aspect of client evaluation pertaining to client satisfaction, but not for those dealing with client evaluations of the counseling climate or counselor comfort. Since these latter 2 factors did not
even approach supporting the hypothesis, and since the overall evaluation of counseling (Total Score) is a combination of the 3 factors, Hypothesis I was not supported for the overall evaluation of counseling. A trend in this direction, however, did emerge.

**Hypothesis II.** Clients' feelings on an inhibition-excitation continuum will be affected by recording procedures. In addition, this effect will partly depend upon client problem type and the number of the counseling interview.

\[ \text{H}_{IIA}. \] Overall, video recording will produce the greatest degree of client inhibition, followed by audio recording and minimum audio recording in that order.

\[ \text{H}_{IIB}. \] The effects of recording indicated in "A" above will be greater for clients with personal-social problems than educational-vocational problems (recording condition x problem type interaction).

\[ \text{H}_{IIC}. \] The effects of recording indicated in "A" above will be greater during clients' first than their second interview (recording condition x interview number interaction).

Hypotheses II and its corollaries are evaluated on Tables 7 and 8. Table 7 presents the mean responses selected by clients out of the 9 alternatives on the Counseling Experience Form (CEF), and the standard deviations of these means. Means and sd's are presented
TABLE 7
Means and SD's on the Counseling Experience Form

<table>
<thead>
<tr>
<th>Problem Type</th>
<th>Video</th>
<th></th>
<th>Audio</th>
<th></th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Personal-Social</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interview 1</td>
<td>5.1</td>
<td>2.35</td>
<td>3.5</td>
<td>1.86</td>
<td>4.7</td>
</tr>
<tr>
<td>Interview 2</td>
<td>4.3</td>
<td>1.55</td>
<td>3.2</td>
<td>0.75</td>
<td>3.9</td>
</tr>
<tr>
<td>Interviews 1&amp;2</td>
<td>4.7</td>
<td>2.02</td>
<td>3.4</td>
<td>1.45</td>
<td>4.3</td>
</tr>
<tr>
<td>Educational-Vocational</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interview 1</td>
<td>4.1</td>
<td>1.92</td>
<td>4.3</td>
<td>1.18</td>
<td>4.2</td>
</tr>
<tr>
<td>Interview 2</td>
<td>3.2</td>
<td>0.63</td>
<td>3.6</td>
<td>1.28</td>
<td>3.4</td>
</tr>
<tr>
<td>Interviews 1&amp;2</td>
<td>3.7</td>
<td>1.52</td>
<td>4.0</td>
<td>1.28</td>
<td>3.8</td>
</tr>
<tr>
<td>Pers-Soc + Educ-Voc</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interview 1</td>
<td>4.6</td>
<td>2.20</td>
<td>3.9</td>
<td>1.61</td>
<td>4.5</td>
</tr>
<tr>
<td>Interview 2</td>
<td>3.8</td>
<td>1.30</td>
<td>3.4</td>
<td>1.07</td>
<td>3.7</td>
</tr>
<tr>
<td>Interviews 1&amp;2</td>
<td>4.2</td>
<td>1.84</td>
<td>3.7</td>
<td>1.25</td>
<td>4.1</td>
</tr>
</tbody>
</table>

N = 60; n per problem type x recording condition treatment combination = 10
### TABLE 8

ANOVA For Counseling Experience Form

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between Ss</strong></td>
<td>196.4</td>
<td>59</td>
<td>3.1</td>
<td>.95</td>
</tr>
<tr>
<td>A (Recording Condition)</td>
<td>6.1</td>
<td>2</td>
<td>3.1</td>
<td>.97</td>
</tr>
<tr>
<td>B (Problem Type)</td>
<td>3.1</td>
<td>1</td>
<td>3.1</td>
<td>.97</td>
</tr>
<tr>
<td>AB</td>
<td>14.1</td>
<td>2</td>
<td>7.1</td>
<td>2.20</td>
</tr>
<tr>
<td>Error (between)</td>
<td>173.1</td>
<td>54</td>
<td>3.2</td>
<td></td>
</tr>
<tr>
<td><strong>Within Ss</strong></td>
<td>128.0</td>
<td>60</td>
<td>2.1</td>
<td></td>
</tr>
<tr>
<td>C (Interview Number)</td>
<td>15.5</td>
<td>1</td>
<td>15.5</td>
<td>7.56**</td>
</tr>
<tr>
<td>AC</td>
<td>.5</td>
<td>2</td>
<td>.3</td>
<td>.12</td>
</tr>
<tr>
<td>BC</td>
<td>.1</td>
<td>1</td>
<td>.1</td>
<td>.05</td>
</tr>
<tr>
<td>ABC</td>
<td>.9</td>
<td>2</td>
<td>.5</td>
<td>.22</td>
</tr>
<tr>
<td>Error (within)</td>
<td>111.0</td>
<td>54</td>
<td>2.1</td>
<td></td>
</tr>
</tbody>
</table>

***p<.01
across recording conditions for problem types separately and combined. They are also given for interviews 1 and 2 separately and combined within each problem type and for both types combined. It should be reiterated that the larger the mean on the CEF, the greater the degree of inhibition.

Examination of Table 7 reveals that for clients in the personal-social category, the VR condition yields the largest means for each interview. For clients in the educational-vocational category, however, the means across the 3 recording conditions for each interview are almost identical. It can also be seen that the means on the CEF decrease (inhibition attenuates) from the first to the second interview for clients in both problem classifications.

The ANOVA on Table 8 indicates that none of the predictions under Hypothesis II are confirmed statistically. The hypothesis leads to the expectation of a significant main effect for Recording Condition. It also suggests significant interactions between Recording Condition and Problem Type, and Recording Condition and Interview Number. However, none of these expected effects emerged. Thus, no aspect of Hypothesis II is supported by the analysis. Finally, although a significant interaction between Recording Condition and Interview Number did not emerge, there is a main effect for Interview Number, with inhibition being less for the second than the first interview across recording conditions and problem types.

$H_{III}$. Counselors' perceptions of clients' feelings on an excitation-inhibition continuum will be affected by recording
procedures. In addition, this effect will partly depend upon client problem type and the number of the counseling interview.

\textbf{H}_{III A}. Overall, video recording will produce the greatest degree of counselor perceived client inhibition, followed by audio recording and minimum audio recording in that order.

\textbf{H}_{III B}. The effects of recording indicated in "A" above will be greater for counselors of clients with personal-social problems than educational-vocational problems (recording condition x problem type interaction).

\textbf{H}_{III C}. The effects of recording indicated in "A" above will be greater for counselors in clients' first interview than their second (recording condition x interview number interaction).

Table 9 presents the means and standard deviations of counselors' responses on the \textbf{Client Experience Form} (CEF). Means and sd's are presented across recording conditions for each problem type separately and for both combined. In addition, means and sd's are given for interviews 1 and 2, separately and combined, within each problem type and for both types combined. As with clients' responses on the Counseling Experience Form, the larger the means on the \textbf{Client Experience Form}, the greater the degree of counselor-perceived client inhibition.
TABLE 9

Means and SD's on the Client Experience Form

<table>
<thead>
<tr>
<th>Problem Type</th>
<th>Video M</th>
<th>Video SD</th>
<th>Audio M</th>
<th>Audio SD</th>
<th>Min M</th>
<th>Min SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal-Social</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interview 1</td>
<td>3.3</td>
<td>1.00</td>
<td>4.0</td>
<td>2.45</td>
<td>3.2</td>
<td>1.78</td>
</tr>
<tr>
<td>Interview 2</td>
<td>3.6</td>
<td>1.02</td>
<td>3.8</td>
<td>1.25</td>
<td>3.5</td>
<td>1.80</td>
</tr>
<tr>
<td>Interviews 1&amp;2</td>
<td>3.5</td>
<td>1.02</td>
<td>3.9</td>
<td>1.95</td>
<td>3.4</td>
<td>1.79</td>
</tr>
<tr>
<td>Educational-Vocational</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interview 1</td>
<td>3.3</td>
<td>1.27</td>
<td>5.0</td>
<td>1.84</td>
<td>3.9</td>
<td>1.58</td>
</tr>
<tr>
<td>Interview 2</td>
<td>3.4</td>
<td>1.43</td>
<td>4.9</td>
<td>1.64</td>
<td>3.9</td>
<td>.83</td>
</tr>
<tr>
<td>Interviews 1&amp;2</td>
<td>3.4</td>
<td>1.35</td>
<td>5.0</td>
<td>1.75</td>
<td>3.9</td>
<td>1.26</td>
</tr>
<tr>
<td>Pers-Soc + Educ-Voc</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interview 1</td>
<td>3.3</td>
<td>1.15</td>
<td>4.5</td>
<td>2.22</td>
<td>3.6</td>
<td>1.72</td>
</tr>
<tr>
<td>Interview 2</td>
<td>3.5</td>
<td>1.24</td>
<td>4.4</td>
<td>1.57</td>
<td>3.7</td>
<td>1.42</td>
</tr>
<tr>
<td>Interviews 1&amp;2</td>
<td>3.4</td>
<td>1.20</td>
<td>4.5</td>
<td>1.87</td>
<td>3.7</td>
<td>1.57</td>
</tr>
</tbody>
</table>

N = 60; n per problem type x recording condition treatment combination = 10
TABLE 10
ANOVA For Client Experience Form

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Ss</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A (Recording Condition)</td>
<td>23.3</td>
<td>2</td>
<td>11.7</td>
<td>2.85*</td>
</tr>
<tr>
<td>B (Problem Type)</td>
<td>7.5</td>
<td>1</td>
<td>7.5</td>
<td>1.83</td>
</tr>
<tr>
<td>AB</td>
<td>6.6</td>
<td>2</td>
<td>3.3</td>
<td>.81</td>
</tr>
<tr>
<td>Error (between)</td>
<td>221.6</td>
<td>54</td>
<td>4.1</td>
<td></td>
</tr>
<tr>
<td>Within Ss</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C (Interview Number)</td>
<td>.2</td>
<td>1</td>
<td>.2</td>
<td>.15</td>
</tr>
<tr>
<td>AC</td>
<td>.6</td>
<td>2</td>
<td>.3</td>
<td>.23</td>
</tr>
<tr>
<td>BC</td>
<td>.1</td>
<td>1</td>
<td>.1</td>
<td>.08</td>
</tr>
<tr>
<td>ABC</td>
<td>.3</td>
<td>2</td>
<td>.2</td>
<td>.15</td>
</tr>
<tr>
<td>Error (within)</td>
<td>67.8</td>
<td>54</td>
<td>1.3</td>
<td></td>
</tr>
</tbody>
</table>

*p<.10, >.05
Examination of Table 9 reveals a consistent trend for means under the AR condition to be larger than those under the VR or the MR conditions. This pattern emerges across client problem types and counseling interview number.

Table 10 presents the ANOVA employed to test Hypothesis III. The F ratio for the main effects of Recording Condition approaches, but does not attain the desired level of confidence (p<.10, <.05). Neither the Recording Condition x Problem Type nor the Recording Condition x Interview Number interactions approach statistical significance. These data lead to a guarded rejection of Hypothesis III and its corollaries.

HIV. Clients' reports of the degree to which they are inhibited by the type of recording which was made of their counseling sessions will be affected by the actual recording condition under which they are counseled. In addition, this effect will partly depend upon client problem type.

HIVA. Overall, clients in the video recording group will report being most inhibited in expressing personal feelings and/or problems by the type of recording made of their interviews, followed by those in the audio recording group and the minimum audio recording group, in that order.

HIVB. The effects of recording indicated in "A" above will be greater for clients with personal-social problems than educational-vocational
problems (recording condition x problem type interaction).

Clients' means and sd's on item 2 of the Mode of Observation Questionnaire are presented on Table 11. As indicated earlier, this item asks clients to, "Rate the extent to which you felt inhibited in expressing personal feelings and/or problems by the type of recording which was made of your counseling sessions." Ratings were made on a 5 point scale (1 = not inhibited, 2 = slightly inhibited, 3 = somewhat inhibited, 4 = very inhibited, 5 = extremely inhibited).

Table 11 reveals that the means are in the hypothesized direction. The ANOVA on Table 12, however, indicates that neither the main effect of Recording Condition nor the interaction of this variable with client Problem Type is statistically significant. It should be noted that the main effect of Recording Condition approaches, but does not quite attain significance (p = .07). Although in violation of statistical assumptions, t ratios for independent samples were computed between each pair of overall means (problem types combined; row 3 of Table 10). It was found that the difference between the VR and MR means did attain significance (t = 2.11, p<.05).

Additional analysis of this item is presented on Table 13. On this table the percent of clients in each recording condition and for each problem type separately and combined who were inhibited at least to some extent is presented (alternatives 2,3,4 and 5 as opposed to alternative 1--not inhibited). As can be seen on Table 13 there are rather pronounced differences between the 3 recording conditions, and
TABLE 11
Self-Reported Inhibition Due to Type of Recording

<table>
<thead>
<tr>
<th>Problem Type</th>
<th>Video M</th>
<th>Video SD</th>
<th>Audio M</th>
<th>Audio SD</th>
<th>Minimum M</th>
<th>Minimum SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal-Social</td>
<td>2.00</td>
<td>1.00</td>
<td>1.50</td>
<td>0.81</td>
<td>1.30</td>
<td>0.46</td>
</tr>
<tr>
<td>Educational-Vocational</td>
<td>1.60</td>
<td>0.66</td>
<td>1.40</td>
<td>0.49</td>
<td>1.30</td>
<td>0.64</td>
</tr>
<tr>
<td>Pers-Soc &amp; Educ-Voc</td>
<td>1.80</td>
<td>0.87</td>
<td>1.45</td>
<td>0.67</td>
<td>1.30</td>
<td>0.56</td>
</tr>
</tbody>
</table>

N = 60; n per problem type x recording condition treatment combination = 10

TABLE 12
ANOVA For Self-Reported Inhibition Due to Type of Recording

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (Recording Condition)</td>
<td>2.97</td>
<td>2</td>
<td>1.50</td>
<td>2.74*</td>
</tr>
<tr>
<td>B (Problem Type)</td>
<td>0.75</td>
<td>1</td>
<td>0.75</td>
<td>1.37</td>
</tr>
<tr>
<td>AB</td>
<td>0.22</td>
<td>2</td>
<td>0.11</td>
<td>0.20</td>
</tr>
<tr>
<td>Error (within)</td>
<td>29.50</td>
<td>54</td>
<td>0.55</td>
<td></td>
</tr>
</tbody>
</table>

*p<.10, >.05
**TABLE 13**

Percent Inhibited by Type of Recording (alternatives 2,3,4&5 vs. 1)

<table>
<thead>
<tr>
<th>Problem</th>
<th>Video</th>
<th>Audio</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal-Social</td>
<td>60</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Educational-Vocational</td>
<td>50</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>Pers-Soc &amp; Educ-Voc</td>
<td>55</td>
<td>35</td>
<td>25</td>
</tr>
</tbody>
</table>

N = 60; n per problem type x recording condition treatment combination = 10
these differences are in the direction predicted by $H_{IVA}$. That is, for both problem types the percent of clients who felt inhibited by the type of recording was greatest in the VR condition followed by the AR and MR conditions, respectively.

The z ratio of the difference between independent sample proportions (Tate, 1965) was employed to compare the percentages presented on Table 13. These ratios were only computed for percentages under the 3 recording conditions for the 2 problem types combined (row 3 on Table 12). None of the z ratios attained the .05 level of confidence, although a few approached this level. For example, the difference between the proportion of clients in the VR versus the MR condition who felt inhibited by the type of recording (.55 vs. .25) yielded a z ratio of 1.94 ($p = .052$). In addition, a comparison of the VR with the AR and MR conditions combined yielded a z ratio of 1.88 ($p = .06$).

Taken together, the results of the tests of Hypothesis IV and its 2 corollaries do not allow full acceptance on these hypotheses. The statistical tests on main effects, however, do come close enough to the conventional significance level to suggest a very guarded acceptance of a portion of the hypothesis.

$H_V$. Whether or not client talk time is affected by recording methods will depend upon client problem type and the number of the counseling interview.

$H_{VA}$. Overall, client talk time will not be affected by different recording procedures.
HB. For clients with personal-social problems video recording will produce the lowest amount of client talk, followed by audio recording and minimum audio recording in that order.

HC. For clients with educational-vocational problems the different recording procedures will not produce differential talk time.

HD. The effects of recording as indicated in "B" above will be greater for the first than the second interview (recording condition x problem type x interview number interaction).

Table 14 presents the means and standard deviations for client talk time across recording conditions for problem types separately and combined. It also gives these estimates for interviews 1 and 2 separately and combined within each problem type and for both types combined.

The data on Table 14 indicate that clients in the personal-social category (interviews 1 and 2 combined) obtained identical talk-time means across the 3 recording conditions. In the educational-vocational problem category, clients in the MR condition spent more time talking than those in the AR or VR conditions. Table 14 also reveals that there is wide variation in the talk time within each condition (note the sd's).

Table 15 presents the ANOVA for client talk time. Neither the main effect of Recording Condition nor the predicted interaction of
### TABLE 14

Means and SD's on Client Talk-Time (in minutes)

<table>
<thead>
<tr>
<th>Problem Type</th>
<th>Video M</th>
<th>Video SD</th>
<th>Audio M</th>
<th>Audio SD</th>
<th>Minimum M</th>
<th>Minimum SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal-Social</td>
<td>7.5</td>
<td>1.18</td>
<td>6.9</td>
<td>.97</td>
<td>7.8</td>
<td>1.50</td>
</tr>
<tr>
<td>Interview 1</td>
<td>6.4</td>
<td>1.78</td>
<td>7.0</td>
<td>1.99</td>
<td>6.2</td>
<td>1.50</td>
</tr>
<tr>
<td>Interview 2</td>
<td>7.0</td>
<td>1.60</td>
<td>7.0</td>
<td>1.57</td>
<td>7.0</td>
<td>1.70</td>
</tr>
<tr>
<td>Interviews 1&amp;2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational-Vocational</td>
<td>6.7</td>
<td>1.64</td>
<td>6.3</td>
<td>2.30</td>
<td>8.0</td>
<td>.99</td>
</tr>
<tr>
<td>Interview 1</td>
<td>7.1</td>
<td>1.53</td>
<td>6.0</td>
<td>1.88</td>
<td>8.0</td>
<td>1.25</td>
</tr>
<tr>
<td>Interview 2</td>
<td>6.9</td>
<td>1.60</td>
<td>6.2</td>
<td>2.10</td>
<td>8.0</td>
<td>1.13</td>
</tr>
<tr>
<td>Interviews 1&amp;2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pers-Soc + Educ-Voc</td>
<td>7.1</td>
<td>1.48</td>
<td>6.6</td>
<td>1.77</td>
<td>7.9</td>
<td>1.27</td>
</tr>
<tr>
<td>Interview 1</td>
<td>6.8</td>
<td>1.70</td>
<td>6.5</td>
<td>2.00</td>
<td>7.1</td>
<td>1.69</td>
</tr>
<tr>
<td>Interview 2</td>
<td>6.9</td>
<td>1.60</td>
<td>6.6</td>
<td>1.89</td>
<td>7.5</td>
<td>1.55</td>
</tr>
<tr>
<td>Interviews 1&amp;2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

N = 60; n per problem type x recording condition treatment combination = 10
### TABLE 15
ANOVA For Client Talk-Time (in seconds)

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Ss</td>
<td>904365.5</td>
<td>59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A (Recording Condition)</td>
<td>65121.4</td>
<td>2</td>
<td>32560.7</td>
<td>2.24</td>
</tr>
<tr>
<td>B (Problem Type)</td>
<td>124.0</td>
<td>1</td>
<td>124.0</td>
<td>.01</td>
</tr>
<tr>
<td>AB</td>
<td>54161.1</td>
<td>2</td>
<td>27080.5</td>
<td>1.86</td>
</tr>
<tr>
<td>Error (between)</td>
<td>784959.0</td>
<td>54</td>
<td>14536.3</td>
<td></td>
</tr>
<tr>
<td>Within Ss</td>
<td>380431.0</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C (Interview Number)</td>
<td>19101.6</td>
<td>1</td>
<td>19101.6</td>
<td>3.37*</td>
</tr>
<tr>
<td>AC</td>
<td>9538.3</td>
<td>2</td>
<td>4769.2</td>
<td>.84</td>
</tr>
<tr>
<td>BC</td>
<td>20856.1</td>
<td>1</td>
<td>20856.1</td>
<td>3.68*</td>
</tr>
<tr>
<td>ABC</td>
<td>24516.6</td>
<td>2</td>
<td>12258.3</td>
<td>2.16</td>
</tr>
<tr>
<td>Error (within)</td>
<td>306418.4</td>
<td>54</td>
<td>5674.4</td>
<td></td>
</tr>
</tbody>
</table>

*p < .10, > .05
this variable with Problem Type and Interview Number attains statistical significance. Thus, only those aspects of the hypothesis predicting negative results were supported, i.e., no main effect of Recording Condition and no differential effect of recording procedures on the talk time of clients with educational-vocational problems. Although not central to the hypothesis, trends ($p<.10, >.05$) may be seen for talk time to lessen from the first to the second interview (main effect of Interview Number), and for Interview Number to interact with Problem Type in affecting client talk time.

$H_{VI}$. Whether or not counselor talk time varies with recording conditions will depend on the problem type of the client and the number of the counseling interview.

$H_{VIA}$. Overall, counselor talk time will not vary according to recording condition.

$H_{VIB}$. For counselors of clients with personal-social problems video recording will indirectly produce the greatest amount of counselor talk time, followed by audio recording and minimum audio recording in that order.

$H_{VIC}$. For counselors of clients with educational-vocational problems, talk time will not vary with recording conditions.

$H_{VID}$. The effects of recording as indicated in "B" above will be greater for the first than the
second interviews in which clients participate (recording condition x problem type x interview number interaction).

Table 16 presents the means and standard deviations for counselor talk time across recording conditions for problem types separately and combined. Means and sd's are also given for interviews 1 and 2 separately and combined within each problem type and for both types combined.

The data on Table 16 suggest a tendency for counselors to talk more under the MR (vs. AR or VR) condition when counseling clients in the educational-vocational category. It can also be seen that wide within-group variation exists in counselor talk time. The ANOVA on Table 17 indicates that only those hypothesized effects predicting negative results were supported. That is, the main effect of Recording Condition is statistically nonsignificant, and when counseling clients in the educational-vocational problem category counselor talk time does not vary with recording condition. On the other hand, the expected Recording Condition x Interview Number interaction was also nonsignificant, as was the Recording Condition x Problem Type interaction effect.

H_{VII.7}. Degree of client self-exploration will be affected by recording procedures. In addition, this effect will partly depend upon client problem type and the number of the counseling interview in which the client is participating.
<table>
<thead>
<tr>
<th>Problem Type</th>
<th>Video M</th>
<th>Video SD</th>
<th>Audio M</th>
<th>Audio SD</th>
<th>Minimum M</th>
<th>Minimum SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal-Social</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interview 1</td>
<td>1.9</td>
<td>.96</td>
<td>2.0</td>
<td>.70</td>
<td>1.9</td>
<td>1.43</td>
</tr>
<tr>
<td>Interview 2</td>
<td>2.4</td>
<td>1.42</td>
<td>2.1</td>
<td>1.04</td>
<td>3.0</td>
<td>1.20</td>
</tr>
<tr>
<td>Interviews 1&amp;2</td>
<td>2.2</td>
<td>1.23</td>
<td>2.1</td>
<td>.89</td>
<td>2.5</td>
<td>1.42</td>
</tr>
<tr>
<td>Educational-Vocational</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interview 1</td>
<td>2.9</td>
<td>1.60</td>
<td>3.0</td>
<td>1.54</td>
<td>1.9</td>
<td>.85</td>
</tr>
<tr>
<td>Interview 2</td>
<td>2.3</td>
<td>1.24</td>
<td>2.8</td>
<td>1.36</td>
<td>2.3</td>
<td>1.29</td>
</tr>
<tr>
<td>Interviews 1&amp;2</td>
<td>2.6</td>
<td>1.47</td>
<td>2.9</td>
<td>1.46</td>
<td>2.1</td>
<td>1.10</td>
</tr>
<tr>
<td>Pers-Soc + Educ-Voc</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interview 1</td>
<td>2.4</td>
<td>1.40</td>
<td>2.5</td>
<td>1.29</td>
<td>1.9</td>
<td>1.18</td>
</tr>
<tr>
<td>Interview 2</td>
<td>2.3</td>
<td>1.34</td>
<td>2.4</td>
<td>1.29</td>
<td>2.6</td>
<td>1.29</td>
</tr>
<tr>
<td>Interviews 1&amp;2</td>
<td>2.4</td>
<td>1.36</td>
<td>2.5</td>
<td>1.29</td>
<td>2.3</td>
<td>1.28</td>
</tr>
</tbody>
</table>

N = 60; n per problem type x recording condition treatment combination = 10
TABLE 17
ANOVA For Counselor Talk-Time (in seconds)

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between Ss</strong></td>
<td><strong>412163.1</strong></td>
<td>59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A (Recording Condition)</td>
<td>2856.2</td>
<td>2</td>
<td>1428.1</td>
<td>.21</td>
</tr>
<tr>
<td>B (Problem Type)</td>
<td>9416.3</td>
<td>1</td>
<td>9416.3</td>
<td>1.36</td>
</tr>
<tr>
<td>AB</td>
<td>26882.0</td>
<td>2</td>
<td>13441.0</td>
<td>1.95</td>
</tr>
<tr>
<td>Error (between)</td>
<td>373008.6</td>
<td>54</td>
<td>6909.0</td>
<td></td>
</tr>
<tr>
<td><strong>Within Ss</strong></td>
<td><strong>332762.0</strong></td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C (Interview Number)</td>
<td>3381.4</td>
<td>1</td>
<td>3381.4</td>
<td>.70</td>
</tr>
<tr>
<td>AC</td>
<td>13083.5</td>
<td>2</td>
<td>6541.8</td>
<td>1.36</td>
</tr>
<tr>
<td>BC</td>
<td>13167.2</td>
<td>1</td>
<td>13167.2</td>
<td>2.74</td>
</tr>
<tr>
<td>ABC</td>
<td>3625.2</td>
<td>2</td>
<td>1812.6</td>
<td>.38</td>
</tr>
<tr>
<td>Error (within)</td>
<td>259504.7</td>
<td>54</td>
<td>4805.6</td>
<td></td>
</tr>
</tbody>
</table>
Overall, video recording will produce the lowest degree of client self-exploration, followed by audio recording and video recording in that order.

The effects of recording indicated in "A" above will be greater for clients with personal-social problems than educational-vocational problems (recording condition x problem type interaction).

The effects of recording indicated in "A" above will be greater during clients' first interviews than their second interviews (recording condition x interview number interaction).

Mean ratings and standard deviations of client self-exploration on the Helpee Self-Exploration Scale are presented on Table 18. Means and sd's are presented for each problem type separately and for both types combined within each recording condition. They are also given for interviews 1 and 2 separately and combined within each problem type and for both types combined. It should be reiterated that the larger the score on the Helpee Self-Exploration Scale, the greater the degree of client self-exploration.

Inspection of Table 18 reveals that within the personal-social problem category, mean self-exploration ratings are about equal under MR and AR conditions. The means under the VR condition, however, are
TABLE 18

Means and SD's on Helpee Self-Exploration

<table>
<thead>
<tr>
<th>Problem Type</th>
<th>Video</th>
<th>Audio</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Personal-Social</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interview 1</td>
<td>2.9</td>
<td>.77</td>
<td>3.3</td>
</tr>
<tr>
<td>Interview 2</td>
<td>2.3</td>
<td>.98</td>
<td>3.0</td>
</tr>
<tr>
<td>Interviews 1&amp;2</td>
<td>2.6</td>
<td>.93</td>
<td>3.1</td>
</tr>
<tr>
<td>Educational-Vocational</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interview 1</td>
<td>2.4</td>
<td>.71</td>
<td>2.1</td>
</tr>
<tr>
<td>Interview 2</td>
<td>2.0</td>
<td>.50</td>
<td>1.9</td>
</tr>
<tr>
<td>Interviews 1&amp;2</td>
<td>2.2</td>
<td>.61</td>
<td>2.0</td>
</tr>
<tr>
<td>Pers-Soc + Educ-Voc</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interview 1</td>
<td>2.7</td>
<td>.79</td>
<td>2.7</td>
</tr>
<tr>
<td>Interview 2</td>
<td>2.2</td>
<td>.79</td>
<td>2.4</td>
</tr>
<tr>
<td>Interviews 1&amp;2</td>
<td>2.4</td>
<td>.79</td>
<td>2.6</td>
</tr>
</tbody>
</table>

N = 60; n per problem type x recording condition treatment combination = 10
lower. A somewhat different pattern emerges for the educational-vocational problem category. Here, the means for the VR and AR conditions are about equal, but the MR mean is appreciably higher (an entire level on a 5 point scale). When problem types are combined, the pattern found for the educational-vocational category emerges, i.e., VR and AR are about equal and MR is appreciably higher than both of these.

The ANOVA for client self-exploration is presented on Table 19. It can be seen that the F ratio for Recording Condition is highly significant (p<.01). In addition, the interaction between Recording Condition and Problem Type attains significance (p<.05). The hypothesized interaction between Recording Condition and Interview Number, however, does not approach significance.

Newman-Keuls tests were employed to compare specific pairs of means. For the overall self exploration scores (problem types combined and interviews 1 and 2 combined) as reflected in the main effect of Recording Condition, significant differences emerged between the MR and AR conditions (p<.01) and the MR and VR conditions (p<.01). The VR and AR conditions did not differ significantly from each other. Specific comparisons were also made of self-exploration ratings under the different recording conditions within each problem classification, since the interaction between Recording Condition and Problem Type attained significance. Within the personal-social category none of the means differed significantly from each other, although the differences between the VR as compared to the AR and the MR conditions approached significance (p<.10, >.05). Finally,
**TABLE 19**

ANOVA For Helpee Self-Exploration

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between Ss</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A (Recording Condition)</td>
<td>42.9</td>
<td>2</td>
<td>21.5</td>
<td>5.97***</td>
</tr>
<tr>
<td>B (Problem Type)</td>
<td>29.0</td>
<td>1</td>
<td>29.0</td>
<td>8.06***</td>
</tr>
<tr>
<td>AB</td>
<td>28.2</td>
<td>2</td>
<td>14.1</td>
<td>3.92**</td>
</tr>
<tr>
<td>Error (between)</td>
<td>192.2</td>
<td>54</td>
<td>3.6</td>
<td></td>
</tr>
<tr>
<td><strong>Within Ss</strong></td>
<td>68.0</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C (Interview Number)</td>
<td>18.4</td>
<td>1</td>
<td>18.4</td>
<td>23.00***</td>
</tr>
<tr>
<td>AC</td>
<td>1.1</td>
<td>2</td>
<td>.6</td>
<td>.75</td>
</tr>
<tr>
<td>BC</td>
<td>3.0</td>
<td>1</td>
<td>3.0</td>
<td>3.75*</td>
</tr>
<tr>
<td>ABC</td>
<td>1.4</td>
<td>2</td>
<td>.7</td>
<td>.88</td>
</tr>
<tr>
<td>Error (within)</td>
<td>44.1</td>
<td>54</td>
<td>.8</td>
<td></td>
</tr>
</tbody>
</table>

*p<.10

**p<.05

***p<.01
within the educational-vocational problem category self-exploration was significantly greater under the MR condition than either the AR or the VR conditions (p<.01 in both cases).

Taken together, the above analyses suggest a partial acceptance of Hypothesis VII. Degree of client self-exploration did appear to be affected by recording condition, but the nature of this effect depended upon client problem type.

Finally, although not central to the Hypotheses, a significant (p<.05) main effect for Interview Number emerged, with self-exploration being less for the second than the first interview. The fact that the Interview Number x Problem Type interaction approached significance (<.10, >.05) indicates that this reduction across interviews may depend, in part, upon the client's problem type. The reduction of self-exploration from the first to the second interview tended to be greater for clients in the personal-social than the educational-vocational category.

Discussion of Results

An attempt will be made in this section to integrate the results of this study and to offer possible explanations of them. The

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4In the preceding section of this chapter several main effects of interview number and client problem type were noted. In addition, in 2 instances these variables interacted with each other in affecting the dependent variable. However, since interview number and client problem type are subsidiary independent variables, their effects, in and of themselves, are not of particular interest in this experiment. They are only of interest inasmuch as they may interact with the main independent variable (recording condition) in affecting a dependent variable. Thus, main effects of subsidiary independent variables, and interactions between them, will not be discussed during the remainder of this chapter. This decision is consistent with the discussion in Chapter II of the purposes of subsidiary independent variables.
variables on which recording was found to have an effect will be discussed first. This will be followed by an examination of the variables on which essentially negative results emerged (i.e., no effect of recording identified).

The results of this study indicate that, for clients in general, the method of recording counseling interviews has no effect upon their overall evaluations of counseling (Tables 2 and 3). When client problem type is categorized by clients into either personal-social or educational-vocational, however, important differences emerge. Clients who indicate prior to counseling that their problems are primarily personal-social in nature and who are counseled under video recording conditions exhibit a tendency to be less satisfied with the counseling process and its outcomes than are such clients whose sessions are either audio or minimally audio recorded. On the other hand, with clients who indicate that their problems are primarily educational-vocational, the method of recording does not appear to affect the extent to which they are satisfied with counseling (Tables 2 and 6).

Regardless of client problem classification, the results indicate that different recording procedures do not differentially affect clients' perceptions of those aspects of overall evaluation of counseling pertaining to the climate of counseling or the comfort of the counselor (Tables 2, 4 and 5). Thus, although clients who are counseled under different recording conditions perceive the climate of counseling as being equally warm, accepting and empathic and see
their counselors as being equally confident and "at ease", clients with personal-social problems who are video recorded are less satisfied with their counseling experience than are such clients who are counseled under audio or minimum audio conditions.

When client self-exploration is examined, a somewhat different picture emerges (Tables 18 and 19). For clients in general (problem types combined) either of the 2 standard recording procedures, video or audio, appears to inhibit self-exploration. That is, self-exploration was greater in the minimum audio group (the partial control group) than in the groups counseled under video or audio conditions. The effect of recording condition, however, was found to depend, in part, upon client problem classification. For clients who indicate that their problems are primarily educational-vocational, either of the standard recording methods appears to rather severely attenuate self-exploration. But for clients with primarily personal-social problems, only video recording may inhibit self-exploration. This latter finding is highly tentative, since the differences between the group counseled under video recording as compared to those under audio or minimum audio conditions did not quite attain the conventional significance level (p<.10, >.05).

Regarding the extent to which clients report feeling inhibited in expressing personal feelings and/or problems by the type of recording which was made of their interviews, a still different pattern emerges (Tables 11, 12 and 13). Overall, method of recording does appear to have an effect on this variable, although the fact that
the main effect of recording condition did not quite reach the .05 level of confidence does not permit a great deal of confidence in this conclusion. In particular, clients in general who are video recorded do seem to feel more inhibited by the type of recording than those in the partial control group who are audio recorded for just a few minutes (t = 2.11, p<.05). Client problem classification does not seem to be a factor on this variable. That is, the same pattern emerges for clients in both problem categories: the reported inhibitory effects are greatest for video recording and least for minimum audio recording. An almost identical pattern emerges when the percentages of clients who report being not inhibited by type of recording are compared across the 3 recording conditions.

It is difficult to integrate and interpret the findings discussed thus far in this section, since they are not clearly consistent. It does seem clear that different recording methods do produce differential effects on various aspects of client behavior. The effects, however, seem to depend upon a complex interaction among the type of recording, client problem classification, and the particular dependent variable under examination.

Why, for example, do clients with self-reported educational-vocational problems explore themselves and their problems less when their sessions are either video or audio recorded, but are equally satisfied with counseling under all 3 recording conditions? Added to this question may be the question of why, on the other hand, do clients with self-reported personal-social problems seem to explore
themselves and their problems less and report less satisfaction with counseling when they are video recorded? Finally, why does self-reported inhibition due to type of recording seem to be essentially independent of client problem classification?

Part of the apparent contradictions discussed in the above paragraph may be a result of differences and problems in the instruments and methods used to measure client satisfaction, self-exploration, and self-reported inhibition. Yet additional factors may have contributed to the differences. For example, clients with self-reported educational-vocational problems may experience less of a need to explore themselves and their problems than those with personal-social problems. This may be due to the possibility that educational-vocational problems are experienced as less affect-charged and/or less urgent. If so, then it would make intuitive sense that either of the standard recording procedures (i.e., video and audio) would inhibit self-exploration. That is, self-exploration in such cases would be highly susceptible to being inhibited. It follows that clients with these types of problems may not be less satisfied with counseling when their exploration is inhibited. The unfortunate aspect of this possible phenomenon is that helpee self-exploration (extensiveness of problem expression and immediacy of experiencing) does appear to be related positively to more ultimate and external outcomes in counseling (Carkhuff, 1969; Carkhuff & Berenson, 1967). Thus, the usual recording methods (video and audio) may be seriously and negatively affecting counseling outcomes.
In contrast to clients who classify their problems as primarily educational-vocational, those who categorize them as primarily personal-social may experience a more urgent need to explore themselves and their problems during counseling. If so, then self-exploration would not be expected to be easily impeded, and, in turn, a more exposing method of recording (i.e., video recording) would be required to inhibit self-exploration. When this occurs, it results in attenuated client satisfaction with the counseling process and its outcomes.

Although seemingly contradictory, the above interpretations may actually be supported by the finding that the increment in self-reported inhibition from minimum audio to audio to video recording was independent of client problem classification. Thus, a given method of recording may produce about the same feeling of inhibition in clients in the 2 problem categories, yet actual self-exploration may be more easily inhibited in clients with educational-vocational problems. It should be noted that the interpretations and possible explanations presented thus far are obviously conjectural. More research is clearly needed.

Probably the most unexpected finding in this study was that in no case did the interaction between interview number and recording condition even approach statistical significance. On an ex post facto basis, this interaction would be particularly expected on the client self-exploration variable discussed above, since recording methods were demonstrated to have an effect on this variable. (Note that
such an interaction could not have occurred on the evaluation of counseling or self-reported inhibition variables, since these variables were measured for interviews 1 and 2 combined.) This lack of an interaction effect indicates that the effect of recording is not highly transitory as many writers in the helping professions believe. Of course, a 2 interview sample is not an entirely sufficient test of the belief that the effects of different recording procedures are transient. It is possible that effects (e.g., inhibition) dissipate gradually. Yet, since the lore has it that such effects reduce very quickly, one would still expect at least a trend in the data toward the reduction of these effects across 2 interviews. An effect of this sort would seem important, since research indicates that in typical counseling agencies, counseling tends not to persist much beyond a few sessions (Blocher, 1968; Clark, 1966; Nugent & Pareis, 1968).

With respect to the above discussion, the fact that the differential effects of different recording procedures shows no trend toward lessening across 2 interviews may, in itself, contribute to the typically brief duration of counseling. In particular, the video recording of clients with personal-social type problems may lead to premature terminations in many cases, since such clients tend to be less satisfied with counseling after 2 sessions when it is video recorded. Again, this point warrants additional research attention (cf. Suggestions for Further Research).

The results discussed thus far have been essentially positive. That is, effects of some form, although complex, have been indicated.
In the remaining portion of this section the basically negative findings will be examined.

No effect was found of recording condition upon clients' reports of their feelings and behavior on an inhibition-excitation dimension, regardless of problem classification (Tables 7 and 8). Neither was such an effect found on counselors' perceptions of clients' feelings and behavior on this dimension, although certain trends emerged from the data (Tables 9 and 10).

This result is quite contradictory to the findings of Van Atta (1969) who administered a highly similar "scale" to students prior to counseling and asked them to anticipate how they would feel and act under various recording conditions. Van Atta summed the number of students under each of the recording conditions who selected each of the 9 alternatives on the "scale". He then classified each selection into 1 of 3 broad categories. Selections of alternatives 1-3 were placed into the stimulated-excited category, 4-6 into the comfortable-controlled category (the middle portion of the theoretical excitation-inhibition dimension), and 7-9 into the inhibited-thwarted category. Although the limitations of the procedure are recognized, a comparison of the percents of students who are placed into each of these 3 categories in the Van Atta study and the present experiment are given on Tables 20 and 21. (The Van Atta classification procedure was used for these data.) Table 20 presents this comparison for clients with personal-social problems (personal feelings and thoughts in the Van Atta study) and Table 21 for those with educational-
TABLE 20
Comparison of Percent of Clients With Personal-Social Problems
Placed Into Each of the Three Categories on the CEF in the
Present Study and the Van Atta (1969) Study

<table>
<thead>
<tr>
<th>Category</th>
<th>Audio#</th>
<th>Video*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Van Atta</td>
<td>Gelso</td>
<td>Van Atta</td>
</tr>
<tr>
<td>Stimulated-Excited (1-3)</td>
<td>9</td>
<td>70</td>
</tr>
<tr>
<td>Comfortable-Controlled (4-6)</td>
<td>31</td>
<td>20</td>
</tr>
<tr>
<td>Inhibited-Blocked (7-9)</td>
<td>60</td>
<td>10</td>
</tr>
</tbody>
</table>

# $\chi^2 = 27.2$, $p < .001$
* $\chi^2 = 25.1$, $p < .001$

TABLE 21
Comparison of Percent of Clients With Educational-Vocational
Problems Placed Into Each of the Three Categories on
the CEF in the Present Study and the Van Atta (1969) Study

<table>
<thead>
<tr>
<th>Category</th>
<th>Audio#</th>
<th>Video*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Van Atta</td>
<td>Gelso</td>
<td>Van Atta</td>
</tr>
<tr>
<td>Stimulated-Excited (1-3)</td>
<td>17</td>
<td>30</td>
</tr>
<tr>
<td>Comfortable-Controlled (4-6)</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Inhibited-Blocked (7-9)</td>
<td>23</td>
<td>10</td>
</tr>
</tbody>
</table>

# $\chi^2 = 1.54$, $p < .30$
* $\chi^2 = 11.47$, $p < .01$
vocational problems (a combination of study problems and vocational indecision in Van Atta's design). It should be noted that these comparisons are made for only video and audio recording, since these were the only 2 procedures which were identical in the 2 investigations.

Table 20 reveals highly pronounced differences between the results of the 2 studies for both video and audio recording methods. In each case a much larger proportion of students in the Van Atta study selected alternatives that reflect inhibition-blocking, and a much smaller proportion selected those reflecting excitation-stimulation. Chi square tests on the differences between the proportions in each category in the Van Atta study versus the present study are highly significant for both video and audio recording. This same pattern emerged for the students with educational-vocational problems, as revealed on Table 21. The differences, however, are less pronounced. In fact, for audio recording they do not attain significance.

It should be noted that only clients' reports of their feelings and behavior during their first interviews are compared with Van Atta's results. If clients' reports of their second interview were used the differences would be even more pronounced, since clients in the present study tended to select alternatives on the "scale" reflecting even less inhibition during the second than the first interview (p<.001).

How may the differences between the present experiment and Van Atta's investigation be explained? It is possible that clients'
anticipation of inhibition due to video and audio recording is much greater than the inhibition which they actually do experience when counseled under these conditions. This may be so despite the fact that audio and especially video recording were found to have an effect in the present study. An alternative explanation is that the Counseling Experience Form (CEF), the scale used to assess inhibition-excitation, is sensitive to anticipated effects but not to actual effects. This latter explanation is supported by the fact that significant effects were found in the present study with other measures but not with the CEF. Although further research is needed to answer this question, a combination of both explanations seems most plausible at this point. That is, clients (particularly those with personal problems) anticipate being more inhibited by standard recording procedures (video and audio) than they actually are; but the effects which do result from these methods are not tapped sensitively by the CEF.

Negative results were also found on client and counselor talk time, regardless of client problem classification (Tables 14, 15, 16 and 17). As indicated earlier, Roberts and Renzaglia (1965) also found that these variables were unaffected by recording (audio recording in their study). Sauer and Marcuse (1957), however, did find that audio recording affected amount of client talk in a projective testing situation. Although this discrepancy may deserve future research attention, it seems that the most parsimonious explanation of these contradictory results is that recording may affect
client talk time in projective testing situations but not in counseling interviews. In combining the Roberts-Renzaglia results with those of the present study, a plausible conclusion is that if recording does affect client and/or counselor talk time, the effects are very slight. Thus a very large sample would be needed to obtain statistically significant results. In light of the slight relationship between amount of client talk and various measures of interview outcome (Carnes & Robinson, 1948), the significance for counseling training and practice of such results, were they to be obtained, would seem questionable.

Limitations of the Study

In this section the possible limitations of the present research will be examined. As will be seen, several of these possible limitations are, in fact, limiting while others will be concluded to be either minor or not limiting.

A major limitation of the experiment was the size of the sample. Although an N of 60 is generally viewed as adequate, this N allowed for only 10 Ss to be placed in each of the 6 recording condition x problem type treatment combinations. Particularly in light of the wide within-cell variation (error variance), and the fact that this was a between Ss design, only rather pronounced between group differences could attain statistical significance. This problem was highlighted by the fact that several significance tests approached but did not quite attain the desired level of confidence (p<.10, >.05). Such outcomes, of course, do not permit clearcut conclusions.
A second major limitation centers upon the partial control group (minimum recording condition). As indicated in the discussion of subsidiary independent variables in Chapter II, this group would seem to permit clear interpretations of positive results, but the meaning of negative results are ambiguous. That is, if significant differences in the predicted direction were found between the MR group and, for example, the AR group it would seem safe to infer that audio recording has a different effect upon clients than non-recording. Yet if no such difference were found, it could not be concluded that audio recording does not differ from non-recording. This is so because it is possible that any type or amount of recording has an effect equivalent to the more standard recording methods and that this effect differs from non-recording, e.g., any type or amount of recording, as compared to non-recording, may inhibit clients.

The value of several of the instruments used to measure the effects of recording may be questioned. Many of the items on the Counseling Evaluation Inventory (CEI), for example, rate very high on social desirability. A related problem with this inventory is that it seems to have a low ceiling. This was evidenced by the fact that the mean score of Ss in the personal-social category in the MR group approached the ceiling, yet did not differ significantly from the other groups. Perhaps this problem could be partially solved by widening the range of alternatives for each item. For example, 5 alternatives (always, often, sometimes, rarely, never) are currently available for each item on the CEI. Providing 7 or 9 alternatives
might yield more sensitive measurement and might widen between-group differences when appropriate.

The same problem applied to item 2 on the Mode of Observation Questionnaire, but the problem is magnified in this item. Not only should the alternatives be widened here, but the labels attached to alternatives may need modification. For example, alternatives 4 and 5 were labeled very inhibited and extremely inhibited. No S checked extremely inhibited. Thus, this label should probably be dropped. The fact that most Ss in all groups checked either 1 or 2 (not inhibited or slightly inhibited) produced a highly skewed distribution, a problem which, again, might be at least partly resolved by widening the scale.

A final major problem related to instrumentation pertains to the Counseling Experience Form (CEF), the 9 alternative questions modified from Van Atta (1969). As indicated in the preceding section, this "scale" may be sensitive to anticipated effects of recording but not to actual effects. Although no research other than Van Atta's (1969) has been conducted in the CEF, examination of the items would suggest a major social desirability problem in assessing actual effects. For example, it might be difficult (e.g., embarrassing) for clients to select alternatives 5-9 (those on the control and inhibition portion of the excitation-inhibition continuum) after they have experienced counseling. These selections would be equivalent to admitting that one was not a "good client" and/or that the effort and time spent in counseling was not profitable. Such a phenomenon
could not occur, however, in Van Atta's study because Ss were asked to indicate on the scale how they would expect to feel if counseled under various recording procedures.

Questions may be raised about the generalizability of results obtained when a 2 interview limit is set on counseling in advance. What effect, for example, does the client's and counselor's knowledge that they will only have 2 sessions have on their transactions? Does such a phenomenon modify the effects of recording to the extent that such effects are not generalizable to counseling that is not so brief and time-limited? Thirdly, independent of the time limits set prior to counseling on the duration of counseling, was counseling too brief to be generalizable to typical counseling relationships?

The questions in the above paragraph clearly are important, but research does not exist which would allow complete answers to them. Some data is available, however, which suggest that the problems implied in these questions do not severely limit the relevance of this study. As indicated earlier, recent studies indicate that counseling typically does not persist much beyond a few sessions (Blocher, 1968; Clark, 1966; Nugent & Pareis, 1968). In addition, although setting such time limits on counseling does seem to affect the therapeutic transactions (e.g., client self-exploration decreased significantly from the first to the second interview, p < .001), it is difficult to see how this would modify the effects of recording to a point where one could not generalize the results to counseling where such limits were not set. If such were, in fact, the case one might
expect an interview number x recording condition interaction on client self-exploration in the present study, i.e., self-exploration would attenuate to an equal level across recording condition. Yet not even a trend in this direction was identified.

A related question focuses upon the use of introductory psychology students as clients when these students enrolled in the experiment, at least in part, to fulfill research requirements for the introductory course they were taking. Do such clients discuss problems which are the kind presented by clients in university counseling agencies? Were their problems, in fact, real and meaningful? Was suspiciousness due to the fact that they were participating in an experiment aroused in them to a point that the results may not be generalizable? Again, while clearly important, such questions cannot be fully answered.

Partial answers to the questions in the above paragraph, however, are available. All 9 counselors, upon questioning, felt that the problems discussed by the clients were quite typical of those presented in counseling psychology practicums. Also, screening procedures (cf. Subjects and Subject Selection in Chapter III) were employed to insure that Ss did have real, meaningful problems with which they desired help. In no instance were counselors, experimenters, or raters aware that this was not the case.

The idea that suspiciousness was aroused to a point that the findings lacked generalizability seems to be disconfirmed by 2 occurrences. First, 85 percent of the Ss indicated that they "never"
distrusted their counselor and 93 percent indicated that they either "rarely" or "never" did so, cf. item 17 on the Counseling Evaluation Inventory. The mean rating on this item was 3.8 (3 = rarely, 4 = never), and the means of Ss under the 3 recording conditions was almost identical. Secondly, upon questioning during the debriefing session, 57 of the 60 Ss indicated that they believed what E told them were the purposes of the experiment and their "pre-set."

While research is needed on the method of subject selection used in this experiment, it seems to the writer that this may be a very useful new method of doing research on the counseling process. It has a major advantage over the typical counseling analogue, in that Ss are individuals with real (vs. role-played) problems with which they desire help. In addition, it has advantages over research in more naturalistic settings in that it allows for the manipulation of experimental variables that are not ordinarily manipulable.

Finally, a question may be raised about whether the counselors actually put forth their best efforts, since they knew that they were in an experiment. As discussed in Chapter II (section on Deception in Counseling Research), this possibility, along with the ethical implications of it, was discussed with the counselors prior to the experiment. Counselors were asked to and did take special precautions to minimize this possibility. For example, all counselors took case notes following their first sessions with each client, although this is not always done in advanced practicums and, especially, in counseling that is not part of a training program. In addition, some
evidence exists which suggests that subjects in the study were satisfied with the counselors' efforts. In answer to item 11 of the Counseling Evaluation Inventory, 90 percent of the subjects indicated that they believed the counselor "always" or "often" had a genuine desire to be of service to them (mean rating = 3.5; 4 = always, 3 = often). In answer to item 21, 98 percent of the subjects indicated that they felt the counselor "never" or "rarely" acted as if he had a job to do and did not care how he accomplished it (mean rating = 3.9; 4 = never, 3 = rarely).

Summary of Conclusions

The findings of this experiment may be summarized as follows:

H1. No difference was found in the overall evaluation of counseling among 3 groups of clients who were each counseled under 1 of 3 different recording conditions: video recording (VR), audio recording (AR) and minimum audio recording (MR). There was a tendency for the clients who classified their problems as primarily personal-social and who were counseled under the MR condition to have more positive overall evaluations of counseling, followed by those counseled under the AR and the VR condition, respectively (p<.10, >.05). This pattern did not occur with clients who classified their problems as primarily educational-vocational.

When overall evaluations of counseling were broken down into 3 factors, it was found that clients in general did not differ in their evaluations of Counselor Comfort, Counseling Climate or Client
Satisfaction. However, clients who classified their problems as personal-social and were video recorded were significantly less satisfied with counseling than such clients who were audio recorded (p < .05) or minimally audio recorded (p < .05). This difference did not occur for clients who classified their problems as educational-vocational. Regardless of problem classification, the groups of clients counseled under different recording conditions did not differ in their evaluations of the counseling climate or the counselor's comfort.

H_{II}. Clients did not differ in their ratings of their feelings and behavior on an excitation-inhibition continuum as a function of the recording condition under which they were counseled. This result occurred regardless of the client's problem classification or the number of the counseling interview in which he participated.

H_{III}. Counselors' perceptions of clients' feelings and behavior on an excitation-inhibition continuum did not vary as a function of the recording condition under which clients were counseled. This result occurred regardless of the client's problem classification or the number of the counseling interview in which the client participated.

H_{IV}. Regardless of client problem classification, clients' reports of the extent to which they felt inhibited in expressing personal feelings and/or problems by the type of recording tended to vary according to the recording condition under which they counseled (p < .10, > .05). Clients in the VR condition reported the greatest
amount of inhibition due to type of recording, followed by those in the AR and MR conditions respectively. This same phenomenon occurred when the per cent of clients under the recording conditions who did not feel inhibited in expressing personal feelings and/or problems by the type of recording were compared with those who felt at least slightly inhibited. Here the z ratio of these percents in the VR vs. the MR conditions reached the .052 level of confidence.

$H_V$. The amount of client talk time did not differ across the 3 recording conditions. This result occurred regardless of client problem classification or the number of the counseling interview.

$H_{VI}$. The amount of counselor talk time did not differ as a function of the recording condition under which clients were counseled. This result occurred regardless of client problem classification or the number of the counseling interview.

$H_{VII}$. Degree of client self-exploration did differ across the 3 recording conditions ($p<.01$). Clients in general who were counseled under the MR condition explored themselves and their problems to a significantly greater degree than those counseled under AR ($p<.01$) or VR ($p<.01$) conditions. This pattern also emerged within the group of clients who classified their problems as primarily educational-vocational. Here the differences were even more pronounced. For the client who classified their problems as primarily personal-social, however, a somewhat different pattern emerged. Here, clients counseled under the VR condition tended to
explore themselves and their problems less \((p < .10, > .05)\) than those counseled under either AR or MR conditions. Those counseled under the AR vs. MR conditions did not differ in self-exploration. It was found that the results presented under \(H_{\text{VII}}\) did not vary as a function of the number of the counseling interview.

**Implications for Counselor Training**

The three most recent investigations on recording in counseling indicate that both audio and video recording have a negative effect on various types of client expression. Van Atta's (1969) survey study demonstrates that a large proportion of students anticipate being inhibited or "blocked" by recording, particularly video procedures. The present experiment and the earlier one by Roberts and Renzaglia (1965) suggest that the actual (vs. anticipated) effects of recording are subtle and complex, but still negative. The fact that actual effects are subtle and complex may clarify why such effects were not identified in several of the early studies on recording (cf. Conclusions and Needed Research sections in Chapter I). In any event, the question arises as to what do these findings suggest for counselor training programs, where recording is a common practice. More specifically, what can be done to minimize the potentially adverse effects of recording on some clients? Although additional research is needed to answer this question with confidence, some possible answers will be discussed in the remainder of this section.
For one, it may be appropriate to challenge the assertion that inhibition of various forms in clients is an undesirable occurrence, particularly when beginning counselors are being trained. Thus, the inhibition in clients due to recording may serve the purpose of allowing beginning counselors to practice and develop their skills with cases that are not too complex. Yet, if such inhibition tends to produce negative outcomes in counseling (cf. the Discussion of Results section), it would seem more profitable to bring counselors-in-training up to a level of proficiency prior to beginning practicum that would allow them to work effectively with clients who express their problems more fully, even though these expressions may be complicated. Pre-counseling programs such as those organized by Truax and Carkhuff (1967) may offer possible solutions to this difficult situation.

The above discussion still says nothing about how to manage recording practices in counselor training programs so they are in the best interests of the client as well as the counselor-trainee. One possibility would be to employ recording procedures selectively. Counselors may be given options of whether or not to record and, if so, what form of recording to employ. These questions can be dealt with by the counselor and his supervisor jointly. For example, at any time during a particular counseling relationship the counselor and supervisor can discuss whether the particular type of recording being used seems to be interfering with counseling progress. If they decide that it is, the next decision would focus on whether another
type of recording would be more appropriate or whether no recording at all would be the most desired procedure.

This latter procedure (non-recording) would seem particularly appropriate (if in the client's best interests) with counselors in advanced practicums or those who have become proficient to a point where supervision would not need to be so close. Non-recording would place the supervisor in a more consultative role. That is, he would not be directly observing each interview but, rather, would discuss problems and strategies with the trainee without having seen or heard the counseling transactions.

Another alternative which might prove useful is for the supervisor himself to have a brief session with the client. This would serve to make the supervisor into something more than an unknown quantity, as he usually is with most current recording procedures. Accordingly, it would reduce or eliminate the threat for the client of an "unknown audience" (cf. Wapner & Alper, 1952), which may be at the basis of the inhibition caused by recording with many clients. That is, the person who is observing the client would become known and, hopefully, trusted by the client. This alternative assumes that the "unknown audience" rather than the fear of a permanent record (i.e., the tape) is what consciously or unconsciously inhibits clients.

There is some basis for the assumption. For a client to be inhibited due to the fear of being exposed by a permanent record he would have to feel considerable mistrust of his counselor, i.e., mistrust him to a point where he would question what the counselor would do with the tape. Yet in the present study 85 percent of the clients indicated
that they "never" mistrusted their counselors (on the Counseling Evaluation Inventory), and this percent did not differ across recording conditions. In addition, few if any of the clients displayed overt mistrust of the experimenter's statement that the tapes would definitely not be used for purposes other than supervision and/or research.

If the above argument is valid, then the discussion thus far and the results of the present experiment may apply to observation procedures in counseling supervision that do not employ recording per se. For example, observing through a one-way mirror or through a television monitor (without video taping) may have the same impact as actually recording with video equipment. This argument is strongly supported by Van Atta's (1969) survey which revealed that clients anticipate being at least as inhibited by one-way mirror observation as video recording or motion picture filming.

The above suggestions and implications are, of course, tentative. Many questions must be answered before firm implications may be drawn. In the next section the avenues of research on the effects of recording which seem most promising to the writer will be explored.

Recommendations for Further Research

Most of the recommendations to be discussed in this section have been implied in preceding sections, particularly the one pertaining to the limitations of the present experiment. Briefly, 6
recommendations will be made below. An attempt has been made to discuss only the more salient possibilities for future experimentation. The reader is referred to the Needed Research section in Chapter I for a supplement to the recommendations presented below.

To begin with, future research needs to be conducted with the use of a control group which is either actually not recorded or recorded without the awareness of subjects. If it was decided that leading subjects to believe their sessions were not recorded when, in fact, they were would present an ethical problem, the use of a control group which actually was not recorded could be accomplished by using paper-and-pencil inventories and ratings. Such forms could be completed after a designated number of counseling sessions by the client, the counselor or both. Of course, this possibility would depend upon the development of reliable and valid instruments. Modifications of the Counseling Evaluation Inventory and the Mode of Observation Questionnaire as discussed on the Limitations section of this chapter would seem to be called for. In addition, measures designed specifically to assess the effects of recording should be useful.

On the other hand, experimentation on subjects who were led to believe that they were not recorded when, in fact, they were would probably be consistent with the ethical position of many or perhaps most researchers if certain precautions were taken. For example, the experimenter could be careful not to even listen to the tapes before seeking the permission of subjects during the debriefing session. This procedure would seem most appropriate when a method for selecting
subjects similar to the one in the present study is employed. It would seem least appropriate when employed in a typical counseling agency with actual clients who come to the agency for counseling. On practical grounds this would seem unwise, since it would be likely to damage the agency's reputation.

A second recommendation is to study the effects of various recording procedures on different types of clients. On a subjective basis, it became apparent to this investigator that even with client problem classification incorporated into the design as a subsidiary independent variable, there was still wide within-group variation that seemed to be a function of particular kinds of clients. A fruitful avenue of study would be to examine the relationship of client personality and the effects of recording. Personality variables such as suspiciousness, general anxiety, and general inhibition are examples of the kinds of variables that might be expected to relate to the effects of recording. This type of research would broadly aim to answer the question of what types of clients (within or across problem classifications) are most disrupted or even stimulated by various recording procedures.

Thirdly, it would seem profitable to study the role of the counselor variable in mediating the effects of recording on clients. For example, variables such as counselor personality, theoretical persuasion, sex, etc. could be examined to determine if they interact with recording procedures in affecting client behavior. It seems likely that with certain counselors even the most exposing observation
methods do not disrupt clients. With other counselors, however, the least exposing methods may inhibit clients.

A fourth recommendation is to study the effects of recording in naturalistic settings, e.g., practicum training centers, counseling centers. It should be cautioned, however, that it is all too easy to conduct poorly designed research in such places, as has been the rule in past research on the effects of recording. Well designed experiments of a more naturalistic variety in typical counseling agencies could be organized to answer several important questions which could not be dealt with in experiments such as the present one. For example, the course of inhibition of self-exploration could be plotted over the full length of counseling with clients with different problem classifications, personality traits, etc. In addition, the relationship between early terminations and different recording methods could be examined to answer questions raised in the Discussion of Results section of this chapter. These are, of course, only a few possibilities. The key point here is that there are critical questions which could only be answered through well-designed naturalistic type research in natural counseling settings.

A fifth point is that research is needed on methods of observation which were not examined in the present experiment. One may infer, for example, that the effects of observing through one-way mirrors are comparable to those attributable to video recording procedures. However, research is clearly needed to answer such a question. Regarding the effects of one-way mirror observation specifically, it
seems noteworthy that not a single study has been located which has examined these effects, although Van Atta's aforementioned survey assessed the anticipated effects of this method of observation. This absence of research has occurred notwithstanding the fact that one-way mirror observation has been common in counselor training programs for a number of years.

A final recommendation pertains to experimental methodology. If dependent measures are employed which yield wide within-group variation (such as those in the present study), sample sizes should be larger than that in this experiment. This statement applies more to the n's per cell than to the overall sample size. As indicated earlier, the use of only 10 subjects per recording condition x problem type treatment combination cell may have been the cause of several of the statistically borderline results. On purely statistical grounds this difficulty could be managed by the use of a within-subjects design. Yet, for reasons discussed in Chapter I (section on Needed Research), such a design would seem inappropriate on subject-matter grounds.
The relevance of contextual variables to the counseling process and its outcomes has been given a paucity of attention in counseling research and theory. The present experiment examined the effects on clients of one important contextual variable: the tape recording of counseling interviews, using different forms of recording.

It has been several years since psychologists and educators first began to record counseling interviews. The potential usefulness of recording appears to have been discussed first over 30 years ago by Symonds (1939), and the first major recording program in counseling and psychotherapy was organized at the Ohio State University in the early 1940's by Carl R. Rogers and Francis P. Robinson (Kogan, 1950).

Currently, audio tape recording of counseling interviews is standard practice in counseling psychology graduate programs, usually for the purpose of supervising graduate students in practicum classes (Roberts & Renzaglia, 1965). In addition, video tape recording appears to be increasing to a point where it too will soon become standard. Perhaps because of the many helpful aspects of audio and video recording in counseling supervision, counselor educators
generally appear to assume that such recording has little or no impact on the therapeutic situation (Roberts & Renzaglia, 1965). Although there has been some early and recent research on this topic, such work has nearly always focused upon the subjective opinions of therapists and/or clients, and the research methodology has been notably loose. Accordingly, there has been a paucity of systematic, experimental research on the effects of various methods of recording counseling interviews on client and/or counselor behavior.

The little research which has been done has studied the effects of audio tape recording. In addition, there appears to be a general assumption among counselor educators that if the client is adversely affected by recording, it is primarily because the counselor somehow transmits his own anxiety over being observed to the client. Finally, there appears to be an assumption that if the client is adversely affected by recording, these affects are highly transitory and, in turn, quickly dissipate.

The present experiment had 3 general purposes: (a) to compare the effects on various client behaviors (or counselor behaviors that are mediated by the effects of recording on clients) of Video Recording (sound-film), Audio Recording (sound), and Minimum Audio Recording—a partial control group procedure; (b) to determine if "recording condition" interacts with client "problem type" (educational-vocational or personal-social) in affecting client behavior and client-mediated counselor behavior; (c) to determine if "recording condition" interacts with the number of the counseling
interview (first or second) in which a client participates in affecting various client behaviors and client-mediated counselor behaviors.

Sixty introductory psychology students were the subjects in this experiment. A careful effort was made to select only those students who had actual problems which they wished to discuss with counselors. The counselors were 9 graduate students in counseling psychology.

The experiment was arranged so that one-half the subjects had primarily educational-vocational problems which they wished to discuss in counseling, and the other one-half had personal-social problems. Within each problem classification, each subject was assigned to 1 of 3 recording conditions on an essentially random basis. The possible confounding effects of the counselor variable were controlled by arranging the design so that each counselor interviewed an equal number of subjects under each recording condition x problem type treatment combination. Also, counselors were unaware of the manner in which their clients were told their interviews would be recorded. All subjects received two 30-40 minute counseling interviews, one week apart.

Seven dependent variables were employed. These were (a) client evaluation of counseling, (b) client reported feelings and behavior during counseling on an excitation-inhibition continuum, (c) counselor-perceived client feelings and behavior on an excitation-inhibition continuum, (d) clients' self-reports of the
extent to which they felt inhibited in expressing personal feelings and/or problems by the type of recording which was made of their interviews, (e) client talk time, (f) counselor talk time, (g) client self-exploration. In fact, while each client was led to believe that his interviews would be recorded under 1 of 3 conditions, all interviews were audio tape recorded from minutes 10-20. These segments were used to assess client self-exploration, counselor talk time, and client talk time. The remaining 4 dependent variables were measured through paper-and-pencil ratings by clients or counselors.

The 7 general hypotheses of this experiment will be stated below. Under each hypothesis will be given the results pertinent to it.

H₁. Whether or not clients' evaluations of counseling are affected by recording procedures will depend on their problem type.

This hypothesis was accepted in part. For clients in general, overall evaluation of counseling did not differ as a function of recording condition. There was a tendency, however, for clients who indicated prior to counseling that their problems were primarily personal-social to differentially evaluate counseling according to the recording condition under which they were counseled (minimum audio>audio>video). This trend did not appear for clients with educational-vocational problems. This finding must be interpreted with much caution, since the F ratio for the interaction between recording condition and problem type did not quite attain the .05 level of confidence.
When overall evaluation of counseling was separated into its 3 components, it was found that, regardless of problem classification, clients did not differentially evaluate counseling climate or counselor comfort according to the recording condition under which they were counseled. Clients who classified their problems as personal-social and who were counseled under video recording conditions, however, were less satisfied with counseling than were such clients who were counseled under audio (p<.05) or minimum audio (p<.05) recording conditions. Clients who classified their problems as educational-vocational did not differ in the extent to which they were satisfied with counseling as a function of the recording condition under which they were counseled.

H_{II}. Clients' feelings on an excitation-inhibition continuum will be affected by recording procedures. In addition, this effect will partly depend upon client problem type and the number of the counseling interview in which he participates.

No portion of this hypothesis was accepted. Regardless of client problem classification or the number of the counseling interview (first or second), clients' feelings on an excitation-inhibition dimension were not found to differ according to the recording condition under which they were counseled.

H_{III}. Counselors' perceptions of clients' feelings on an excitation-inhibition continuum will be affected by the recording procedure. In addition, this effect will partly depend upon client problem type and the number of the counseling interview.
No portion of this hypothesis was accepted, although certain trends were noted. Regardless of client problem classification or the number of the counseling interview, counselors' perceptions of their clients' feelings on an excitation-inhibition continuum did not vary according to the recording condition under which clients were counseled.

**HIV.** Clients' reports of the degree to which they are inhibited in expressing personal feelings and/or problems by the type of recording which was made of their counseling sessions will be affected by the actual recording condition under which they are counseled. In addition this effect will partly depend upon client problem type.

A portion of this hypothesis was accepted, but only on a highly tentative basis, since the predicted differences did not quite attain the desired level of statistical significance. Regardless of client problem type, self-reported inhibition was related to recording condition (video recording > audio recording > minimum audio recording). Although the F ratio for the main effect of recording condition did not quite attain the conventional significance level (p<.10, >.05), the t ratio of the difference in mean ratings of the group which was video recorded and the one which was minimally audio recorded did attain this level (p<.05). Since a posteriori testing following a non-significant F ratio in the analysis of variance violates certain statistical assumptions, this finding must be interpreted with a great deal of caution.
When the percent of clients under each recording condition who felt at least slightly inhibited by the type of recording was compared, an almost identical pattern emerged. In this case, a comparison of the difference between these percents for clients counseled under video recording conditions and minimum audio recording conditions yielded a z ratio of 1.94 (p = .052). The differences discussed under Hypothesis IV warrant additional research.

$H_V$. Whether or not client talk time is affected by recording methods will depend upon client problem type and the number of the counseling interview.

Only those aspects of this hypothesis which predicted negative results were supported. Regardless of client problem classification or the number of the counseling interview in which the client was participating, client talk time was not found to vary with recording condition.

$H_{VI}$. Whether or not counselor talk time varies with recording condition will depend on the problem type of the client being counseled and the number of his counseling interview. Only those aspects of this hypothesis which predicted negative results were supported. Regardless of client problem type or the number of his counseling session, counselor talk time did not vary with recording condition under which the client was counseled.

$H_{VII}$. Degree of client self-exploration will be affected by recording procedures. In addition, this effect will partly depend upon client problem type and the number of the counseling interview in which the client is participating.
A major portion of this hypothesis was accepted. When the 2 problem classifications were combined, it was found that clients counseled under the minimum audio condition explored themselves and their problems significantly more than those counseled under audio (p<.01) or video (p<.01) conditions. This same pattern emerged for those clients with primarily educational-vocational problems, although to an even greater degree. For clients with personal-social problems, however, counseling under video recording yielded less self-exploration than counseling under either audio or minimum audio recording. This latter finding must be viewed with caution, since the difference between video and audio and between video and minimum audio recording did not quite attain the desired level of confidence (p<.10, >.05 in both cases). The effect of the recording condition was not found to depend upon the number of the counseling interview.

An effort was made to integrate the above results and to offer possible explanations of why they occurred. It was concluded that effects of recording procedures were identified in the experiment, but that the nature of these effects seemed to depend upon a complex interaction among recording methods, client problem classification, and the particular dependent variable being studied. The limitations of the experiment were noted, along with the implications of the findings for counselor training. Six recommendations for further research on the effects of recording were proposed.
APPENDIXES
APPENDIX A

Area of Concern Form
AREA OF CONCERN FORM

Name (please print) ____________________________

Number of interview (1st or 2nd) __________________

Counselor ____________________________

Please check the area of concern that you wish to discuss with your counselor. As indicated on the "sign up" sheet for this experiment, there are two major areas. These are indicated below, along with examples of the kinds of problems that are relevant to each area. Please check only one of the two below.

Social and/or personal concerns

Examples: Roommates, family, dating, marriage
Making friends or relations with people in general
Lack of self-confidence
Differences between ideas and standards upheld at home and those expressed at the University
Sense of direction, planning personal life
Feelings of discouragement, unhappiness, nervousness, or inadequacy

Educational and/or vocational concerns

Examples: Deciding on a major and/or vocation
Improving organization of study, use of time
Ability relative to career choice
Employability and/or occupational goals
Sources of vocational-educational information
Improving reading and/or study skills
Not enough time for study and/or recreation
Improving ability to prepare for and take exams
Difficulty in understanding textbooks, lectures, instructors
APPENDIX B

Points Made in Initial Contact between S and E
1. E asks S if he is clear about the type of students that E requires for the experiment. Regardless of S's answer, E reiterates that he is only interested in students who wish to discuss real, meaningful concerns or problems of an educational-vocational or personal-social nature (some examples given) with a counselor. E indicates that the counselor will be a second or third year doctoral student in counseling psychology who has had experience in counseling. In addition E tells S that the counselor will treat the sessions as he does any counseling session; he will be doing his best to help the student with his problems. E reiterates that to participate in the experiment the student must be able to schedule the same hour for two consecutive weeks. At this point E asks S if he still thinks he fits into the experiment and, if so, if he still wishes to participate in it. (At this point, most Ss tended to give a general description of their problem and ask E if he thought they would be suitable Ss.)

2. If S and E agree that S would be suitable, E discusses the general purposes of the experiment. He indicates that there are two main purposes: (a) to give doctoral student counselors a greater opportunity to do counseling, and (b) to do research on counselor-client communication. E informs S that he will be required to complete some questionnaires after the counseling sessions. He again asks S if this sounds like an experiment in which he wishes to participate.

3. If S's answer is again affirmative, E asks S to indicate what he perceives as the general problem area which he wishes to discuss with the counselor. S indicates this on the Area of Concern Form. (Approximately twice as many Ss with personal-social, as compared to educational-vocational, problems signed up for the experiment when this procedure was followed. After 30 such Ss signed up, the procedure was abandoned. A new sign-up sheet was then posted asking for Ss with educational-vocational problems.)

4. Usually during the discussion involved in "1" above, E told S that the interviews would be confidential and that S could go as deeply into and as far with his problem during the interview as he wished. It was also suggested that S probably should not expect to solve his problems in just two interviews, but that it would probably be best to use the interviews as a chance to explore himself and his problems so that he could get them out and examine them clearly.

5. S was told that if he wanted additional counseling after the second session it could not be provided for him in the experiment. His counselor would, however, suggest agencies on campus where he could get additional counseling.
6. At the conclusion of this session, E scheduled an appointment time for S with a counselor.

7. Each S is instructed to visit E's office 5-10 minutes prior to his appointment time with his counselor.
APPENDIX C

Points to Counselors
POINTS TO COUNSELORS

1. Your participation will entail interviewing each of 6 clients twice. The interviews should last for 30-40 minutes. While it is not strictly necessary, try to stick to these limits.

2. Use your own counseling style, but try to use the first 25-35 minutes of each interview to help the client explore himself and his problem (unless it is clinically or ethically impossible or unwarranted).

3. In accord with the above, don't be too prescriptive just because there are only 2 sessions. You can use the last 5-10 minutes of each session to close things up. In addition, the last few minutes of your second interview can and should, if appropriate, be used to refer your client to appropriate agencies, e.g., the Counseling Center, Student Consultation Service, Psychological Clinic, Mental Hygiene Clinic.

4. Complete the Client Experience Form after each session.

5. If the client asks about the recording condition, tell him that whatever Mr. Gelso told him was accurate, then try to move smoothly but quickly off the topic--do not try to elicit from him his pre-set about the recording condition. If he persists (this is highly unlikely) inform him that counselors in this practicum are not given this information because it is unimportant to them.

6. If the client does inform you of his pre-set, just continue to work with him as you would any client. However, I would like you to indicate on the Client Experience Form (a) if he did inform you; (b) if so, what was the recording condition.

7. All sessions will be audio taped. Please note that I am not interested in your behavior in counseling. The tapes will be used only to rate client behavior on various dimensions. Feel free to do your own thing.

8. It will be emphasized to counselors that these will be real counseling interviews with clients who have real concerns, and that the counselors must be as conscientious as they would be in any other counseling situation.
APPENDIX D

Counseling Evaluation Inventory

(Linden, Stone & Shertzer)
Counseling Evaluation Inventory

Below are some statements about counseling. Your task is to rate your own counseling experience using these statements. Please check (✓) the one of the five alternatives for each statement (always, often, sometimes, rarely, never) which best describes your feeling. Be sure to answer all items.

Please note that this evaluation will only be seen by the researcher. Your counselor will not have access to it. Also, since the researcher is the only person who will see this evaluation, your responses will neither hurt nor help your counselor in his doctoral program.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Always</th>
<th>Often</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I felt the counselor accepted me as an individual.</td>
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<td>2. I felt comfortable in my interviews with the counselor.</td>
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<td>3. The counselor acted as though he thought my concerns and problems were important to him.</td>
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<tr>
<td>4. The counselor acted uncertain of himself.</td>
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<tr>
<td>5. The counselor helped me to see how taking tests would be helpful to me.</td>
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<tr>
<td>6. The counselor acted cold and distant.</td>
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<td>7. I felt at ease with the counselor.</td>
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<tr>
<td>8. The counselor seemed restless while talking to me.</td>
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<tr>
<td>9. In our talks, the counselor acted as if he were better than I.</td>
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<tr>
<td></td>
<td>Statement</td>
<td>Always</td>
<td>Often</td>
<td>Sometimes</td>
<td>Rarely</td>
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<td>---------------------------------------------------------------------------</td>
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<tr>
<td>10.</td>
<td>The counselor's comments helped me to see more clearly what I need to do to gain my objectives in life.</td>
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<tr>
<td>11.</td>
<td>I believe the counselor had a genuine desire to be of service to me.</td>
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<tr>
<td>12.</td>
<td>The counselor was awkward in starting our interviews.</td>
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<tr>
<td>13.</td>
<td>I felt satisfied as a result of my talks with the counselor.</td>
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<tr>
<td>14.</td>
<td>The counselor was very patient.</td>
<td></td>
<td></td>
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<tr>
<td>15.</td>
<td>Other students could be helped by talking with counselors.</td>
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<tr>
<td>16.</td>
<td>In opening our conversations, the counselor was relaxed and at ease.</td>
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<tr>
<td>17.</td>
<td>I distrusted the counselor.</td>
<td></td>
<td></td>
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<tr>
<td>18.</td>
<td>The counselor's discussion of test results was helpful to me.</td>
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<td></td>
<td></td>
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<tr>
<td>19.</td>
<td>The counselor insisted on being always right.</td>
<td></td>
<td></td>
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<tr>
<td>20.</td>
<td>The counselor gave the impression of &quot;feeling at ease.&quot;</td>
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<tr>
<td>21.</td>
<td>The counselor acted as if he had a job to do and didn't care how he accomplished it.</td>
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</table>
APPENDIX E

Counseling Experience Form

(Modified from Van Atta, 1969)
Name (please print) ____________________________

Number of Interview (1st or 2nd) ______________

Counselor ________________________________

COUNSELING EXPERIENCE FORM

Please check (_) the one sentence of the nine below which best
describes your experience during the counseling interview in which
you just participated. Please note that no one but the researcher
will see your response. Your counselor will not have access to it
and it will not affect him or you in any way. This checklist is
being used for purely research purposes.

____ I was quite excited and overly talkative.

____ I was somewhat excited and said things I did not intend to say.

____ I was stimulated enough to enjoy the experience and to talk
    more about myself than usual.

____ I was comfortable and talked about as much about myself as
    usual.

____ I was comfortable but tended to watch what I said.

____ I was comfortable but tended to put my best foot forward.

____ I was ill at ease and found it hard to express myself.

____ I was uncomfortable and found it very difficult to express
    myself.

____ I was very uncomfortable, found it almost impossible to
    express myself, and (if after the first interview) probably
    would not return for the second interview if it were not for
    credit or (if after the second interview) probably would not
    wish to return for counseling even if I had the time and still
    had problems to work on.
APPENDIX F

Client Experience Form

(Modified from Van Atta, 1969)
CLIENT EXPERIENCE FORM

Please check (x) the one sentence of the nine below which best describes your perception of the client's experience during the counseling interview in which he just participated. It may seem that more than one statement is descriptive, but I would like you to make a judgment on the most descriptive sentence.

_____ He was quite excited and overly talkative.

_____ He was somewhat excited and said things he did not intend to say.

_____ He was stimulated enough to enjoy the experience and to talk more about himself than usual.

_____ He was comfortable and talked about as much about himself as usual.

_____ He was comfortable but tended to watch what he said.

_____ He was comfortable but tended to put his best foot forward.

_____ He was ill at ease and found it hard to express himself.

_____ He was uncomfortable and found it very difficult to express himself.

_____ He was very uncomfortable, found it almost impossible to express himself, and (if after the first interview) probably would not return for the second interview if it were not for the credit or (if after the second interview) probably would not wish to return for counseling even if he had the time and still had problems to work on.
APPENDIX G

Mode of Observation Questionnaire
Name (please print) ____________________________

MODE OF OBSERVATION QUESTIONNAIRE

1. Rate the extent to which you felt inhibited in expressing personal feelings and/or problems by the fact that all or part of your counseling sessions were recorded. (Circle)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>not</td>
<td>slightly</td>
<td>somewhat</td>
<td>very</td>
<td>extremely</td>
<td>extremely</td>
</tr>
<tr>
<td>inhibited</td>
<td>inhibited</td>
<td>inhibited</td>
<td>inhibited</td>
<td>inhibited</td>
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</tr>
</tbody>
</table>

2. Rate the extent to which you felt inhibited in expressing personal feelings and/or problems by the type of recording which was made of your counseling sessions. (Circle)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>not</td>
<td>slightly</td>
<td>somewhat</td>
<td>very</td>
<td>extremely</td>
<td>extremely</td>
</tr>
<tr>
<td>inhibited</td>
<td>inhibited</td>
<td>inhibited</td>
<td>inhibited</td>
<td>inhibited</td>
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</tbody>
</table>

3. Would you have been able to discuss more of your personal feelings had your interviews not been recorded at all? (yes or no) ____________

4. Rate the extent to which you felt aware during your sessions of being recorded. (Circle)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>never</td>
<td>rarely</td>
<td>sometimes</td>
<td>often</td>
<td>always</td>
<td></td>
</tr>
</tbody>
</table>

5. Indicate the type of recording which was made of your sessions.
   a. video tape and audio tape of each session ______
   b. audio tape of each session ______
   c. audio tape of just a few minutes of each session ______

6. If you checked "c" above ("just a few minutes of each session"), which part of your interviews was recorded?
   a. early part ______
   b. middle part ______
   c. latter part ______
APPENDIX H

Helpee Self-exploration in Interpersonal Processes:

A Scale for Measurement
HELPEE SELF-EXPLORATION IN INTERPERSONAL PROCESSES: A SCALE FOR MEASUREMENT*

R. R. Carkhuff

Level 1

The second person (client) does not discuss personally relevant material, either because he has had no opportunity to do such or because he is actively evading the discussion even when it is introduced by the first person.

EXAMPLE: The second person avoids any self-description or self-exploration or direct expression of feelings that would lead him to reveal himself to the first person.

In summary, for a variety of possible reasons the second person does not give any evidence of self-exploration.

Level 2

The second person responds with discussion to the introduction of personally relevant material by the first person but does so in a mechanical manner and without demonstration of emotional feelings.

EXAMPLE: The second person simply discusses the material without exploring the significance or the meaning of the material or attempting further exploration of that feeling in an effort to uncover related feelings or material.

In summary, the second person responds mechanically and remotely to the introduction of personally relevant material by the first person.

Level 3

The second person voluntarily introduces discussions of personally relevant material but does so in a mechanical manner and without the demonstration of emotional feelings.

EXAMPLE: The emotional remoteness and mechanical manner of the discussion give the discussion a quality of being rehearsed.

SELF-EXPLORATION SCALE, CONT'D

In summary, the second person introduces personally relevant material but does so without spontaneity or emotional proximity and without an inward probing to discover new feelings and experiences.

Level 4

The second person voluntarily introduces discussions of personally relevant material with both spontaneity and emotional proximity.

EXAMPLE: The voice quality and other characteristics of the second person are very much "with" the feelings and other personal materials that are being verbalized.

In summary, the second person introduces personally relevant discussions with spontaneity and emotional proximity but without a distinct tendency toward inward probing to discover new feelings and experiences.

Level 5

The second person actively and spontaneously engages in an inward probing to discover new feelings and experiences about himself and his world.

EXAMPLE: The second person is searching to discover new feelings concerning himself and his world even though at the moment he may perhaps be doing so fearfully and tentatively.

In summary, the second person is fully and actively focusing upon himself and exploring himself and his world.
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