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THE EFFECTS OF COGNITIVE DISSONANCE AND INTERVIEW PREFERENCE UPON COUNSELING-TYPE INTERVIEWS

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of the requirements for the degree of
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CHAPTER I

THEORY AND PROBLEM

Introduction

Students of human behavior have long recognized that a powerful and omnipresent instigator of action exists when an individual concurrently experiences two psychological elements (e.g., cognitions) which, though related, are disparate along some psychological dimension. Thus, for example, an individual is driven to climb the managerial ladder by his awareness of the disparity between his present status and the higher positions potentially available to him. Or an individual is driven to seek an explanation when, considering himself to be a kind person, he commits an undeniably cruel act.

It is only recently that systematic attempts have been made to construct theories which are directly concerned with these and similar phenomena. These efforts have produced a number of theories which may be termed "disparity" theories. The existence of several such theories may in part be attributed to the fact that they originated in a number of different areas (e.g., perception, attitude change, psychophysiology, etc.). The specific constructs of these disparity theories were, initially at least, designed to deal with the content areas in which they were developed.

How shall disparity theory be described -- in short, what is its most salient identifying characteristic? A disparity theory can be

considered to be a theory which is concerned with disparity states. A disparity state in turn may be defined as a state in which one element of some structure does not "fit", is not assimilated or creates a state of imbalance with some other element of the structure. A structure may be generally defined (after Peak, 1958a) as a system of interlocking and related cognitions, affects or any other discriminable components.

The fact that disparity theories have emerged in a number of areas not only suggests that the theories have a considerable range of applicability but also that they might usefully be applied to additional problem areas as well, thereby leading to further understanding of these areas. One such problem area is that of psychotherapy in general and psychologically oriented vocational counseling in particular for, in the complex interaction process that occurs in therapy and counseling, there is certainly great opportunity for disparities to be created and have an effect. The nature of such effects has yet to be systematically investigated.

The research to be presented in the following pages is an effort to apply disparity theory to the counseling situation. The two main goals are the following:

1. to derive and test predictions from one of the several disparity theories currently available in a situation to which it has seldom been applied;

2. to gather empirical data about the counseling situation itself in certain specified areas of interest, using disparity theory to channel effort and derive predictions not necessarily

suggested by the vocational counseling situation itself.

An aspect of the vocational counseling situation that is important and may be usefully examined utilizing disparity theory is the area of client expectancy. Accordingly, the following discussion centers on the examination of some important client expectations and some of the possible effects of the disconfirmation (violation) of such expectations.

Clients entering a vocational counseling relationship bring with them various expectations regarding counseling including those which specify the kinds of behaviors they expect to occur and the experiences they expect to receive. Such expectations exist despite the fact that they have yet to explore the boundaries of the counseling situation. (The same, of course, is true for any new situation.) Furthermore, as counseling begins and progresses, new expectations will inevitably arise.

Just as clients have expecations about the occurrence of certain experiences in counseling, so, too, do they have preferences (likes and dislikes) for these experiences. There is often a relationship between these preferences and expectations. In fact, the relationship may often be a direct dependent one: that is, the individual's expectations may be determined by the kinds of events he would like or not like to happen. Such a relationship between expectancy and preference may be considered as one form of what might be termed "wishful thinking". But given the capacity of individuals for realistic evaluation of the environment, it is often equally true that one expects

events that one would not prefer to happen or conversely that one does not expect events to occur which one very much desires.

Naturally, many expectations vary with the individual client, being dependent on his personality and his previous experiences with people. Personality and experiential expectation are, of course, closely related. In fact, several personality approaches (e.g., Rotter, 1954: Kelly, 1955) take the individual's relatively stable expectancies as a starting point in their theoretical constructs. The potential influence of personality upon expectation in the counseling situation may be more easily understood when it is recognized that the counseling situation is, after all, an interpersonal one to which the client brings many expectations as to the course of interpersonal interactions.

Though such personality or experientally based expectations are of great importance in a client's reaction to counseling and the counselor, they do not constitute the only way in which expectancies may be aroused. The client may have heard something about the nature of counseling from acquaintances or readings. Furthermore, as counseling proceeds, new expectations will arise. The way in which the counselor structures the interviews and what he implicitly or explicitly leads the client to expect about, for example, the nature of the counseling process, the type of interview to be used, and the problems, feelings and events to be talked about will create new expectations. All these expectations, while they are of course modified by the personality of the client, tend to be <u>situationally</u> determined.

What might some of these expectancies be? Perhaps the most obvious one is that the counselor will behave professionally: that is, he will be motivated, and act, to help the client obtain a clearer understanding of his problem as it is developed in the course of the counseling sessions, and further, that he will not take advantage of the relationship, and the information revealed therein, for personal gain. A different kind of expectancy might be that the counselor will follow through with statements he makes regarding the nature of the counseling process.

Despite the best intentions, however, situations do occur in counseling in which expectancies are not confirmed by ensuing events. Putting aside client distortions of events (which is, of course, a common source of perceived disconfirmation), disconfirmation may occur where the counselor gives the impression that interviews may be conducted in one way but conducts them in another way. For example, the typical personality-oriented counselor may perceive that personality factors are of great importance in the client's vocational problem and wish to focus upon such factors when they arise during an interview. If he has not adequately prepared the client for the possibility that such an investigation may be made or perhaps has created an expectancy, most likely in an implicit manner, that this kind of investigation is not necessary, disconfirmation of an expectancy would be present. The effect on the subject's reaction to counseling and the counselor then becomes a matter of some importance.

The effects of the disconfirmation of expectancy, rather than expectancy in general, is the problem of interest. It is, in fact,

the disconfirmation of expectancy which is the event that permits the use of disparity theory. As will be shown later, the disconfirmation of an expectancy is, in large part, a sub-class under the more general heading of disparity.

The discussion thus far has dealt with the matter of client expectations and disparity. It will be recalled, however, that clients' preferences for specific kinds of counseling experiences was mentioned. This fact was utilized by the addition of a preference variable. Accordingly, let us now turn to this additional variable and discuss the nature of an important specific set of preferences.

While preferences may, of course, relate to many events, the concern here is with preferences for two different kinds of counseling interviews. An important reason for the focus on these particular kinds of interviews is that a study by Bordin (1955) indicated that two distinct groups of vocational counseling clients exist, each preferring one kind or the other. Since a more detailed description of these types of interviews will later be set forth, only their general nature will be indicated here. One type of interview is essentially oriented toward long-range decisions about occupational activities and accordingly is concerned with objective information and guidance about specific career fields. The other type of interview is essentially oriented toward a discussion of vocational problems but in the context of a realization that personal attitudes and problems play a part in making a vocational choice and hence should be a center of attention. Preference for the former type of interview

may create difficulty for many clients because many counselors have a mental health orientation toward vocational counseling (Bordin, Warman, 1958). Accordingly, these clients find themselves confronted with a counseling experience that they initially did not prefer.

The first goal (to test predictions from a disparity theory, see page 2) may now be somewhat modified. Examining the effects of receiving or not receiving one's interview type preference may make it possible to examine the nature of the relationship between the disconfirmation of an expectancy and preference. This suggests the utilization of a factorial design.

The foregoing may be considered to be an introduction to the problem to be investigated and an orientation to the kind of theory to be utilized. To better understand the nature of such theories, several of the more important ones will be reviewed. It will be noted that even though all the theories are disparity theories they differ in important particulars. The abstraction "disparity theory" captures their shared quality but does not totally characterize them. The choice of the specific theory to be used in the present study, and the reasons for such a choice, will be briefly discussed following this review.

A Review of Some Disparity Theories

The first one which will be discussed is that of Hebb (1949). Here, the motive construct is part of a much more extensive theoretical structure. Hebb has proposed that at least some motives occur as a result of a disparity between expectation and perception. Motivation

in this system refers "(1) to the existence of an organized phase sequence, (2) to its direction and content, and (3) to its persistence in a given direction, or stability of content" (p. 181). At low levels of disparity, the phase sequence is rapidly run off and there is no persistence. At high levels of disparity, there may be disruption and lack of an organized cerebral pattern. At moderate levels, on the other hand, the existence of some disparity ensures the continuation of organized activity. The nature of affective states likewise is dependent upon the amount of disparity. Pleasure is found with moderate disparities while boredom occurs with small or non-existent disparity. Panic or disorganization (with negative affect) occurs with high disparity.

Building on this model, McClelland, Atkinson, Clark and Lowell (1953) have proposed an "affective arousal model" in which motive is defined as "the redintegration by a cue of a change in an affective situation" (p. 28). In the system all motives are learned. Changes in the affective situation are caused by disparities between expectation and perception. Concerned with the failure of the Hebbian model to provide a measure of the amount of disparity between expectation and perception, McClelland et al. propose to define expectation in terms of adaptation level, a concept developed by Helson (1948). The positive or negative character of the affect depends, as in Hebb, on the amount of the disparity. Positive affect arises from smaller disparities while negative affect arises from larger disparities.

Berlyne (1960) argues that organisms seek to maintain an optimal

level of arousal, and that when the actual level is above or below this optimal level a drive state (arousal) is created. He then examines the classes of stimuli which can produce the increases in arousal. Included among such stimuli are those which he labels "collative variables" or stimuli which are novel, unexpected, incongruous or complex. All such stimuli have elements of disparity among their characteristics. This is especially true of stimuli that are unexpected (having the character of "surprisingness" in Berlyne's terminology) or are incongruous. Berlyne examines a great deal of empirical evidence demonstrating that this kind of stimulation has pervasive effects not only on drive but on many other kinds of activity as well. Collative variables lead to increased orientation and attention, increased investigatory behavior, and either to positive or negative affect, depending on the conditions and amount of the disparity.

Disparity as a motive system is similarly found in a number of theories that owe much of their origin to work on attitude formation and change and to interest in cognitive processes. A number of them have subsequently been extended to other areas. Three such theories are presented. Osgood, Suci, and Tannenbaum (1957) have presented data on what they have called the "principle of congruity". This principle has its starting point in the fact that cognitive elements are in constant interaction. The general congruity principle is that "Whenever two signs are related by an assertion, the mediating characteristic of each shifts toward congruence with that characteristic of the other, the magnitude of the shift being inversely proportional to intensities of the interacting reactions" (pp. 200-201). To

help explain this notion, two constrasting examples, set forth by the authors, are here presented. A congruent assertion where there would be no pressure for meaning change (hence no motivation) would be "Eisenhower is in favor of freedom of the press", assuming, of course, that both concepts, "Eisenhower" and "freedom of the press" are equally favorable. On the other hand, a statement such as, "Eisenhower stifles freedom of the press" produces a dissociation of equally favorable signs. In such a situation, and in similar ones, motivation occurs, resulting in meaning change of one or both of the concepts. The predicted results for the example, since both signs are equally polarized (both equally favorable), would be a cancellation to zero evaluation of both. A number of different outcomes are possible depending on the nature of the assertion (associative or dissociative) and the original polarizations of the signs being related. It is to be noted that the problem of the amount of disparity, a deficiency of the Hebb formulation, is handled here by using the quantitative scores produced by the semantic differential.

A more general motivational construct involving the use of disparity is found in Peak's formulations (1955, 1958b). Actually, the motivational construct is part of a theory of psychological structure and activity but for present purposes a discussion of the motivational construct will suffice. Motivation is held to arise from any disparity relationship regardless of its specific content, e.g., disparities may exist between cognitions or between affects or both. Peak argues that when two psychological events are very close in psychological distance (that is, when the disparity

between them is small, as when a person in psychotherapy is told directly or indirectly that he is aggressive and he accepts this already), activity in this system terminates rather quickly. For events very far in psychological distance, on the other hand, the two events will not involve a structure for they are unrelated. There is no motive system and no persisting activity. Such a situation might occur if a 35-year-old person with only a high school education read about career possibilities in the field of physics. In this case, it is not likely that this would motivate him to consider becoming a physicist. It is when two events at an intermediate distance are activated that a motive structure capable of supporting activity exists.

The final theory to be considered is Festinger's Theory of Cognitive Dissonance (1957) which, for reasons to be explained later, provides the theoretical foundation for the present study. Full discussion of the theory is reserved for the following section, where it will be presented in some detail. The discussion here will be limited to the basic hypothesis of the theory which pertains to the disparity element. The main hypothesis states that if a person possesses two cognitive elements, the two elements are in a dissonant relation, if "considering these two alone, the obverse of one element would follow from the other" (p. 13). Another way to state this, somewhat more formally, would be to say that X and Y are dissonant if not X follows from Y. For example, if one was scheduled to take an important examination in an area in which one was not well informed and did not study for the exam., the cognitions corresponding to the importance

of the exam and the lack of knowledge of the area would be dissonant with the cognitions arising out of the failure to study. Consonance, of course, is the other state of affairs where one element does follow from the other as would be the case where the person had studied for the examination. The amount of dissonance is held to be a function of the amount or proportion of the cognitive elements that are in a consonant or dissonance relation and the importance of these elements. Dissonance is held to be an unpleasant state and the person who experiences dissonance will make efforts to reduce it because it is unpleasant, the magnitude of the effort being positively related to the amount of dissonance. Finally, and importantly, it is clearly necessary that the involved elements be "cognized", that is, be in "awareness" before dissonance can be created.

Elaboration of Dissonance Theory

Cognitive dissonance theory, from among the several disparity theories available, was chosen to form the theoretical basis for the study for a number of reasons. First, several of the theories do not readily lend themselves to the problem area under investigation. The Hebb theory is too general, while the Osgood et al. congruity hypothesis is too limited. The McClelland et al. theory is dependent upon the measurement of adaptation level and there did not seem to be a feasible way of measuring it, if indeed it can be measured, for the present problem. The remaining theories, Peak's and dissonance theory, seemed to offer the most attractive alternatives. Dissonance theory was selected because it allowed certain

predictions to be made rather directly and because a number of experimental studies testing derivations from the theory had recently been published. These studies, it was believed, could serve as guidelines for prediction.

Having selected dissonance theory to form the theoretical foundation for the study to be described, the theory will now be presented in more detail. This elaboration and discussion will attempt to clarify certain vague aspects of the theory; it will also provide the conceptual tools needed to understand the use of the theory, and the predictions derived therefrom, in the present experiment.

The Meaning of Dissonance as Used in the Present Study

The basic definition of dissonance theory, cited on page 11, is a conceptual definition. In other words, a number of different, though related, experimental operations can be subsumed under the more general definition. While some lack of preciseness may result from use of this kind of definition, this is often a most useful way to proceed.

The usual problems involved in insuring that experimental arrangements do, in fact, operationalize the theoretical concepts under investigation are, however, greater in dissonance theory. First, those conceptual terms from the basic definition which pertain to the particular cognitive elements involved in a given situation (e.g., cognitive "elements", "considering those two alone") are vague terms and often offer poor guidance. As a result, the identification of the relevant cognitive elements may pose a difficult problem. While a lessening of this vagueness can be expected by the gradual accumulation of experimental data, the problem at present

is often a perplexing one. Similar statements can be made about ambiguities in subsidiary theoretical statements. (While it is beyond the scope of this thesis to discuss all of these ambiguities, those relevant to the present study will be touched upon.) Second, and more importantly, some confusion can easily arise as to just what dissonance is, or stated another way, what necessary relationships must exist between cognitions for dissonance to come into being. The problem stems in part from the incorrect use of the word "obverse" in the basic definition[1] and in part from the sketchiness of the verbal and "formal" definitions of dissonance (in the light of the wide content areas to which the definitions are meant to be applicable).

It is necessary, therefore, to state what shall be meant by the concept "dissonance" as used here. Even though a clarification is involved, the writer believes that the usage to be proposed is quite consistent with Festinger's intent as illustrated by the expositional examples and experimental studies presented by him and subsequent experimenters. The proposed usage also has the important advantage of defining dissonance in disparity terms.

The necessary condition for dissonance is that there exist in the person's thinking three cognitions, arranged in two related pairs. Each pair shares one identical cognition and the remaining cognitions (one in each pair) are

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[1] According to Webster's New World Dictionary (1953), "obverse" means the opposite counterpart of a statement (e.g., the obverse of "all men are fallible" is "no man is infallible".) Clearly, this is not the notion Festinger wishes to convey in using the term "obverse".

incompatible. The first pair consists of two cognitions which are disparate because there exists a second, related pair of cognitions which are non-disparate. Thus, for example, the perception of oneself as an equalitarian person is disparate with resisting the entry of a Negro into the neighborhood because if one is equalitarian one should accept a Negro into the neighborhood. Hence, the first pair -- equalitarian-resisting -- is disparate because the second, related pair -- equalitarian-accepting -- is non-disparate. In general, then, dissonance arises because the person performs, thinks, experiences or perceives a pair of cognitions which are disparate because he knows he should perform, think, experience or perceive a related, non-disparate pair.

This interpretation of dissonance leads to the conclusion that disparity and dissonance are not identical concepts. Disparity is a necessary but not sufficient condition for the existence of dissonance. Dissonance may be considered, in part, a sub-class within the disparity concept. Dissonance, on the other hand, is not a necessary condition for the existence of disparity. For example, a junior executive with a goal of becoming a vice-president is experiencing a motivating disparity, at least if the disparity is a moderate one, but the conditions for him to experience dissonance, as outlined above, are not present.

The failure to recognize that disparity can exist without dissonance probably is the cause of some misunderstanding of the dissonance concept. This clarification, even though it is a first approximation, may help to correct this misunderstanding. It is similar to one made, though

unsystematically, in Festinger and Bramel (1962), perhaps in response to their perception of some misreading of the dissonance concept.

Two Ways in Which Dissonance May Be Created

Two of the numerous ways in which dissonance can be created will be considered and examined. They were selected because they have particular relevance for the problems examined in the present investigation.

Dissonance Created by the Disconfirmation of an Expectancy. One can expect that dissonance will be created when there is a disparity between an expectation and an experience (perception). Dissonance is created since there exists a pair of cognitions (the expectancy and the unexpected perception) that are disparate because there also exists a second pair of cognitions (the expectancy and the expected perception) which are non-disparate. It should be made clear, however, that not all of an experience need be involved in the disconfirmation. That is, although parts of an experience may be unexpected, it is usually the case that enough is familiar or is confirmed by experience to keep the amount of dissonance below its possible maximum. For example, a client expecting a kind, permissive counselor may be taken by surprise when he finds the counselor confronting him as to some aspect of his behavior. The counselor is, however, likely to do this in the expected manner, i.e., without condemning and berating him.

Dissonance Produced by Engaging in Behavior that is Disliked or That is Against One's Attitudes or Beliefs. Dissonance may also be created

when a person acts in a way contrary to his beliefs or engages in an activity which he does not like. The former may occur, for example, when a businessman who believes in fair employment practices does not hire a qualified Negro because of the strong disapproval of his partner. The latter may occur when a person who cannot tolerate opera goes to a performance with friends. While the creation of dissonance in such situation may seem straightforward and clear, there are complications. Dissonance is not inevitable in such situations and its amount, should there be dissonance, may vary under different conditions.

The complexity arises from the following additional considerations. First, while it is true that to behave against one's beliefs or attitudes is dissonant, it is also true that if a reward or threat of punishment is used to produce the compliance, the knowledge of such reward or avoidance of punishment is consonant with the compliance. Thus a person who complies but receives a reward or avoids a punishment by means of his compliance is simultaneously experiencing both consonant and disso ant elements. The ratio of consonant to dissonant elements in this situation depends on the amount of punishment avoided or reward promised or given. If the amounts are great, dissonance from engaging in a disliked behavior will be less since strong cognitive elements (corresponding to the knowledge of the amount of reward received or punishment avoided) will support the individual in his behavior. On the other hand, if the amount of reward or punishment avoided is just sufficient to elicit the non-preferred or objected-to behavior, dissonance should be maximal. Second, if a person is forced

to engage in a disliked activity without any volition on his part, he should not experience dissonance.

In Festinger's original statement of the theory, he presents two experiments that support the general hypothesis that dissonance is created by engaging in a disliked experience (manifested by subsequent increased liking for the experience). Unfortunately, the reporting of the experiments blurs the argument concerning the reward-punishment-compliance variable. These two experiments were not originally formulated in dissonance terms, being pre-dissonance theory studies, but can be interpreted in those terms.

In the first of the two, King and Janis (1956), subjects were required to do one of three things with a persuasive communication: (1) improvise a speech into a tape recorder along the same lines as the communication they had just read: (2) simply read the document into the tape recorder: (3) merely read the document to themselves. Subject reactions to the area covered by the communication were assessed before and after these activities took place. The content of the communication was not in agreement with the private opinion of the majority of the subjects. Hence in condition (1), they behaved in a way dissonant with their private opinions. In condition (3), on the other hand, they merely read the communication to themselves and hence no dissonance should be involved. This condition was then available to use as a base line for the improvisation condition, for any attitude change in condition (3) is attributable to the persuasive power of the message. In condition (2), they merely

read the communication (though into the recorder) and again no dissonance should be involved. The results conformed to what dissonance theory would predict in that the private opinion of those who improvised moved closer to the position advocated by the communication than it did for either of the other groups.

It will be noted that in this study, subjects had no choice but to comply with reading the communication. Presumably this should have reduced the amount of dissonance but Festinger does not discuss this point in connection with the experiment. This could be taken to mean that, despite his theoretical discussion on the importance of voluntary compliance, it is not always necessary to take such compliance into consideration.

Festinger's reporting of a study by Kelman (1953), however, could be taken to mean just the opposite -- that the problems of reward, punishment and voluntary compliance are critical. In that study, it was demonstrated that the degree of incentive offered to the school children subjects (copies of a book and movie passes) did produce differential amounts of dissonance as manifested by differing amounts of opinion change. Here the subjects had to write essays in favor of one or the other type of comic books, their opinion toward each type of comic book being assessed before and after writing the essay.

Thus while the theoretical position is clear, the reporting of these two studies produces some doubt as to how seriously to take the importance of reward, punishment and voluntary compliance. There are four recent studies which attempt to resolve this ambiguity and find the limits of the

theoretical prediction.

Cohen, Brehm and Fleming (1958) required their subjects to write an essay, against their opinion, on an issue under two conditions of urging: (1) high justification -- the subjects were given a talk to impress upon them the importance of the study, the need of the experimenter for their help, etc.: or (2) low justification -- the subjects were simply told to write the essays but need not comply if they did not wish to. While all subjects felt pressure to comply, they did perceive greater pressure in the high than in the low condition. The dependent variable was the amount of opinion change following the writing of the essay. As predicted, those who felt low justification changed their opinion more than the highs although the difference was of borderline significance (.07).

Brehm (1959), agruing that an event outside of a person's control might still produce dissonance if at a prior choice point the event was predictable, required his subjects (school children) to eat a non-preferred food, a dissonant event. Then for one group, just as they were about to finish eating, the experimenter casually remarked that their parents would be informed of the fact that they had eaten the disliked food. This event, certainly outside the subjects' control, was expected to increase the amount of dissonance since the implication was they would have to eat more of the disliked food at home when their parents found out. It was found that the subjects who experienced the event beyond their control increased their liking for the vegetable beyond that of the subjects in the group without the threat of increased eating (who also increased their liking). Brehm

concluded that an act outside volition can affect the amount of dissonance.

In a third experiment, Brehm and Cohen (1959) informed subjects that they would be participants in a disagreeable experiment for which some of them would receive a money reward. They were further told that the determination as to who would not receive the reward would be solely on the basis of chance. The rewards were of two amounts, a large and a small one. In actuality, the experiment, unknown to the subjects, had been so arranged that all subjects were informed that they were to be one of the unlucky ones. Thus all subjects, not knowing that all subjects had been deprived of a possible reward, felt themselves to be relatively deprived, by an event which was presumably due to chance and over which they had no control. Before the subjects were told they would not receive a reward, two groups of subjects had been formed by telling one group they could not be excused and the other that they could be excused if they went through certain rather cumbersome procedures. This was intended to vary the amount of choice but perceived pressure did not differ from one group to the other. Subjects were therefore divided according to the amount of perceived pressure (the converse of choice), regardless of original group, for the analysis. The hypothesis was that under greater, but not lesser degrees of choice, increasing relative deprivation leads to increasing anticipated (since the subjects did not actually have to do the disagreeable task) satisfaction. The hypothesis was confirmed although a serious unexplained finding and the post hoc division of the group on the pressure variable indicate caution in accepting the results.

The final experiment relevant here is that of Cohen, Terry and Jones (1959). The initial step here was to assess the subject's opinion on a topic, then present him with a persuasive communication and finally re-assess his opinion following the communication. There were two conditions of exposure: (1) the subjects could listen to the communication or not listen to it in the high choice condition; or (2) they were required to listen to it in the low choice condition. Subjects were also divided into those for whom a large disparity existed between their opinions and the communication and those for whom a small disparity existed between their opinions and the communication. The main hypothesis was "Under greater but not under less degrees of choice, increasing the discrepancy between a person's initial opinion and new information confronting him gives rise to increasing dissonance and consequent attitude change" (p. 388). The hypothesis was confirmed.

What, then, do these studies demonstrate? They seem to show that merely having a person do or say something contrary to his attitude or opinion is not sufficient to create any appreciable amount of dissonance. There must be some element of volition in his exposure or in his behavior. However, a second finding, perhaps more tentative, seems to be that the volition requirement may be met if the person in some way voluntarily commits himself to the general situation in which he, the subject, later acts in a way contrary to his beliefs, attitudes or preferences.

This completes the discussion of two ways in which dissonance may be created. Let us turn now to other theoretical considerations of

importance and discuss methods by which dissonance, once aroused, may be reduced.

Ways in Which Dissonance May be Reduced or Handled.

A number of ways of reducing or handling dissonance once it is present, or could become present, are conceptually possible. Which technique is actually chosen will, however, depend on the personality of the individual, the restraints imposed by the situation in which the dissonance occurs, and the type of cognitive elements involved.

One method would be to refuse to recognize the existence of a dissonant situation through a process of distortion or misidentification of one or more types. Such distortion may involve a total failure on the part of the person to recognize he is faced with a dissonant situation or it may involve some kind of initial, partial recognition that some dissonant cognitions exist, immediately followed, however, by a process of thinking (e.g., rationalization) that eliminates whatever dissonance there is, and avoids any substantial amount of dissonance.

But it is not always possible to use distortion nor is it often a desirable and healthy way of handling dissonant situations. Where distortion is not possible or where the individual is too realistic to deny the existence of dissonance, he may employ a second method -- attempting to reduce dissonance by seeking out new cognitions which function to increase consonance and by avoiding new cognitions which would serve to increase dissonance. This technique may be termed selective information seeking. Thus a person who regards himself as fair-minded and tolerant and discovers

himself resisting the attempt of a Negro family to move into his all-white neighborhood might be expected to pay close attention to articles which contend that property values drop and crime increases when integration of neighborhoods occur. On the other hand, he might be expected to avoid articles which describe successful integration of Negroes and whites in similar neighborhoods.

A third method can be used where one of the dissonant cognitions arises from a person's behavior. Here, the person can reduce the dissonance by changing the behavior. Behavior, in this context, also means liking for some activity or object. When liking is involved, the person might be expected to increase his like or dislike for the activity depending on which direction would be the dissonance reducing one. For example, we have already noted that Brehm (1959) found that children who ate a non-liked food, a clearly dissonant act, increased their liking for the food.

These three ways of reducing dissonance have been described in some detail because they were available to the subjects in the present experiment and were measured. They do not constitute, however, the only ways of reducing dissonance. Again, depending on the circumstances, a person may reduce dissonance by seeking social support for his initial way of thinking after he has been confronted with dissonant information, decreasing the importance of the cognitive elements, rationalizing the dissonance, perceiving characteristics of the dissonant cognitive elements as being in reality identical, or changing the social reality when this is possible.

The Importance of Dissonance Relative to Other Influences on Behavior

Before conclusing the chapter on the nature of the problem and theory, let us examine the question of the importance of dissonance relative to other influences on behavior. This is highly relevant because interest resides not only in dissonance effects alone but also in the effects of a person receiving a liked or disliked kind of interview and the relationship between these two variables. Let us therefore see if any evidence does exist regarding the importance of dissonance relative to other sources of subject reaction.

Before the only two studies that I have found that bear on this question are reviewed, it should be noted that people have a great investment in a stable and predictable environment as Hilgard (1951), Attneave (1954) and Berlyne, among others, have pointed out. They are unlikely to be easily dissuaded from those cognitions which they value or deem important. Furthermore, when events force recognition that things are not going the way they were expected to go, they will make efforts to salvage their previous views, or, if this is not possible, they will experience considerable discomfort until a new equilibrium can be achieved in some way. This suggests that attempts at dissonance avoidance or dissonance reduction should often be of great importance.

The two studies referred to above are those of Wallen (1942) and McGuire (1960). In each case it was possible to compare dissonance with some other variable which was "affective" in nature, such as the "desirability" of a personality trait as applied to the subject or "hope for the occurence of

a desirable event".

The Wallen study is actually a pre-dissonance study whose operations make it amenable to analysis using dissonance concepts. Wallen gave subjects a list of forty trait adjectives and asked each subject to state which adjectives applied to him and which did not. One week later each subject was shown the same list containing ratings of the subject presumably made by someone else. Half of these ratings disagreed with those made by the subjects, dissonance presumably resulting as a consequence. Subjects tended to forget those items which introduced dissonance. The finding relevant here is that the desirability or undesirability of the adjectives had no apparent effect on their recall. The dissonance variable was the only one affecting recall.

McGuire prepared an ingenious experiment which showed, for the materials used, that dissonance was of greater importance than "wishful thinking". Subjects were shown 24 statements describing possible events (e.g., whether college students would be drafted). They had to rate each statement on a scale labelled "very improbable" at one end and "very probable" at the other. The statements actually consisted of eight syllogisms (hence 24 statements), the 24 statements arranged in a modified random order. In the first session, the subjects made their ratings of the likelihood of the statements being true. Logically, the probability of the conclusion should equal the joint probability of the premises. It was found, however, that the rating of the probability of the conclusion was often at variance with the logically correct probability and that this variance was

most often in line with outcomes the subject desired. This may be considered to be a tendency toward "wishful thinking". Then, one week later, they were given persuasive messages which addressed themselves to one of the premises. These messages always argued for the likelihood of the occurence of the event. Each subject saw four persuasive arguments arguing for four of the premises, belonging to four different syllogisms. Further, for each subject, two of the arguments favored increasing the likelihood of a premise related to a desirable conclusion while two favored increasing the likelihood of a premise related to an undesirable conclusion.

The results showed that the persuasive message was utilized to reduce the dissonance which existed as a result of the inaccurate assessment of the probability of the conclusion. Desirability or undesirability played no demonstrable part in the utilization of the message. The same results obtained for the four syllogisms for which there was no persuasive message -- changes in the probabilities reduced the logical inconsistency but were not related to desirability. These results are striking since these changes toward logical consistency (dissonance reduction) had to work against the tendency toward "wishful thinking".

The two studies support the contention that dissonance <u>can</u> be the more important determinant of reaction than the affective loading (for reasons other than dissonance) of the material involved or the tendency toward wishful thinking. It would be a rash person, however, who would at this time, draw <u>general</u> conclusions concerning which is the more important determinant. Many more studies investigating the relevant variables (e.g., kinds of dissonance, polarity of the preferences, etc.) are needed. Such

studies do not presently exist. It might, however, be possible to predict which will be more important in a given situation.

This concludes the chapter on problem and theory. The discussion in the next chapter is concerned with the methodology and the specific predictions emanating from the theory and methodology.

CHAPTER II

METHODOLOGY

In order to make the following discussion and description of the experimental procedures easier to follow and more fully comprehensible as well, the first part of this chapter will consist of a summary of the experimental design.

Summary of the Experimental Design

The heart of the experiment lies in a vocational counseling type interview conducted with volunteer male subjects. The interview the subject received was one of two types: (1) an interview oriented toward finding out something about the subjects' personality and called, accordingly, a Personal interview: and (2) an interview oriented toward an objective investigation of the subjects' vocational experiences, course work, etc. while avoiding as much as possible discussion of his personality and called, accordingly, an Objective interview. The interviews themselves constitute the first independent variable, called the "interview type" variable.

Before the interviews took place subjects were given forms describing the two interviews and were asked to state their preference for one or the other of the two kinds of interviews. Half the subjects received a preferred interview, the other half a non-preferred interview. Whether or not a subject received an interview he preferred constitutes the second independent variable, called the "preference" variable.

At the same session in which preference was assessed, subjects were told by the experimenter which of the two interviews they would receive.

Notwithstanding this information, one-half of the subjects received the other kind, that is, the kind they did not expect. Whether or not a subject received the kind of interview he had been told he would receive, that is, whether he was confirmed or disconfirmed, constitutes the third independent variable, called the "confirmation" variable. This variable is, of course, the one to which dissonance theory is particularly applicable. Certain aspects of the preference variable, however, are also amenable to dissonance predictions. The various combinations of the three independent variables produce a 2x2x2 factorial design. Table 1 summarizes the experimental design.

TABLE 1

SUMMARY OF THE EXPERIMENTAL DESIGN

Confirmation	Interview Type	Preference	Non-Preference
Confirmed	Personal	1	5
	Objective	2	6
Disconfirmed	Personal	3	7
	Objective	4	8

The dependent variables consisted of: (1) measures of distortion or misidentification of the interviews obtained by asking the subject to indicate the kind of interview he received: (2) measures of the reactions to the interview and counselor, all obtained by the subjects' rating, on seven point

scales, a number of items: (3) measures of the subjects' interest in obtaining various kinds of information about the counselor, administered to the subjects both before and after the interview: and (4) a measure of the change of the subjects' rating of their preference for the interview they believed they received (from before to after the interview).

The Relation of Theory, Problem and Design

Before proceeding further let us examine the relationship of the design, as summarized above, to dissonance theory and the problem area as described in the previous chapter. The design's relation to the theory will be examined first.

First, it is clear that the design meets the formal requirements for the creation of dissonance. For a subject who is disconfirmed, there exists a pair of cognitions (the expectancy for one kind of interview and the perception or experience of the other kind) that are disparate because there also exists a second pair of cognitions (the expectancy and the correct interview) which are non-disparate. Accordingly, the considerations previously examined, in the discussion of dissonance aroused by the disconfirmation of an expectancy, are applicable here. The dissonance so aroused by disconfirmation of this expectancy is to some extent counteracted by cognitions which are consonant. The subject does, as expected, receive a counseling type interview in which the counselor behaves professionally. Careers and vocational problems are at least mentioned in both interview types although the emphasis is different and the amount of time spent discussing careers differs. As a result of the presence of such consonant cognitions, it would

be expected that the amount of dissonance would be moderate. A larger amount of dissonance would be expected had the subject, expecting a counseling interview for example, been given an interview for a job vacancy.

Second, the conceptual requirements for the creation of dissonance as a result of behaving against one's preferences may be considered to have been met. That is, there are dissonant aspects when a person, preferring one kind of interview, behaves (in a cooperative manner) in a kind that he does not prefer. Of course, the subjects had no choice in deciding which interview they were to receive, this being decided by the experimenter. As the discussion in Chapter I would suggest, this would tend to operate against the creation of dissonance. But as was further pointed out in that discussion, if the subject made a voluntary choice by which he commited himself to the general situation some dissonance as a result of behaving in a non-preferred interview may still be expected. Since all subjects volunteered for the experiment (the general situation) the theoretical requirements for the creation of dissonance appear to be satisfied.

Despite the fact that opportunity for the creation of dissonance exists, if the evidence indicates that the subjects do not have very definite preferences for the one interview over the other, it is not likely that performing in a relatively non-preferred interview will create very much dissonance. After all, if one prefers one interview over the other only slightly, it is not particularly dissonant to behave in the non-preferred interview. In discussing the findings on changes in interview preference for those receiving a non-preferred interview, the amount of difference in preference between the two

types of interview will be taken into account.

Third, as to ways of reducing dissonance, it will be noted that the design allows for the measurement of three ways by which the subject can handle dissonance. There is a measure of the subjects' distortion of the kind of interview he received, measures of his potential interest in information which could reduce the dissonance and a measure of the change in interview preference (that is, one way of reducing dissonance is to increase one's liking for an initially non-preferred interview).

Turning next to the relation of the design to the problem area of interest -- the clinical counseling situation -- the design provides ways of deriving useful findings for the clinical situation. First, the experimental arrangement involves the disconfirmation of an expectancy, a situation which can potentially exist in the clinical situation. Naturally, a counselor does not tell a client, except perhaps for rare situations or purposes, that he will give him one kind of experience and then give him another. But as previously pointed out, occasions arise in which a counselor may lead a client to believe certain events will occur but for one reason or another they do not. The results here may give some information as to the effect of such a disconfirmation of expectancy. The argument that the experimental findings on disconfirmation are relevant to the clinical counseling situation would be further supported if the results prove consistent with a counseling study by Biddle (1954). Because the disconfirmations in his study were created in different ways than in the present study, any consistency will provide evidence that there are predictable and reliable effects from the

disconfirmation of an expectancy.

In the Biddle study, the content of the interviews dealt with the problems faced by student teachers. (Actually the subjects, student teachers, rated their reactions to plays involving an actor playing a counselor and an actor playing a student teacher.) Biddle utilized or created expectancies, subsequently disconfirmed, in two different ways. The first utilized the students' pre-existing expectations concerning the anticipated behavior of the academic counselor. The second involved an experimental manipulation, consisting of "information" supplied by the experimenter as to the normative behavior of academic counselors. The effects of a disconfirmation of expectancy were quite marked (generally lower ratings for the counselor and interview) but only in the situation in which norms had been established.

The second reason the design might be useful for the clinical counseling situation is that it stipulates that one-half of the subjects receive a non-preferred interview. As Bordin's and Warman's data show, this is close to the actual clinical counseling situation, since many clients who desire one kind of experience may get the other depending on the orientation of the counseling center and counselors.

Third, the design does provide the opportunity for evaluating the response to two different kinds of vocational counseling type interview, similar to two used in actual clinical practice.

The discussion of the relation of the theory and problem to the design is now completed. It is now time to describe the specific experimental procedures, state and discuss the predictions and indicate the analysis methodology.

Population and Recruitment

Inasmuch as the content area covered by the experiment, vocational counseling, might not be of current concern to many students, it was necessary to insure that participating students were motivated for the experiment. Otherwise, the experiment would have been a matter of indifference to many of the subjects for whom the three independent variables would have no particular significance. Furthermore, since it was hoped that data arising from the study might have some usefulness for actual counseling in the clinic, it was clearly essential that attempts be made to secure subjects comparable to those who seek professional help.

Three methods were utilized to insure that adequate motivation would be present. First, a useful starting point was provided by the fact that at the end of the sophomore year at The University of Michigan students must select a major. Whenever possible, therefore, subjects who were in their freshman and sophomore years were used. The final sample consisted of 28 freshmen who had completed one year of college work, 23 sophomores who, with three exceptions, had completed their second year of college work, and 6 juniors. The juniors were deemed satisfactory subjects since they all met the other requirements which will be described below.

Secondly, all subjects were volunteers who participated without pay. The volunteer lists were compiled by instructors of the introductory psychology course. Normally, such volunteers receive hourly pay. Volunteering for the present experiment without pay, therefore, is some indication of high intrinsic motivation for the experiment, whose general nature had been

explained to them.

Thirdly, subjects were recruited individually, by telephone, which gave the experimenter opportunity to ask them a number of key questions. The telephone communication was as follows for all subjects:

> "Hello, my name is Robert Mendelsohn and I am connected with an experiment on vocational counseling that is currently going on in the Psychology Department. We are interested in recruiting as subjects those who are undecided as to what major to select or career to follow, are concerned about not being able to make up their minds, or who feel they would like to have assistance in helping them come to a good decision. Would you say that you are in this situation?"

If the subject indicated that he met any of these conditions and was interested, he was told that I would be most happy to have him as a subject and a time and place for meeting for the first of the two sessions was arranged. The subject was also told that I would require his services for two sessions of about an hour each as a minimum requirement but that the experiment was a continuing one. Hence, if he desired, he could participate further and receive more than one interview which, strictly speaking, was not true. This was done both to make the study more realistic and also to insure that he felt committed to the experiment. If the subject asked for more details about the experiment, he was told that vocational counseling interviews were being compared and that he would be asked a number of questions about the interview that he experienced. The answers to all other questions, he was told, would have to be deferred until the experiment was over. All subjects accepted these conditions. The experimental nature of the study was mentioned several times in context, since it was not felt desirable to leave the impression that

there existed a competitive (with the Counseling Division) counseling service. Nonetheless, the realism with which the experiment was conducted led many students to feel that it was like real counseling.

It should also be mentioned that the subjects that were used in the experiment had not had previous experience with either collegiate counseling or psychotherapy although some had had some high school counseling. This previous "counseling" was universally disparaged by those subjects who had experienced it. They obviously did not consider the experience as counseling in any meaningful sense of the word. The reason for not using subjects who had had previous counseling was that a possibility existed that such experience might bias their expectations toward counseling in such a way as to give them a different set from subjects without such experience.

The answers to two statements responded to at the first session demonstrate that the recruiting methods were probably successful. These questions are, "Indicate the degree of concern with what major and/or career field you are going to enter," and, "Would you like assistance in helping you to reach a sound decision?" A seven point scale, with verbal definitions of the end and middle points was attached to the question. The mean "concern" score was 5.6 while the mean "help" score was 5.7 (7 being the highest score possible). Of course, a subject who volunteered to participate without pay in the experiment was not likely to indicate a low score on these two items but when taken in conjunction with the recruiting procedures, the evidence is satisfactory that the motivation desired was present.

Interviews and Counselors

Interviews.

As noted earlier, the two interviews selected for use are similar to two kinds commonly used in vocational counseling practice. They were felt to be sufficiently distinguishable by both the experimenter and counselors so that subjects could tell them apart and have differential preferences for them. Evidence which supports the tenability of this belief will be presented later. The characteristics of each of the interviews were presented to the subjects in the first session by means of description sheets. The description sheets also served as the guidelines for the counselors administering the interviews. In other words, dissonance was created by giving the subject the wrong kind of interview, not by changing the content of the interviews themselves.

Below are the verbatim descriptions of the interviews which were read by all subjects in the experiment.

Type I. Objective

> In this kind of interview, the discussion centers about the kinds of job experiences that you have had, the value, if any, they have had for you, and the types of professions or careers you are interested in or have at one time considered. In short, we try to find out on the basis of past experience what kinds of areas of work are of interest to you. We also review any plans you may have for work experience in the future, such as summer jobs, etc. Secondly, we can discuss the tests that have proven useful in the area of vocational counseling -- that is, we describe their characteristics, what they prove, places you can go to take them, etc. Finally, the study and experience requirements needed to enter given career fields may be discussed.

Type II. Personal

> The purpose of this kind of interview would be to trace the personality and motivational background of the problem you have in deciding on a career field on the assumption that these underlying factors play a big part in both career decision and career problems. In this type of interview, the emphasis is on trying to find something out about what kind of person you are and to focus, whenever appropriate, on the personality and motivational roots of your interests or indecisions about selecting a career field. Sometimes your feelings and attitudes for significant people and events in your life may be included in the discussion. Here, we would not be concerned with telling you about job fields and their requirements nor would vocational tests ordinarily be discussed for the first few interviews, at least.

The Counselor's task, of course, was to conform to the descriptive statements of the kind of interview. Evidence will later be presented that they were able to do so despite the inevitable difficulty of doing so in a face-to-face situation with a client. The key statements to set the orientation of each interview occurred after a minute or two of conversation between client-subject and the counselor during which rapport was established and the subject was free to state his problem as he saw it. For the Objective interview the key statement was, "I think it's best if you tell me something about the subjects or careers that you seem interested in or have tried out or what jobs you have held that might throw some light on your interests." For the Personal interview the key statement was, "I think it's best if you start by telling me something about yourself as a person: that is, how would you characterize yourself as a person and what are some of your attitudes toward persons and events. Anything you can tell me about yourself as a person will be helpful". From that point on, the counselor was to focus on

those statements by the subject that dealt with the nature of his vocational and academic experience in the Objective interview and on his self-description and the nature of his relationships to others in the Personal interview. If the subject began to deviate from this pattern, it was the counselor's job to ask questions which would bring the subject's conversation back to that appropriate to the kind of interview. This could usually be done by a focusing question or statement. Only very rarely was it necessary for the counselor to tell a subject that he (the counselor) felt it would be better to talk about something else (in line, of course, with the interview type). The ease with which it was possible to get the subjects to talk about what the counselor wanted was a surprise especially in the disconfirmation condition. Detailed instructions on how to handle recalcitrant subjects had been worked out in advance but not once did they have to be used. Naturally, the counselor did not know the subjects' status in respect to the confirmation and preference variables although it may have been possible for him to make an intelligent guess about it.

Counselors

Two male counselors conducted all 56 interviews. Both had had extensive experience in psychotherapy and particularly in counseling. One, at the time of the experiment, was working at The University of Michigan Counseling Division and had been there for a number of years. The other had been at the Counseling Division for one year and, at the time of the experiment, was working as a clinical psychologist at a local outpatient clinic. Two counselors were used in order to examine the possibility that

there might be a counselor effect. The evidence relative to this possibility will be examined in the Results section.

Experimental Procedure

There were two experimental sessions during which all the data were collected (with one important exception which will be described toward the end of this section).

First Session

The main purposes of the first session were to obtain several measures from the subjects and assign them to one or the other of the experimental conditions.

The first session was conducted by myself, acting as the experimenter. Several subjects were run at the same time. Efforts were made to run the same number of subjects each time but this proved impossible to achieve in practice since approximately 40% of the subjects scheduled did not appear at a given meeting and had to be rescheduled. (About 15% of those who did not appear the first time declined to participate when re-contacted.) Accordingly, the range for the number of subjects run in the first session was 3 to 6. However, since the subjects worked individually and no interaction was required. the number of subjects attending the first session would seem to be relatively unimportant.

The procedure in the first session was as follows (see Appendix I for the experimenter's spoken statements). I introduced myself and repeated, in essence. the information given the subjects during the telephone conversation. I also explained the reasons why only those subjects who felt

they had a vocational problem were recruited. At this time, the subjects were informed that I would be testing "a number of different approaches that have been used in counseling". In addition, the subjects were informed that the interviews would be taped. Finally, "to find out whether there are differences in the two kinds of interviews", the subjects were told that they would be asked to fill out a number of questionnaires, some before and after the interview, some before the interview, and some after.

At this point, the subjects were given a questionnaire (Appendix 2) which included: (1) space to write down the vocational fields that they had considered at one time or another: (2) the "concern" and "help" questions described earlier: and (3) two rating scales (extending, as usual, from 1 to 7, with verbal statements below points 1, 4, and 7) which had the headings at the top of the two kinds of interviews being used. Before indicating how much they would like to have each kind of interview, the subjects were given the description sheets, reproduced above, encouraged to read them carefully and ask any questions they desired to clarify the nature of the interviews. If there were no questions, they completed the scales. Most subjects did not ask questions and the ones that were asked were easily answered. Since each interview was rated separately, it was possible to indicate equal preference for both. (Only five persons indicated equal preference.) In such cases, the subject was asked to indicate a preference.

After the subjects had completed their statement of preference, they were told that that information conveyed by this indication of their preferences was needed to "complete the study of the effects of the two kinds of interviews"

but that they would be assigned to one interview or the other purely on the basis of chance. It was explained that by assigning them to one interview or the other by chance, differences between subjects that could not be controlled could be neutralized. There were no dissenting comments from any of the subjects and an interview conducted at the end of the experiment revealed only three subjects who wondered about the adequacy of the explanation. It must be recognized, of course, that others may have had doubts that remained unverbalized.

I then gave the subjects a form consisting of 50 incomplete sentences in order to "see if the group of subjects used in the experiment is similar to the general college population" (Appendix 4). Actually, the reason for this task was to give me time to assign the subjects to groups according to certain pre-selected criteria which will be described in the Results chapter. Before I left the room to so assign the subjects (a reasonable action since filling out 50 incomplete sentences takes a considerable amount of time), I produced a table of random numbers and busily engaged in some writing. This, of course, was to justify the earlier statement that the subjects would be assigned to one interview or the other by chance alone. After the subjects had been working for about five minutes, I left the room so that I could, in private, assign the subjects according to the predetermined criteria. The sentence completion data, while potentially of some interest, will not be analyzed at this time.

When the subjects had finished the sentence completion form, I told each one individually what kind of interview he would receive, presumably

readings from the writings that had been made while I had been consulting the table of random numbers.

The last task during the first session was completion of a form which requested the subjects to indicate how much they would like to have information about the counselor who was to interview them. That is, a number of items of information -- such as, how long had he been with the experiment, how much he knew about vocational tests, what his strong points were, etc. -- were presented, each item having attached a 7 point rating scale (see Appendix 5). The subjects were to indicate how much they would like information for each of the items if they could get such information. It was pointed out to the subjects in regard to this task that they, of course, had not yet met the counselor and that their contact with him would be their first.

Following the completion of this form an interview time was arranged and the subjects were informed of the room in which the interview would be held. They were also specifically informed that they should keep the description of the interviews form to look over should they desire.

Attempts were made to schedule subjects for the interview within one week after the first session and with only a few exceptions it was possible to do this. The range of time between the first session and the interview was 4 to 7 days with the exceptions noted and no one was interviewed more than two weeks after the first session.

Second Session

During this session, which was also the last, although the subjects

did not know it at the time, the interview was given and the dependent variable measures were taken. (All subjects who had been through the first session appeared for the interview and only five subjects missed their first appointment and had to be rescheduled. This attests to the high motivation of these subjects.) The session can be broken into four parts. Before describing them, the physical facilities in which the interviews took place will be described.

The interview room was one of a series of rooms in a kind of alcove off the main hallway of the building in which classes, including psychology classes, were ordinarily held. The room itself was rather small and contained a desk with two chairs, one for the counselor, the other for the subject. They sat, in typical interview fashion, with the corner of the desk between them. The tape recorder was in plain sight on the top of the desk but out of the line of sight of the participants. The recorder was running when the subject entered the room. The room was deemed quite suitable for a proper interview atmosphere. Though other rooms in the alcove were at times in use during the experiment, there was little or no noise and the interviews were never disturbed.

First Part. When the subject arrived at the door of the alcove, he was met by a "receptionist" sitting on a chair in the hallway of the alcove. She asked if he were Mr._____and then said, "Fine, and let's see. you are due to get a _____interview, is that right?" She waited for the subject's affirmation that the _____interview was the one expected and then led him down the hall to the interview room. Her statement

of the type of interview, of course, was identical with what the subject had been told in the first session. All the subjects correctly remembered which interview they were to get and so there was no need to make an on-the-spot correction. The receptionist's presence at the interview session was to make the experiment more realistic and to remind the subject of the kind of interview he was due to receive. The last part of her task at this point was to introduce the subject to the counselor, after which she retired.

Second Part. The second part of the session consisted of one or the other of the two interviews. The interview lasted 20 minutes. At the conclusion of the interview, the counselor and the subject emerged from the room and were again met by the receptionist who gave the subject a form (Appendix 6) to fill out which consisted mainly of the dependent variables indices and three open-ended questions. The subject was moved to another room to complete the forms since the interviewing room was to be used for the next interview which usually took place before the first subject had finished completing the dependent variable forms. In general, a given counselor interviewed two or three subjects in succession, this being done solely for practical reasons.

Third Part. The subject received two questionnaires to complete after the interview. The first one, given to him by the receptionist, had four differentiable sections.

The first section consisted of a second administration of the information form that had been given to the subjects during the first session. The second section consisted of four general questions rated, as were all but the three

open-ended questions and several interview identification questions, on seven point scales. The "success" question, for example, as it appeared to the subjects is reproduced below and the other questions can be found in Appendix 6:

Using the following rating scales, evaluate the degree to which:

1. You feel the interview was a success

1	2	3	4	5	6	7
not at all successful			moderately successful			highly successful

The third section consisted of 23 statements to be rated. The first 22 described reactions to the interviews and counselor that the subjects might or might not have had or would anticipate having in future interviews with the same counselor. Point 1 on the scale was labelled "no, not at all". Point 4 was labelled "difficult to say"; and Point 7 was labelled "yes, definitely so". The statements, reproduced in Appendix 6, included such statements as:

I felt comfortable and at ease with him.

I liked him as a person.

I felt he was "understanding".

I felt I could show my feelings as well as talk about my problems.

The fourth section consisted of three open-ended questions to be answered briefly by the subjects. In the order presented to the subjects they were, "How well did the counselor conform to what you expected he would do and say", "Briefly describe what you talked about", and, "Briefly describe what the counselor said".

Following completion of this form, the subjects were presented by myself with the familiar interview description forms and a brief new questionnaire (Appendix 7). After having re-read the description forms, they again indicated their preferences for the two kinds of interviews and stated which kind of interview they had received, henceforth called the "identification"response. The latter, of course, was an attempt to provide the basic data for the distortion variable. The last part of this second form consisted of three questions designed to provide information about the realism of the experiment. In order, they were, "To what extent would you say your interview behavior was influenced by your knowledge that this interview took place in an experimental setting rather than at a counseling center", "Would you have acted differently if this interview had taken place in a counseling center?" and, "To what extent did you feel you were playing a part (role) in the interview rather than behaving as you would have were you in a counseling center?" (Appendix 8).

Fourth Part. This section consisted of a semi-structured interview (Appendix 9) which I conducted in order to find out the subjects' reaction to the experiment, to allow them to cathart if they had been upset about being given the other kind of interview, to find out what they thought to be the purpose of the experiment, to find out how many times they had read the description sheet at home and to inform them that while the experiment was in actuality terminating at this point, if they wished additional counseling, they could go to the Counseling Division. They were given the campus location and telephone number of the Division and informed that they would

be seen for evaluation rather quickly but that if extended counseling were called for, they would have to be placed on the waiting list. This was acceptable to all but a few subjects and may even have been of use to a few who had only a dim awareness, at best, of the existence of such a service. In addition to the specific information desired and obtained in this interview, the subjects volunteered a considerable amount of useful information which will be discussed later.

An Additional Measure.

With the last mentioned interview, the second session, as well as the data collection according to the initial design, was completed. It soon developed, however, that one additional data collection procedure would be required. To understand the reason for this additional procedure, a review must be made of an important set of findings, what seemed at the time the probable reasons for these results, and certain implications stemming from these probable results.

After one-half of the subjects had been run it was found that while the confirmed subjects were correctly identifying the interviews, all but a handful of disconfirmed subjects were misidentifying the interviews in line with expectancy. While this had been a prediction, the extent to which this was happening came as a surprise. Examination of the response to the interviews (by means of the various rating scales) showed that those who correctly identified the interviews (in the disconfirmed condition) were rating the interviews more unfavorably than those who were confirmed but that those who were misidentifying the interviews failed to show any difference from the

truly confirmed group.

The most probable reason for this misidentification it was then believed were that there existed two distinct groups of subjects whose misidentification responses came about for different reasons. First, it might have been that some of the subjects' identification responses were influenced by constraints imposed by the demands of politeness. That is, such subjects might have believed that making an identification response that was different from what they had been told to expect might be viewed as complaining. Hence they wrote down that they had received the expected interview even though they had actually experienced the other interview. The implication for this group is that such subjects avoided admitting their awareness of being disconfirmed. Second, for some misidentifying subjects, the identification response at the time of the interview might have represented their real belief about the kind of interview they had received. Misidentification by this latter group would presumably have been for the purpose of avoiding dissonance although other explanations, which will be described and evaluated in the Results section, are also possible.

While the existence of the postulated first group would not present a problem for the data analysis, the existence of the postulated second group most certainly would. To understand the reason for the inclusion of the additional procedure to be described below, it is necessary to explain the nature of this problem.

It will be recalled that in order for dissonance to exist, the disparity must be "cognized". The postulated first group, those assumed to have

made an incorrect misidentification response primarily for reasons of politeness, by the very definition of the group, would have recognized the disparity. Accordingly, they should still rate the interview in line with their status as disconfirmed subjects. The predicted result would be lower ratings on the various scales. The postulated second group (those who did not recognize they were getting the other kind of interview), on the other hand, by not recognizing the disparity, should not rate the interview in line with their status as disconfirmed subjects since, as noted, such recognition is necessary for dissonance to exist. Their ratings should not be different from that of the truly confirmed subjects since they would be responding to the interview, in large part, from the standpoint of confirmed subjects.

If most of the subjects making an incorrect identification response were to fall into this latter group, the overall interview ratings of all truly disconfirmed subjects should not be different from that of truly confirmed subjects. But it is important to note that the reason for the absence of this difference would not be that disconfirmation does not produce lower ratings which, as noted, is a prediction (developed more fully later), but that misidentification prevents a less favorable reaction to the interview. If most subjects truly misidentified, it is meaningless to compare confirmed versus disconfirmed subjects in terms of the objective conditions of the experiment if the intent is to draw conclusions as to whether dissonance produces a lower rating for the interview experience -- for dissonance is not present.

It should be clear from the above that it was essential to know which subjects indicated an incorrect identification response from considerations

of politeness and which from true misidentification. Since there was no way of telling from the identification response itself, the task was to find a way to differentiate the two groups of subjects from each other in order to test a prediction that dissonance produces lower ratings for an interview experience. Then the "polite" group could be combined with those who correctly identified the interview at the time of the interview, thereby forming a group that experienced dissonance. The group which did not recognize the disconfirmation, on the other hand, would be added to the confirmed group (whom they would resemble). With this accomplished, the prediction that a group experiencing dissonance would produce lower ratings could be tested. Naturally, the fact that a group of subjects had not recognized the existence of disconfirmation would remain an important finding.

The most efficacious way to accomplish this, it seemed, would be to send an explanatory letter to all of the subjects (confirmed as well as disconfirmed). The letter would inform them that "a number of them" had received the other kind of interview rather than the one they had been told to expect and ask them to indicate if they were one to whom this had happened. The notion behind this was that those subjects who had been affected by the need to be polite would be released from this need since admitting disconfirmation could hardly be construed as complaining in the face of such definite information. Those other subjects, on the other hand, who had not recognized they were disconfirmed would not change their response since they had never realized this fact in the first place. If this reasoning were correct, the desired differentiation of subjects would be achieved and the

needed redichotomization could be made. The former group would be considered to belong with the disconfirmed group, the latter group with the confirmed subjects. Accordingly, a letter was sent to all subjects (Appendix 10), this constituting the additional data collection procedure that was referred to at the start of this discussion.

It can be seen from the above that this new dichotomization of the groups on the confirmation variable was based upon the subjects' cognized belief, after the receipt of new information, as to what had happened and not necessarily upon what had actually happened. To the extent, however, that politeness was the prime factor in the subjects' misidentification and the subjects could utilize the information contained in the letter to correct their identification response, the new dichotomization would place most subjects in their original groups, i.e., the groups based upon what really had happened. To the extent that failure to recognize the true state of affairs was the cause of misidentification, the newly formed confirmed and disconfirmed groups would consist of many subjects who objectively were in the other groups.

The question remains, however, as to whether the subjects' response to the letter, indicating their belief at the time of receiving additional information, is a valid indicator of their cognized experience at the time of the interview. If the line of reasoning described above which led to the decision to send the letter is correct, it would be and hence would reflect not only the subjects' belief but their cognized experience at interview time as well. But if politeness was not an influence on the identification response

following the interview and if the misidentification at interview time, regardless of response to the letter, represented what the subject truly believed, the new dichotomization would lose validity as a way of differentiating between those who experienced dissonance and those who did not. If so, this method of dichotomization of the subjects could not be used to test the influence of dissonance on reaction to an interview. Naturally, it would be necessary to explain why a subject who misidentified at the time of the interview was able to make a correct identification in response to the letter. Because the problem of the meaning of the identification response is complex and quite critical to this study, much time will be spent evaluating the evidence that bears on the problem of interpretation of the identification response and on other, related problems, as well.

Forty-nine of the 56 subjects who had been participants in the experiment responded to the letter. Thirty subjects believed they had been confirmed (21 of whom were correct) and 19 subjects thought they were disconfirmed (15 of whom were correct). The letter reached the subjects from two to four weeks after they had taken part in the experiment. Ideally, it would have been desirable to send the letter to all subjects at a fixed time after the interview but this was not possible primarily because the idea to send the letter occurred after the first half of the subjects had been run. This meant that a longer time span between interview and letter existed for subjects run at the start of the experiment than for those run at the end of the experiment.

With this information, the data collection from the experimental

(but not certain control) subjects was completed.

Dependent Variables

It is now time to describe the four major dependent variables.

Distortion or Misidentification

Distortion was measured by the subjects' post-interview response to the question, "What kind of interview did you receive?" as well as by his answer to the question posed to him in the letter. There are a number of problems connected with this way of measuring distortion and these will be discussed in the Results section.

Rating of the Interview

This variable was measured by the subjects' ratings of the four general questions and the following twenty-three specific items all answered on 7 point rating scales and administered following the interview. The twenty-three items, most adapted from Biddle's study and some specifically designed by myself for this study, may be divided into three parts. (The questions constituting these three parts were intermixed with each other so that the subjects did not answer all the questions of one part before going on to the next part.) The following describes the nature of the three parts.

Evaluation of the Counselor. This consisted of 11 ratings which included such statements as:

I felt I was treated like a person instead of just another case.

I liked him as a person.

He seemed to be the kind of person I would like to have as a close friend.

I felt he knew a lot about counseling techniques.

I felt he was trying to help me.

Client Feelings. This consisted of 11 ratings which included such statements as:

I felt comfortable and at ease with him.

I felt I could unburden myself to him or could do so in future interviews.

I felt free to reveal very personal things or would so feel in future interviews.

I felt I could talk about whatever I wanted to talk about.

I felt I could show my feelings as well as talk about my problems.

Justification. This consisted of only one statement, "To what extent do you feel the counselor had good reason for what he did and said in the interview?"

Information Seeking

This was a before and after the interview measure, the nature of the items involved having been described earlier in the section on experimental procedure. In addition to this planned measure, another analysis utilizing certain of the before scores was employed. While this additional measure is of course based on a post hoc prediction and any findings must be cross-validated, the prediction and test is a rather interesting and worthwhile one. In the prediction section, naturally, the prediction is stated in terms of the change scores, since this was the way it was originally formulated.

Change in Preference

This, too, was a before and after measure, the measure consisting

of the difference between the subjects' ratings of their preferences for the interview they believed they received from before to after the interview.

Predictions

The previous discussion has provided the background which allows the derivation of the following predictions to be understood. The predictions, of course, were made before data collection began and hence justify the use of one-tailed tests of significance. Wherever it is felt that an explanation is needed to clarify the basis of the prediction, a brief explanation will accompany the predictions. Before stating these predictions, it should be noted that while all the predictions could be tested, the exact method of testing them had to be modified in some cases. To anticipate, this modification consisted of finding a more valid way of dichotomizing subjects on the confirmation variable. This problem and its solution will be set forth in the Results section. In addition, as already noted, one test of the information variable tested a new, though related, prediction which, of course, is not included in the predictions to be presented below.

Distortion or Selective Perception

Prediction 1: While the majority of disconfirmed subjects will not misidentify the interviews, such misidentification as does occur will be more frequent in the disconfirmed than in the confirmed condition.

Prediction 2: Such distortion or misidentification as occurs will not be attributable to the desire to receive a preferred interview. To state this another way, misidentification will be equally present in the non-preferred and preferred conditions.

Rating of the Interview

Prediction 3: For both evaluation of the counselor and client feelings, subjects in the confirmation condition will rate the interviews higher than subjects in the disconfirmation condition. The rationale is as follows. A person who experiences dissonance will feel uncomfortable and tend to ascribe the cause of at least part of this discomfort to the behavior of the counselor. This should result in lower evaluation of the counselor in a number of areas such as liking for him, evaluation of his "understanding" and so on. Similarly, the subject in part due to his discomfort, in part due to his loss of assurance that this environment is stable and predictable, should also be less willing to reveal himself and express himself. Furthermore, as Pepitone (1957) and Horowitz (1957) have demonstrated, when a role status figure does not act in accord with expectations, there is a general tendency to see him as acting on the basis of individual and selfish motives. It is not clear whether it is the dissonance from the violation of expectancy or the attribution of selfish motives, in and of itself, that causes the negative attribution. This study will not clarify this issue but the prediction that has been made is in line with dissonance theory.

Prediction 4: For both the evaluation of the counselor and client feelings, subjects who receive a preferred interview will rate the interviews higher than subjects who receive a non-preferred interview.

Relationship of Dissonance and Discomfort

Prediction 5: Disconfirmed subjects will feel more uncomfortable than confirmed subjects. This prediction is a direct test of the theoretical statement that dissonance is an uncomfortable state.

Information Requested About the Counselor

Prediction 6: Subjects experiencing a disconfirmation interview will: (1) indicate a change in interest in the direction of more interest on more items than will those who receive a confirmation interview:

and (2) indicate a selective change for those items that are especially suited for dissonance reduction, again in contrast to those who receive a confirmed interview. Confirmed subjects should either decrease their interest in the items or maintain their former interest level. This prediction follows from the theoretical derivation that one way to reduce, though not necessarily eliminate, dissonance is to acquire information which explains the dissonant experience, or in other words, which increases consonance.

Prediction 7: As a corollary prediction, it is expected that change in information seeking will not be related to the variable of preference.

Change in Preference

Prediction 8: Subjects who conform to the required behaviors of a non-preferred interview will increase their liking for such an interview more than will those who receive an interview which is their preference. This prediction follows from the conclusions reached in Chapter I concerning the reduction of dissonance through an increase in the liking of a non-preferred or disliked activity, if one has voluntarily submitted oneself to such a disliked activity.

Prediction 9: The more subjects commit themselves to behaving as required in a non-preferred interview, the more dissonance they should have, other things being equal, and hence the more attitude change toward increased liking. This follows from the theory since the more effort one puts into a disliked activity, the more one's behavior is at odds with this dislike.

Prediction 10: The more the non-preferred interview which is administered is initially disliked, the greater the subsequent attitude change toward increased liking. The basis of the prediction is straight-forward. The more the interview is initially disliked the more the dissonance that must necessarily exist.

Prediction 11: The more the counselor must persuade the subject to participate in a non-preferred interview, the less the dissonance and the less attitude change toward that kind of interview. This follows since, as our

previous discussion has demonstrated, dissonance does not exist when one is more or less forced to behave against one's preference.

Overall Effects

Prediction 12: The overall effect of the confirmation variable will be greater than that of the preference variable. This prediction is based both on the anticipated strength of dissonance and on the anticipated lack of strong differential interview preferences on the part of many subjects.

Prediction 13: Subjects will experience greater liking, believe they gained more in helping them choose a vocation and report higher success for the confirmation condition than for the disconfirmation condition.

Prediction 14: Subjects will experience greater liking, believe they gained more and report higher success for the preferred condition than for the non-preferred condition.

It will be noted that no predictions have been made concerning the effects of the interviews themselves, that is, the evaluation of the Personal as contrasted to the Objective type interviews. While, of course, this effect will be analyzed, the variable is considered exploratory in nature. Without formally making a prediction, however, there is some expectation that the Personal interview will be preferred to the Objective interview. Indeed, Biddle, using analogous kinds of interviews, found the interview closest to the Personal type in the present experiment (which he called the "relationship establishing" type) was preferred to the interview closest to the Objective type in the present study (which he called the "problem oriented" type).

Analysis Methodology

The original plan for testing the significance of the results of the

"rating of the interview" scales was to used the analysis of variance technique. This method would have permitted analysis, in one statistical operation, or both the main effects (e.g., type of interview) and the interaction effects. The redichotomization of the disconfirmed subjects (described on pp. 52-54), however, produced unequal and non-proportional cell N s and precluded analysis of the interactions by means of analysis of variance. The existence of non-proportional cell Ns also raised the question that analysis of even the main effects might not quite fit the analysis of variance model. Accordingly, it was decided to use the t test to analyze both the main and interaction effects. As will be shown, however, the factorial design was preserved despite these changes.

The t test was also employed, as originally anticipated, for analysis of the "information seeking" variable and the analyses of the overall effects. It was necessary to use the Wilcoxon matched-pairs, signed-ranked test for one analysis of the additional prediction on the information variable since the t test's assumptions could not be met. It was also necessary to use the Mann-Whitney U test for analysis of the relationship of dissonance and discomfort and for two of the tests of the overall effects again because the t test's assumptions could not be met. Finally, as originally planned, the binomial expansion was used to analyze the significance of the "distortion" variable.

Variables Analyzed by Means of the t (and Related Non-parametric) Tests

Rating of the Interview Indices. To simplify the analysis of the twenty-seven indices involved and utilize the fact that many of the indices seemed to be conceptually similar to each

other, these indices had been grouped into categories before the subjects were run. My final grouping was quite similar to Biddle's which is to be expected since the procedure used was to start with his grouping and modify it only when there was disagreement with a given placement. For example, two indices which were combined, initially, were, "I felt I was treated like a person, not a case", and "I felt he treated me like somebody special".

The possibility, however, that this initial, apparently reasonable, grouping might not always be the correct one had to be considered. This could happen, if, for example, the subjects interpreted the meaning of the indices differently than was intended. The decision was made, therefor to let the data determine the groupings. Accordingly, after the data collection had been completed, scores on all the dependent variable indices were punched on cards and intercorrelated (using the IBM 7090 computer). Then, using these intercorrelations, new combinations were created in the manner to be described below.

Table 2 presents the intercorrelation matrix. For presentation in this table, the indices were renumbered and rearranged (and hence are different from the order in which they appeared to the subjects). This rearrangement was made so that each index could be grouped with its appropriate section of the "rating of the interview" dependent variable. Thus the four "general" questions are indices 1 - 4, "the evaluation of the counselor" are indices 5 - 15, "client feelings" are indices 16 - 26 and the "justification" question is index 27. The purpose of this rearrangement is to make it easier to follow the subsequent discussion. For the ordering of the indices as they appeared to the subjects, consult Appendix 6. For the content of the indices consult Table 3 (pp. 69 - 70).

TABLE 2

MATRIX OF INTERCORRELATIONS OF "RATING OF THE INTERVIEW" INDICES

1													
2	.578												
3	.611	.485											
4	.354	.510	.239										
5	.330	.377	.158	.241									
6	.466	.529	.480	.257	.508								
7	.327	.441	.305	.177	.516	.672							
8	.210	.318	.162	.244	.614	.335	.493						
9	.243	.400	.246	.239	.452	.534	.543	.583					
10	.429	.408	.345	.321	.583	.590	.588	.591	.388				
11	.282	.374	.205	.285	.382	.353	.487	.494	.608	.480			
12	-.022	.116	-.151	-.068	.206	-.048	.128	.205	.112	.178	.311		
13	.519	.379	.294	.247	.576	.561	.441	.510	.661	.548	.515	.219	
14	.493	.335	.235	.274	.458	.268	.303	.471	.346	.552	.383	.173	.438
15	.190	.231	-.009	.320	.530	.235	.275	.394	.312	.425	.509	.213	.406	.379
16	.005	.103	-.141	.060	.405	.092	.086	.241	.075	.198	.206	.255	.226	.297
17	.429	.505	.285	.489	.537	.602	.491	.605	.640	.556	.519	.061	.634	.568
18	.135	.096	.023	.118	.188	.079	.165	.327	.202	.218	.333	.189	.251	.333
19	-.127	.229	-.187	.104	.022	.041	.080	.086	.240	-.099	.129	.307	.049	-.070
20	.328	.382	.143	.388	.555	.538	.422	.557	.573	.537	.562	.270	.660	.341
21	.053	.368	-.094	.187	.057	-.055	.048	-.014	.133	-.075	.074	.123	.061	-.022
22	.305	.366	.156	.339	.391	.360	.205	.243	.293	.367	.396	.214	.392	.247
23	.062	.183	.043	.197	.475	.275	.454	.344	.300	.310	.527	.201	.311	.283
24	.193	.224	.015	.080	.539	.246	.398	.407	.358	.313	.408	.121	.325	.301
25	-.018	.034	.071	.176	.373	.192	.385	.342	.282	.470	.529	.310	.331	.143
26	-.076	-.080	-.091	.087	.019	-.115	.101	-.087	-.046	-.038	-.103	-.093	.096	-.034
27	.035	.006	.031	.117	.237	.107	.047	.140	.153	.358	.273	.034	.224	.184
	1	2	3	4	5	6	7	8	9	10	11	12	13	14

TABLE 2

MATRIX OF INTERCORRELATIONS OF

"RATING OF THE INTERVIEW" INDICES

CONTINUED

Significance data for two-tailed test

.05 = .264

.01 = .342

-.157												
.383	.190											
.225	.340	.206										
-.139	.292	.182	.238									
.243	.255	.621	.227	.155								
.080	.027	.112	.048	.293	-.012							
.268	.219	.305	.072	.110	.531	-.011						
.430	.376	.291	.316	.284	.327	.030	.325					
.263	.228	.320	.098	-.021	.326	.208	.400	.436				
.409	.177	.280	.199	-.004	.257	-.063	.309	.452	.446			
.070	.239	-.131	.135	-.006	-.053	.057	-.061	-.002	-.076	.137		
.390	.137	.057	.210	-.1 7	.133	-.130	.414	.123	.114	.271	-.087	
15	16	17	18	19	20	21	22	23	24	25	26	27

Before describing the manner in which new combinations were formed, I examined the correlations as a check on the validity of the initial groupings. The skepticism was well-founded. For example, originally I had placed the two indices, "I felt comfortable and at ease with him" and, "I was left with the feeling of having enjoyed being with him" in the same group. Biddle had also grouped these two items (there was one other in this group in his study). But unlike the present study where the individual indices were intercorrelated, Biddle intercorrelated the combined score for each group of indices, not the separate indices. It is apparent, therefore, that Biddle was convinced that his groupings possessed validity but, given the fact he intercorrelated groups of indices, he could not test such an assumption. Returning now, to these two items, despite both Biddle's and my decision to place them in the same group, they have a non-significant correlation of + .19, a rather low correlation especially when contrasted with the generally higher correlations of the matrix. Each index has a far higher correlation with other groups and were assigned to separate groups in the subsequent analysis. As another example, let us take another grouping used by Biddle and originally used in the present experiment consisting of seven indices in the Biddle study and six (19-24) in the present one. Examining the intercorrelations of these six indices, it is seen that while there are a number of moderately high positive correlations, there are an equal number of insignificant and/or negative correlations. Furthermore, at least two of the indices do not belong in the group. Thus, while justification (in terms of the data) exists for some of the logical groupings, such justification is totally absent for

others. While it is possible that differences between the operations of these two studies make a strict comparison of the intercorrelations of the indices questionable and perhaps Biddle's grouping worked in his study, it is quite clear that if the initial classification had been followed here, many of the indices would have been incorrectly grouped.

To determine how the indices should be grouped, an "elementary linkage analysis", a method devised by McQuitty (1957), was performed. The procedure will be briefly outlined but for a full exposition of the method, see the article itself.

The method, analogous to factor analysis, leads to the identification of types. The types may be of items, persons, etc. The first step is the preparation of a matrix of intercorrelations. The highest correlation for each column is then identified. The first type forms with the two most highly correlated variables as its focus. Other variables, if any, called "first cousins", which have their highest correlations with either of the original members of the type are added. Then other, if any variables which have their highest correlations with the first cousins are added and the process is continued until there are no longer any, variables which have their highest index of association with a member of the type. The second type is then formed with the two variables, not in the first type, that are most highly correlated and the process, outlined above, is repeated for the second type. The overall process is repeated until all the variables are accounted for, i.e., placed in one type or the other. As can be seen, each member of a type has its highest index of relationship with a member of that type. This is the definition of a type --

a group of measures each of whose highest index of association is with some other member of the type.

In this study, two sub-matrices were formed from the grand matrix presented in Table 2 and a linkage analysis was done for each matrix. The first consisted of those indices pertaining to "evaluation of the counselor" (indices 5 - 15), the second to "client feelings" (indices 16 - 26). The four general questions (indices 1 - 4) and the "justification" question (index 27) were added to both matrices since it was impossible a priori to tell whether they belonged with "evaluation of the counselor", "client feelings" or were independent of them. As it turned out, the four general questions were linked to each other in both matrices and to two indices of the "client feeling" matrix as well but not to any index in the "evaluation of the counselor" matrix. Accordingly, it was grouped with those two indices in the "client feelings" matrix. The "justification" index was linked to types in both matrices but was assigned to a type in the "client feelings" matrix since it had a higher association with an index in that matrix than to any index in the "evaluation of the counselor" matrix.

This procedure produced a total of six types, three of which arose from one sub-matrix and three from the other. From now on, types will be termed "scales". The scores of the components of each scale were summed. This reduced the number of units for analysis from 27 to 6, and in a way determined by the empirical relationships between the indices. In Table 3 are presented the groupings that resulted from this analysis. The wording of the indices are reproduced verbatim from the forms filled out by the subjects. The numbers of the indices, however, are those used for Table 2. The original order in which they appeared to the subjects (which is also the original numbering) is found in parentheses following the item.

TABLE 3

EMPIRICALLY DETERMINED GROUPINGS OF
THE DEPENDENT VARIABLE INDICES

SCALE I

Index 6: I felt he treated me like somebody special (11).

Index 7: I felt he liked me (16).

SCALE II

Index 9: He seems to be the kind of person whom I would like to have as a close friend (9).

Index 11: I felt he was "understanding" (8).

Index 12: I felt he understood what I was talking about (13).

Index 13: I felt he was trying to help me (7).

SCALE III

Index 5: I felt I was treated like a person instead of just another case (5).

Index 8: I liked him as a person (3).

Index 10: I felt he knew a lot about counseling techniques (20).

Index 14: I felt the counselor communicated well with me (22).

Index 15: I felt the counselor took his job seriously (21).

SCALE IV

Index 17: I was left with the feeling of having enjoyed being with him (18)

Index 20: I felt I could unburden myself to him or could do so in future interviews (4).

Index 22: I felt free to reveal very personal things or would so feel in future interviews (10).

Index 27: To what extent do you feel the counselor had good reason for what he did and said in the interview? (J).

SCALE V

Index 16: I felt comfortable and at ease with him (2).

Index 18: I found it easy to communicate my thoughts and problems (14).

Index 23: I felt I could talk about whatever I wanted to talk about (15).

Index 24: I felt I could show my feelings as well as talk about my problems (17).

Index 25: I felt free to tell him favorable things about myself or would feel free to tell him such things in future interviews (19).

Index 26: I was hesitant to tell him unfavorable things about myself or would have been hesitant in future interviews (12).

Table 3 Empirically Determined Groupings of the Dependent Variable Indices (continued)

SCALE VI

Index 1: Evaluate the degree to which you feel the interview was a success (1).[2]

Index 2: Evaluate the degree to which you liked the interview you received (2).

Index 3: Evaluate the degree to which you feel you gained something of value in helping you choose a vocation, by means of the interview (3).

Index 4: Evaluate the degree to which you would be willing to see this counselor again (4).

Index 19:[1] I felt I had to be careful of what I said to the counselor (1).

Index 21:[1] I was afraid to disagree with him or would be afraid to disagree with him in future interviews (6).

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[1]For these indices, the scale values were reversed for the correlation process so that index 26, for example, actually means, "I was not hesitant, etc."

[2]Indices 1 - 4 of Scale VI were the first indices filled out. The other 23 indices followed.

Table 4 presents the intercorrelations of the six scales.

TABLE 4

INTERCORRELATIONS OF SCALES

	I	II	III	IV	V	VI
I	___					
II	.545	___				
III	.542	.656	___			
IV	.540	.717	.704	___		
V	.322	.496	.553	.475	___	
VI	.472	.461	.373	.440	.211	___

As Table 4 shows, the six scales are for the most part "moderately" correlated with each other and hence show a "substantial" relationship according to the classification system for correlations coefficients proposed by Guilford (1956). Nonetheless, out of the 54 possible comparisons, in 47 of them the average correlation of each individual index with the other members of its scale is higher than the average correlation of that index with indices of any other scale in its sub-matrix. The exceptions consist of four ties and three reversals. That is, on four comparisons the average correlation of an index with its scale is equal to the average correlation of the index with the indices of another scale: and on three occasions the average correlation is higher with the indices of another scale than with its own. The problem posed by the moderate intercorrelations of the scales poses a problem for the data analysis which will be discussed in the Results section.

Despite the positive relationship of the scales to each other, and hence the likelihood that they all reflect some general attitude toward the interviews and/or counselor, there still are differences in what aspects of the interview they seem to be capturing. What is needed now is an interpretation of the scales. In other words, how shall each scale be labelled in such a way as to capture the meaning of the combination? The following is the proposed interpretation of each scale.

Scale I -- This scale seems to arise out of the subjects' estimate of the counselors' regard for them.

Scale II -- This scale seems to arise out of the subjects' estimate

of the counselors' ability and desire to empathize with them and try to understand their personal and vocational difficulties.

Scale III -- This scale seems to arise out of the subjects' estimate of both the counselors' more "practical" vocational counseling skills and the counselors' attitude toward their task.

Scale IV -- This scale seems to arise out of the subject's estimate of his willingness to really "let go" and talk about things of considerable importance in an open, meaningful way.

Scale V -- This scale is not fundamentally different from Scale IV. The difference is perhaps one of intensity and depth. This scale appears to reflect the subject's felt freedom to discuss himself and his problems in areas of importance to him but in areas not as revealing as those reflected in Scale IV.

Scale VI -- The meaning of this scale is more difficult to discern than was true of the other scales. The four general indices (indices 1 - 4) are moderately correlated with each other but only slightly with indices 19 and 21. The most likely interpretation is that it measures the subjects' general reaction to the interview with an eye toward their ultimate use in helping them resolve their vocational and/or personality problems.

While some meaning seems to have been abstracted from these combinations of indices, it is my belief that this has been possible only because each item provides a clue as to the meaning of the

scale that can be checked and/or modified by the clues provided by the other items. I would hesitate before assuming that the meaning of an individual index can be gleaned simply by reading its manifest content, especially since the empirical groupings of some scales deviate from the logical groupings suggested by their apparent content. If this is the case, then there is more justification, it would seem, in interpreting the meaning of a scale than of a single index.

Discomfort Index. The analysis here consisted of dichotomizing the subjects into confirmed and disconfirmed subjects on index 2, "I felt comfortable and at ease with him", and testing the significance of the difference by means of the Mann-Whitney U test. It was necessary to utilize this non-parametric test since the distribution for this index is markedly skewed, thereby exceeding even the rather large deviations from normality found to be acceptable in utilizing the *t* test (Boneau, 1960).

Information Seeking. The analysis plan for this variable, reflecting the influence of the confirmation variable, was to examine the change scores, the before score being taken before the interview, the after score following the interview. The *t* test was used for all analyses of this, the original test of the prediction. In addition, a post hoc analysis using certain selected "before" scores only was made. This second analysis tested an analogous prediction which also related dissonance theory to information seeking. The tests involved

the difference between pairs of before scores (five pairs in all), each pair being produced by the same subjects. Accordingly, the t test for correlated means was used for four of the pairs and the Wilcoxon test for the fifth, the latter test necessitated by extreme deviations from normality.

Overall Effects. The three predictions involved here utilized all the indices of the "rating of the interview" measures for one prediction and three of the general indices for the other two. All tests made in connection with these predictions were analyzed by means of the t test with the exception of two tests of the general indices which required the use of the Mann-Whitney U test.

Variable Analyzed by the Binomial Expansion

The variable tested by this statistic is the distortion variable. The analysis is simple and straightforward. All that is necessary is to set the probabilities, p_1 and p_2, count the observed number of subjects who misidentify and relate such misidentifications to the experimental condition to which the subject belongs. Thus, if chance alone were operating, p_1, the number of confirmed subjects who misidentify would equal .5 and p_2, the number of disconfirmed subjects who misidentify would also equal .5. Any significant deviation from these chance levels in the predicted direction supports the prediction. I mean by chance that if I, say, flipped a coin to determine whether a subject went into the confirmed group or the disconfirmed group, by chance, one-half of them would be in each group. In short, they would be equally

likely to be confirmed or disconfirmed. The observations, of course must be, and are here, independent since each subject contributes one score. The test was made for two sets of data: (1) the subject's statement, immediately following the interview, of which interview he had received, and (2) the subject's statement as to whether he was confirmed or disconfirmed in response to the letter that was later sent to him.

This completes the discussion of analysis methodology. In the next chapter, the results are presented.

CHAPTER III

RESULTS

Experimental Controls

Before examining the findings associated with the predictions, it is necessary to ask and answer a number of questions. The first asks whether the interviews were differentiable to the subjects. The second concerns itself with the success of an attempt to match subjects on two motivation-for-counseling indicators. The third considers the possibility of differential responses to the two counselors. We will take up these matters in the order presented above.

The Distinguishability of the Interviews

As noted earlier, the psychologists involved in the experiment, the counselors and I, and others who were consulted, saw the interviews as clearly differentiated. Furthermore, the two counselors were almost always satisfied that they had conducted the kind of interview called for. The persistent misidentification of the interview by disconfirmed subjects, however, raised the question as to whether unsophisticated subjects, as contrasted to knowledgeable psychologists, could differentiate the interviews. If the subjects could not tell the interviews apart, their response would presumably have been determined only by what they had been told to expect. Since, of course, all the independent variables are dependent upon the ability of the subjects to tell the interviews apart, it is essential that there be assurance of this fact. While the data produced by the experimental subjects might have sufficed for this purpose, there was no way of knowing

in advance of the data collection if it would be possible to use the data to discover this. Furthermore, it seemed likely that the evidence would be equivocal and hence would require interpretation. Doubt would thereby remain in regard to this important question. Accordingly, three control methods were employed to provide the needed evidence.

The Non-Set Control. This control consisted of running subjects through the entire experimental procedure of the experiment with the sole exception that they were not told which kind of interview they were to receive. The subjects met the same criteria for inclusion in the study as the experimental subjects. Ten subjects were run in this manner, five receiving a Personal interview and five receiving an Objective interview. The counselors knew the subjects were controls in the case of four of these subjects. Since the observations are independent, the binomial could be used for the test. The null hypothesis was that subjects would be equally likely to be correct as incorrect. Nine of the ten subjects correctly identified the interview. The exact probability that this or a more extreme result could have occured by chance is .011 for a one-tailed test. The evidence from this powerful control group is therefore quite clear: the interviews were differentiable.

The Mail Response Control. The results of the subjects' response to the letter can also be used as a control. If the interviews were differentiable, the response to the letter by those who were confirmed should be correct. Naturally, the probability for those who were disconfirmed cannot be stated. An incorrect identification response from this group could mean either the interviews were not differentiable or that they had convinced themselves

(for one or the other of the reasons discussed earlier) that they had received the kind of interview they were told they would receive.

Two findings result from the response to the letter. First, examining the responses of the 25 confirmed subjects who responded to the letter, it is found that 21 correctly identified the interview they had received. Again the binomial test (one-tailed) was used. The probability, under the same null hypothesis as above, that this result or a more extreme one could occur by chance, is less than .001. Secondly, examining only those 12 subjects who changed their identification response (that is, from the post-interview response) on receipt of the letter, it is found that 9 were actually disconfirmed. Under the hypothesis that they would be equally likely to be confirmed or disconfirmed subjects, the probability that this result or a more extreme one could occur by chance is .073, again for a one-tailed test. Incidentally, all the disconfirmed subjects who changed their identification responses were correct. There is no instance of a disconfirmed subject who was correct on the post-interview identification response changing his response to an incorrect one after receiving the letter. The evidence from this control also is therefore quite clear: the interviews were differentiable.

The Naive Judge Control. A somewhat different procedure was followed for this control test. Whereas the first two controls used data collected from subjects who actually participated in the experiment, the subjects in this control were freshmen, sophomore and junior subjects who did not participate in the experiment proper. Instead, they listened to tape recordings of five of the actual interviews that resulted from the experiment.

Each of these control subjects, to make their participation similar to the experimental group and prevent direct comparison of the interviews, heard only one tape of one kind of interview. The selection of the tapes to be used for this control was made in the following way. The experimental interviews were divided into those run during the first half of the experiment and those run during the second half of the experiment. Each interview run during the first half of the experiment was then assigned a number beginning with the number "10". A table of two digit random numbers was then entered until a number corresponding to a number assigned to one Personal and one Objective interview was reached. The procedure was repeated for interviews run during the second half of the experiment except that a different set of two digit random numbers was used. Since several subjects who were called to request permission to use their tapes for the above purpose refused, a new selection, along the lines described above, had to be made. Finally, when it became apparent that the subjects were finding it more difficult to identify the Objective interview, a third Objective interview was added, its selection being made in a similar manner.

During the session itself, the judges were given some information about the main study (see Appendix 11) and then asked to read carefully the same description forms that had been given to the experimental subjects. The tape was then played, the subjects being requested to listen carefully, since "I (the experimenter) will ask you some questions about the interview later". At the conclusion of the tape, the description forms were returned to the subjects, they reread them, and then indicated to which interview

they had been listening (Appendix 12).

Before describing the results, let us examine several of the characteristics of this control group. First, the subjects were from the same general population as the experimental subjects in terms of their class standing; there was no requirement, however, that they be aware of vocational difficulties. Second, they were not a volunteer group, as were the experimental subjects, but were required to participate as part of their introductory psychology course requirement. Third, the great majority of the subjects had had no previous experience with vocational counseling interviews; in this way they were similar to the subjects in the experimental conditions. Fourth, their interest in the problem varied, as might be expected from the fact that they were involuntary subjects; this differentiates this group from the experimental subjects. (About half of these control subjects indicated high interest in the tape but the other half varied from moderate to low interest, most of this latter group expressing moderate interest.) Finally, it should be noted that the conditions for identification of the interview by the control group and the experimental subjects were similar. That is, they were given the description of the interviews, heard an interview (the experimental subjects actually received it, of course) and then rated the interview following re-reading of the interview descriptions.

In summary, the control group is similar to the experimental group in a number of ways and, superficially at least, they had the same amount of information to use in making their decision. Their involvement and motivation were clearly lower, however, and they were not, nor could they

possibly have been, as completely involved in the experience as were the experimental subjects.

Now let us examine the results. The two Personal interviews to which they listened produced 23 judgments of which 22 were correct, that is, 22 were identified as Personal. The three Objective interviews produced 61 judgments of which 35 were correct. The probability of such a result or a more extreme one under the hypothesis that subjects would be equally likely to identify the interviews as Personal or Objective is .154 for a one-tailed test. This probability does not reach acceptable levels of significance. (The much larger number of subjects used for the Objective interview was due to the desirability of using more subjects when it became apparent that subjects were finding it more difficult to identify this interview and the obvious lack of need for more subjects for Personal interviews.) Under the hypothesis that subjects would be equally likely to be correct as incorrect, the probability of the number of correct judgments observed, for both groups combined, arising from chance is .0008 for a one-tailed test. The data from this control group suggests, therefore, that a minority of the subjects find the interviews difficult to differentiate.

Another interpretation of the finding that the Objective interview is sometimes misidentified may be proposed, however. This alternate interpretation would view the misidentification as being the result of a set possessed by students, at least within an experimental study, to judge vocational interviews as the Personal kind. This set would presumably arise out of a conception of counseling that relates counseling to problems of

personality and interpersonal relationships. In actuality, however, even if such a set existed, an interpretation such as the one made which focuses on the differentiability of the interviews would still hold. That is, the chief effect of the set would be to make it necessary for the interviews to be constructed in a way more clearly differentiable before a correct identification could be made by subjects with a set than those without a set. If this were not done, the subjects with a set would misidentify. The misidentification would exist, however, because, given subjects with this set, the types of interviews were not sufficiently differentiable, regardless of how adequate the interviews' differentiability was for those without such a set. The problem, therefore, still remains the problem of the differentiability of the interviews to the subjects of this experiment.

Discussion of Findings From the Control Groups. The data from the control groups and control measures generally support the assumption that the interviews were differentiable for this group of subjects. In my opinion, more weight should be placed on the first two control indices since they were taken from subjects motivated for counseling and the experiment and who actually were fully involved in the experimental procedures. They stand in contrast to the control subjects whose motivation is questionable and who, in all probability, could not get the full "feel" of the experimental procedures and interviews. Nonetheless, the data do indicate that the two interviews can be confused, perhaps due to the operation of a set. The evidence from the first two controls leads me to expect, however, that this confusion is likely to cause misidentification in only a small minority of cases.

Matching of Subjects.

Since the amount of motivation a subject has for counseling might affect his reaction to the interviews, attempts were made to assign subjects to the eight cells in such a way that motivation for counseling would be approximately equal from cell to cell. The attempt to measure subjects' motivation for counseling was made by asking them how concerned they were about being undecided and how much they wanted help. Naturally, these questions, despite their "face validity", might not have tapped this variable. Furthermore, the recruiting procedures probably insured sufficiently equivalent motivation for the vast majority of subjects. Nonetheless, it was decided to go ahead with the matching on the basis of these questions. In addition, an attempt was made to match the subjects in terms of the difference in preference for the two interviews. It should be noted that it was to achieve this matching in private that subjects were given the sentence completion task. The results, clearly indicating success in matching the subjects, are presented in Table 5.

TABLE 5

MEAN SCORES ON THE CONTROL QUESTIONS BY INDEPENDENT VARIABLE

Preference Variable					
Concern		Help		Diff. in Initial Preference	
Pref.	Non-Pref.	Pref.	Non-Pref.	Pref.	Non-Pref.
5.5	5.7	5.8	5.6	1.8	1.5
Interview Type Variable					
Personal	Objective	Personal	Objective	Personal	Objective
5.6	5.6	5.6	5.8	1.8	1.6
Confirmation Variable					
Conf.	Disconf.	Conf.	Disconf.	Conf.	Disconf.
5.5	5.7	5.6	5.9	1.8	1.5

As can be readily seen, none of the differences of Table 5 is significant.

Counselor Effects.

It will be recalled that two counselors conducted all the interviews. Since each counselor administered half the total interviews as well as half the interviews in each cell and were limited in their actions to the instructions denoting each kind of interview, the amount of potential difference between them must have been reduced. The possibility existed, however, that subjects differentially rated the interviews conducted by each. Accordingly, this possibility was examined.

Since this was the first time that these six scales have been subjected to analysis, I shall digress at this point and discuss two important methodological points. These points will be applicable as well to further analyses involving these scales. One point pertains to the problems that arise from the generally moderate intercorrelations of the scales with one another; the second pertains to certain tests traditionally made before employing t tests or analyses of variance to assess (1) the normality of the population from which the sample is drawn, and (2) the homogeneity of the variance. Each point will be examined in the order presented before proceeding to the analysis of the counselor effects.

The existence of moderate correlations among the six scales prohibits interpreting as independent significant results on the raw scores of the six scales. That is, if, for example, significant differences were found between confirmed and disconfirmed subjects on two scales, those

could not be assumed to be two independent tests of the prediction concerning the effects of confirmation-disconfirmation. The reason is that, due to the moderate intercorrelations, any significance test, after the first one, violates the requirement that the sample be randomly drawn from the relevant population. As McNemar (1955) points out, each set of scores after the first one is constrained by its relationship to the first set. For example, if there is a high scoring subject on one measure, there is likely to be a high scoring subject on the second measure, such an effect varying directly with an increase in the correlation between the measures. An alternative way of looking at this problem is to argue that, therefore, the number of independent tests on these six scales is indeterminate.

To remedy this situation, it was decided to find a way to remove the variance shared by all six scales, leaving only that part of the variance distinctive to each. Significance tests for the independent variables could then be presented in two ways. First, tests of significance would be run using the raw scores of each of the six scales. The obtained significance levels would indicate the level that would exist if each scale were the first selected and would give an idea of the overall trend of the data. Second, significance tests would be computed using each scales' residual scores. The obtained significance levels on a given scale would be applicable to that scale only. The influence of the independent variables on that scale alone would then be revealed.

The problem of how to isolate each scales' distinctive variance was solved by use of multiple regression equations. Using the step-wise

regression program of the 7090 computer, the scores on each scale in turn were predicted by the scores on the other five. Then, for each scale, the predicted scores were subtracted from the obtained scores. When the process was complete, the residual scores resulting were independent of variance associated with the other scales. Six independent scales then existed and significance tests run on the residual scores of each scale can be considered to be independent tests of a given prediction.

Several possibilities exist concerning the relationship between tests of significance based on the two sets of scores. To the extent that each scale reflects a distinctive reaction to the interviews, tests that were significant utilizing the raw scores should remain significant when the corresponding residual scores are used. To the extent, however, that the scales are largely measuring common variance, tests utilizing the residual scores would probably not be significant. It would be possible, though not as likely, however, for significances that had not appeared on the raw score tests to emerge on the now independent scales. This might occur if, for a particular comparison, e.g., Personal interview vs. Objective interview, the higher of the two mean raw scores for each scale comparison was not consistently in favor of one interview or the other. For example, on one scale the Personal interview might be rated higher, while on another scale, the Objective interview might be rated higher. With the elimination of that part of the variance which reflects the common variance, differences previously masked by the common variance, might be shown to be significant.

In the analysis to follow, and in future analyses, the first step

will be to present the tests of significance for the raw scores. Then tests of significance based on the residual scores will follow. Lastly, the results of these two tests will be interpreted.

The second methodological point concerns the assumptions of normality and homogeneity of variance for the t test and analysis of variance. The following considerations led me to (1) utilize t tests and analyses of variance even where there were moderate departures from normality and (2) not use the traditional Bartlett's test for homogeneity of variance (1937). The reasons for both steps lie in the implications of recent findings by Boneau. Boneau found that both tests are quite robust, that is, they can withstand large deviations from both normality and homogeneity of variance without losing their power to discriminate between significant and non-significant findings. Furthermore, in regard to the Bartlett test, findings demonstrate that this test is a remarkably inefficient and often inaccurate way of assessing the homogeneity of variance.

Accordingly, all that was done here and in subsequent tests was to determine the distribution of scores for the quantitative measures and only if the distribution grossly deviated from normality was a non-parametric test used. No test was made for homogeneity of variance but variances, as it turned out, were roughly comparable for all tests made.

With these procedures in mind we turn to the data on counselor effects. Table 6 presents the raw score means on the interviews conducted by each counselor.

TABLE 6

MEAN SCORES FOR EACH COUNSELOR ON DEPENDENT VARIABLE SCALES

	Scales					
	I.	II.	III.	IV.	V.	VI.
1. Counselor	7.91	20.23	25.32	19.82	31.23	29.95
2.	8.28	20.82	25.80	20.38	30.80	29.82

Clearly, none of these mean differences is significant. Similarly, when residual scores are used, significant differences do not emerge. If a further analysis had not been made, it would have been concluded that there was no evidence of a difference between the counselors.

This conclusion is not justified, however, when the scores for each of the three independent variables on the interviews conducted by each counselor are examined. Then we find that while no difference exists between the counselors on the confirmation and interview type variables, there is a marked difference in regard to the ratings their interviews received on the preference variable. Counselor 1's subjects rate the non-preferred interview higher for all six scales, which is contrary to prediction. Counselor 2's subjects rate the non-preferred interview lower for all six scales, hence in accord with prediction. The relevant means are presented in Appendix 13. Inasmuch as the mean difference between the preferred and non-preferred interviews tend to be greater for Counselor 2 than for Counselor 1, the combined scores of both counselors on the preference variable tend to be in the predicted direction.

With the discovery of this counselor difference, clearly the next step was to test its significance. Since it is the interaction of counselor and the variable of preference that is of particular interest, analysis of variance was clearly the method of choice. Tables 7 through 12 present the results of the analyses of variance for each of the six scales. It will be noted that since only the preference variable is the one being examined all 56 subjects could be used, each cell containing 14 subjects. For reasons to be made explicit later, comparisons which involve the confirmation variable employ fewer than the 56 who participated in the experiment.

TABLE 7

ANALYSIS OF VARIANCE (RAW SCORES) FOR COUNSELOR AND PREFERENCE VARIABLES ON SCALE I

Source of Variation	Sum of Squares	df	Mean Square	F
Preference	.004	1	.004	
Counselor	1.968	1	1.968	
Preference x Counselor	13.504	1	13.504	3.050 (.10)
Total Between Treatments	15.478	3		
Total Within Treatments	230.232	52	4.428	
Grand Total Variance	245.710	55		

TABLE 8

ANALYSIS OF VARIANCE (RAW SCORES) FOR COUNSELOR AND PREFERENCE VARIABLES ON SCALE II

Source of Variation	Sum of Squares	df	Mean Square	F
Preference	40.300	1	40.300	3.410 (.10)
Counselor	4.861	1	4.861	
Preference x Counselor	115.720	1	115.720	9.780 (.01)
Total Between Treatments	160.881	3		
Total Within Treatments	615.331	52	11.833	
Grand Total Variance	776.212	55		

TABLE 9

ANALYSIS OF VARIANCE (RAW SCORES) FOR COUNSELOR AND PREFERENCE VARIABLES ON SCALE III

Source of Variation	Sum of Squares	df	Mean Square	F
Preference	34.571	1	34.571	
Counselor	.071	1	.071	
Preference x Counselor	80.161	1	80.161	3.710 (.10)
Total Between Treatments	114.803	3		
Total Within Treatments	1123.679	52	21.609	
Grand Total Variance	1238.482	55		

TABLE 10

ANALYSIS OF VARIANCE (RAW SCORES) FOR COUNSELOR AND PREFERENCE VARIABLES ON SCALE IV

Source of Variation	Sum of Squares	df	Mean Square	F
Preference	17.719	1	17.719	
Counselor	4.290	1	4.290	
Preference x Counselor	76.612	1	76.612	6.100 (.025)
Total Between Treatments	98.621	3		
Total Within Treatments	653.089	52	12.559	
Grand Total Variance	751.710	55		

TABLE 11

ANALYSIS OF VARIANCE (RAW SCORES) FOR COUNSELOR AND PREFERENCE VARIABLES ON SCALE V

Source of Variation	Sum of Squares	df	Mean Square	F
Preference	7.875	1	7.875	
Counselor	2.571	1	2.571	
Preference x Counselor	23.143	1	23.143	
Total Between Treatments	33.589	3		
Total Within Treatments	1176.393	52	22.623	
Grand Total Variance	1209.820	55		

TABLE 12

ANALYSIS OF VARIANCE (RAW SCORES) FOR COUNSELOR AND PREFERENCE VARIABLES ON SCALE VI

Source of Variation	Sum of Squares	df	Mean Square	F
Preference	1.786	1	.786	
Counselor	.018	1	.018	
Preference x Counselor	111.446	1	111.446	5.602 (.025)
Total Between Treatments	113.250	3		
Total Within Treatments	1134.464	52	19.893	
Grand Total Variance	1247.714	55		

The finding for the residual scores is, however, that none of the previously significant results remains so. The obvious interpretation is that the significances obtained on the correlated scales (the raw scores) are actually significances on a general interview attitude which is reflected on all the scales.

To check on this interpretation, the matrix of intercorrelations of the six scales was subjected to an abbreviated centroid factor analysis (Fruchter, 1954) from which only the first factor was extracted. If the six scales loaded heavily on this first factor, the interpretation made above would be justified. From this analysis, the following loadings were obtained: Scale I, .685; Scale II, .830; Scale III, .816; Scale IV, .830; Scale V, .603; Scale VI, .561. It seems clear that the significant interactions are based on a general interview attitude factor. (Use will be made of the finding of this factor in later analyses.)

While it is true, therefore, that the significant interaction of the counselors and the preference variable is based on a general interview attitude factor which is reflected on all the scales, it is equally true that this interaction reflects a real difference between the counselors. But how this difference arose is not readily apparent since neither counselor knew whether the subject was receiving a preferred or a non-preferred interview. In an attempt to discover a reason for the difference between the counselors, the data were carefully examined with particular attention being paid to the possibility that systematic differences on the other two independent variables could account for the interaction. No evidence for this could be found. It would appear that the source of the explanation lies in events that occurred during the interview itself. The most reasonable speculation is that Counselor 1 reacted to the unhappiness or difficulty in behaving in a non-preferred interview manifested by a number of

subjects by initiating a warmer approach (within the limits imposed by the appropriate behaviors for the particular kind of interview he was conducting). This would presumably have resulted in a more positive reaction by the subject to the interview and/or counselor. Unfortunately, adequate data are lacking to support this interpretation. It is, in truth, a logical speculation.

Given this counselor difference, it was decided to analyze the preference variable in two ways: (1) with the scores of the two counselors combined, and (2) with the scores of the one counselor whose interviews were in the predicted direction. The latter analysis is justified since Counselor 1's assumed behavior, if I am correct in my assumption, alters the nature of the experimental variable of preference and since the difference between his preferred and non-preferred interviews is small and not significant.

Tests of Prediction

In Chapter II , 14 predictions were made. The discussion of the results is organized in terms of these predictions. Before commencing this discussion, however, two things should be noted. First, a number of the predictions are predicated on the disconfirmed subjects cognizing the disconfirmation -- in short, experiencing dissonance. As previously discussed, doubt does exist that this cognition did occur for many of the subjects at interview time. If they did fail to recognize the disconfirmation, it would become difficult or impossible to test several of the predictions involving the confirmation variable by means of the letter dichotomization. If so, it was decided that new ways of testing the predictions would be substituted. Any changes will be discussed in the context of the predictions with which they are associated. The above indicates a clear need, therefore, to pay special attention to the reasons for the misidentification.

Secondly, the measure of several of the predictions were based upon the presumed meaning of certain of the dependent variable indices. For example, the "success" index was intended to measure the actual success of the interview. But whether it does measure success is open to question. In a previous section, some confidence was expressed in deriving meaning from a scale but far less confidence for a single index. Hence predictions from single indices will be cautiously interpreted.

Now let us turn to the predictions, taking them in the order they were presented in Chapter II.

Distortion or Selective Perception:

> Prediction 1: While the majority of disconfirmed subjects will not misidentify the interviews, such misidentification as does occur will be more frequent in the disconfirmed than in the confirmed condition.

The data exist in the response to the two questions the subjects were asked at different times. The first, following the interview, was, "Which kind of interview did you receive?" The second, not actually a question, was contained in the letter. The subject was informed "a number of subjects" had been disconfirmed, and was asked to choose between the two alternatives, "I received the kind of interview I was told I would get", or, "I did NOT receive the kind of interview I was told I would get." From previous discussions, it is known that this prediction was substantiated. But now let us examine the exact findings.

Examining first the post-interview data, the finding is that 27 of the 28 subjects who received a confirmed interview correctly identified the interview while only 8 of 27 subjects who received a disconfirmed interview correctly identified the interview. (The N of 27 for the disconfirmed subjects occurred because one subject left before answering the question.) Thus, the identification

responses of 19 disconfirmed subjects were incorrect while the identification response of but one confirmed subject was incorrect. Considering only these twenty subjects, with the hypothesis that they would be equally likely to be confirmed or disconfirmed subjects, the associated probability, using the binomial, for incorrect identification is less than .001. Examining the data received in response to the letter, it is found that 21 of the 25 confirmed subjects who responded to the letter correctly identified the interview while 15 of 24 disconfirmed subjects who responded to the letter correctly identified the interview. Four confirmed subjects thought they were disconfirmed while nine disconfirmed subjects thought they were confirmed. (Table 13 is presented below to provide a rapid and clear picture of the breakdown of the subjects who responded to the letter). The associated probability for incorrect identification (confirmed vs. disconfirmed) is not significant (less than .20). Of course, there is no reason to expect the probability for incorrect identification from the letter response to be significant. More correct responses would be expected as a result of receiving definite information from the experimenter.

TABLE 13

BREAKDOWN OF SUBJECTS WHO RESPONDED TO THE LETTER

Actual Experimental Condition			
Confirmed	N	Disconfirmed	N
Correct Identification Interview Time & Letter	21	Correct Identification Interview Time & Letter	6
Correct Identification Interview time but Incorrect Identification Letter	3	Correct Identification Interview time but Incorrect Identification Letter	0
Incorrect Identification Interview Time but Correct Identification Letter	0	Incorrect Identification Interview Time but Correct Identification Letter	9
Incorrect Identification Interview Time & Letter	1	Incorrect Identification Interview Time & Letter	9
Totals	25		24

Since the subjects had no less than three opportunities to read the interview descriptions (at the first session, at home, and following the interview) and were reminded three times as to what kind of interview they were to receive (twice at the first session and once immediately before the interview), the fact that only 8* of the 27 disconfirmed subjects correctly identified the interview,immediately following the interview, is quite dramatic. It may therefore be concluded that the substance of the prediction was confirmed although considerably more subjects misidentified than were expected to do so.

Since the prediction arose from dissonance theory, it would seem to support the theoretical statements from which it was derived. The argument implicating dissonance as the causal element in the misidentification would be more powerful, however, if other, competing explanations could be eliminated. One such competing argument--that the reason for the misidentification lay in the lack of differentiation of the interviews--can be discounted, at least for the great majority of subjects, by the findings from the control groups.

A second interpretation might begin, as did the previously mentioned argument, with the observation that, at the time of the interview, 47 out of the 55 subjects identified the interviews in line with expectancy. This might be then interpreted as indicating that the subjects in this experiment, with the exception perhaps of the eight disconfirmed subjects who correctly identified the interview, are simply a "passive" or "compliant" group. They would be,

[1] Six of the eight subjects responded to the letter. As Table 13 shows, their letter identification response was correct. The other two subjects did not respond to the letter but are combined with the other six subjects to form the immediate recognition group. This group of eight subjects will figure prominently in subsequent analyses.

therefore, ready to accept an authority's (the experimenter's) statement of what kind of interview they were to receive as indication of what they actually had received. Such a compliant identification response would, of course, be incorrect when, by chance, it did not match the actual interview conducted and correct, on the other hand, when, by chance, it did match. However interesting this compliance might be, the argument might continue, the incorrect identification response would not be due to dissonance avoidance.

It should be carefully noted that the specific argument being made here is that while the subjects believed they were getting the other (non-expected) kind of interview, when it came to the moment of making a definite commitment to one type or the other, they (with a shrug of the shoulders?) reasoned that if the experimenter had said it was to be a _____interview, it must be so.

The argument implicating compliance as the cause of the incorrect identification would clearly lead to the conclusion that the major determinant of the identification response was what the subjects had been told to expect. The kind of interview they had actually received would have had nothing to do with their identification response. Since, however, they would actually have experienced dissonance, one would expect their ratings on the various indices to be lower than those who had actually been confirmed. Furthermore, their ratings should be about the same as those of the eight subjects who had made a correct identification response at interview time. Viewed in this light, the identification response would be little more than an empty verbalism for the overwhelming majority of disconfirmed subjects. It would not at all reflect the subjects' perceived experience in the interview.

This argument is quite similar to the politeness interpretation set forth earlier (see pp. 50-55). Both arguments require that while the subjects indicated

an incorrect identification response, they knew they were getting the non-expected kind of interview. Hence they should have experienced dissonance producing lower ratings on the scales. The only major difference between the arguments is that they attribute the misidentification to different motives. Hence the validity of both arguments may be evaluated by recourse to the same data.

The way decided upon to test both of these alternative explanations was to compare disconfirmed subjects who recognized the disconfirmation at the time of the interview (and hence clearly did not distort) with those disconfirmed subjects who made an incorrect identification response and persisted in this incorrect response even after the definite information contained in the letter. The reason for this particular comparison is that if those who recognized they were disconfirmed produced ratings on the scales which were significantly lower than those who were incorrect, then the evidence would be the latter group truly distorted. For it will be recalled, distortion is functional in avoiding dissonance. Furthermore, distortion should lead to the preservation of comfort and trust which would not be possible if dissonance existed. Therefore a group which distorts should produce higher ratings on the scales. If, on the other hand, they did not distort, but simply gave a more compliant identification response, they should have experienced dissonance. Therefore they should produce ratings on the scales which are not significantly different from the group that clearly did not distort and did, therefore, experience dissonance.

The findings are presented in Table 14.

TABLE 14

MEAN RAW SCORES OF SUBJECTS WHO CORRECTLY RECOGNIZED IMMEDIATELY FOLLOWING THE INTERVIEW THAT THEY WERE DISCONFIRMED AND SUBJECTS WHO NEVER RECOGNIZED THEY WERE DISCONFIRMED

Scale	Group		p for t test (one-tailed)
	Aware (N=8)	Unaware (N=9)	
I	6.94	7.39	N.S.
II	19.31	21.39	.10
III	22.69	27.94	.02
IV	17.12	20.22	.05
V	29.31	33.22	.05
VI	28.12	29.50	N.S.

When the residual scores are analyzed, the groups do not differ significantly, although the difference between the mean scores of the two groups on Scale III just falls short, in the predicted direction, of acceptable levels (.06). It is clear, therefore, that the differences on the raw scores between the two groups, shown in Table 14, are, for the most part, differences on the general attitude factor which was previously identified.

The differences found in Table 14 may be attributed only to the confirmation variable for the two groups contain equivalent numbers of preferred and non-preferred interviews and are equally split among the counselors. While the groups do differ in the numbers of each type of interview, this variable is not significant when the raw scores are used (see Table 24, p.117). Another point is worth noting about this finding. As Edwards (1950) points out, results obtained when the N is small is "a difference which is easily detected and is much more likely [than when significance is achieved using a large N] to be of sufficient magnitude to be of some practical importance." (p. 31) Hence there is justification in considering this an important finding and one attributable to dissonance.

The most important conclusion from these data is that evidence exists that distortion is functional in the way dissonance theory postulates it to be because those subjects who did not distort were more uncomfortable and less favorably inclined toward the interviews and counselors. It also provides evidence for the more general contention that the subjects' identification response really reflected his belief at the time of the interview as to the kind of interview he received and is not an empty verbalism. It thereby provides evidence against both the compliance and politeness interpretations. Further evidence on these points will be considered below.

The fact that the incorrect identification response seems predominantly due to defensive distortion does not mean that a compliance trait could not have been a factor influencing some of the subjects to distort. In fact, the push toward distortion that most people would feel may have been stronger in compliant subjects due to a greater need to perceive the interview as they were told. Compliant subjects may have poor tolerance for the disturbing experience of having their organized world upset by, in this case, the counselor or experimenter. But the incorrect response would still be due to true distortion and not to the processes implied by the compliance and politeness interpretations discussed above.

Confidence in the above conclusions is strengthened by an examination of some qualitative secondary data revealed by the subjects' responses to the three open-ended questions and in the interview which I conducted following the completion of all dependent variable forms. These data also reveal the methods by which some subjects avoided recognizing the disconfirmation which may have been close to being cognized.

These methods, which may be considered to be various forms of

rationalization, were used by slightly more than half of the disconfirmed subjects. One subject said, "I thought it was a Personal but realized it was an Objective because the Objective is too objective and must include the Personal." Several others blamed their initial "misunderstanding" for their awareness of some disparity between what they expected and what they received (for example, "The Objective may have been more personal than I presupposed.") Others, expecting a Personal but receiving an Objective said, "The counselor was not trying to find out in what vocation I belonged but what kind of person I am.", presumably by asking what were clearly questions relevant to an Objective interview. Another few subjects simply identified it in line with what they expected but "with features of the other kind", or, "lots of overlap".

Now, the interesting fact in so far as the discussion of the meaning of misidentification is concerned is that these rationalizations occurred predominantly in the disconfirmed group (although a few doubting subjects in the confirmed group offered similar rationalizations). This suggests an active struggling against awareness of the disconfirmation.

The possibility that my questioning produced, at least in part, this differentiating use of rationalization can be discounted with some confidence. These rationalizations were made: (1) on the three open-ended questions, which were asked and answered before the subject was seen by me; or (2) in immediate response to the first two semistructured questions of their interview with me, before I could intervene. These latter two questions were, "What was your overall impression of the experiment?", and "What do you think was the purpose of the experiment?" These considerations, plus the fact that I took almost verbatim notes in the interviews, at the very least severely limits my potential ability to distort or influence the data.

While the evidence is consistent, strongly supports the dissonance interpretation that has been developed and eliminates the politeness, compliance and lack of differentiation interpretations, it cannot be claimed that all alternative explanations have necessarily been invalidated. Two others are worthy of consideration and will be briefly examined. They are speculative explanations, since, as will be seen, the data to either support or invalidate them are not available or are inconclusive.

The first one stems from a different version of the compliance argument. The reasoning is that the subjects who recognized the disconfirmation produced lower ratings because they are non-compliant subjects who would be alert to experience and would also tend to be more critical of experience in general and this interview in particular. The subjects who failed to recognize the disconfirmation, on the other hand, are compliant subjects who would tend to be non-critical of such experience. The differential scores between the two groups would then be held to arise from the correlates of a personality trait of compliance, not the unpleasant effects of dissonance. Therefore, such differential scores could not be used to infer that the misidentification was true distortion, such distortion serving to avoid dissonance.

It should be noted, however, that this interpretation depends on a number of questionable assumptions. First, it demands that those subjects who recognized the interview was different from what they had been told necessarily be non-compliant subjects and vice versa. Since an independent measure of compliance is not available, there is no way of testing this assumption. Second, the argument demands that non-compliant subjects necessarily rate the interviews lower on the scales due presumably to their greater ability to express critical attitudes. But it is quite possible that non-compliant subjects would

be more realistically satisfied with an interview while compliant subjects would have expected too much and, while remaining overtly compliant, express the dissatisfaction in lower ratings.

Even if these assumptions were met, it remains possible that the compliant subjects were still protecting themselves, by distortion, from dissonance. It is highly relevant to ask what the reaction of compliant subjects would have been had the stimulus conditions, as in the Biddle study, forced them to acknowledge the disconfirmation. It would prove surprising if they were not considerably lowered from the level found under the present conditions. From this, and previous statements that have been made, it may be concluded that I take the position that there is an interaction of the situation and personality which determines who will distort but that the distortion is quite real and is an effort to avoid dissonance. In any event, the existence of a purely personality determination of the ratings is a possibility, though in my opinion, one not as likely as the dissonance interpretations herein developed.

The second argument is that people misperceive an event when they expect something else to occur because they are attuned or set to perceive the expected event and will selectively pick out what they are set for. According to this argument, no avoidance of discomfort would be involved only the inability of people to attend to everything in the environment at once. While this may often be true, Berlyne cites considerable evidence showing that disconfirmations of expectancy do cause discomfort and anxiety. In addition, the subjects in this experiment who recognized the disconfirmation were less comfortable and happy with their interviews than were those who avoided this recognition. The question is actually one of interpretation. Is non-recognition of a disconfirmation due to the person's desire to avoid the dissonance that often follows such

disconfirmations or is it due to selective tuning which may, if the real event forces recognition, then incidentally or secondarily cause dissonance? The question cannot be settled by this research and further studies are necessary for the answer.

Prediction 2: Such misidentification as occurs will not be attributable to the desire to receive a preferred interview. To state this another way, misidentification will be equally present in the non-preferred and preferred conditions.

The data are found in response to the same two questions used to test Prediction 1. To the post-interview measure, there were 20 incorrect answers. The incorrect answers were evenly split between preferred and non-preferred interviews. That is, ten subjects who received a preferred interview incorrectly identified the interview while ten subjects who received a non-preferred interview incorrectly identified the interview. To the letter information, seven subjects who received a preferred interview and six subjects who received a non-preferred interview misidentified it. It may be concluded, therefore, that preference for one interview or another did not play a part in the subjects' misidentifications. Taken in conjunction with the findings on the previous prediction, the conclusion is that for the conditions of this experiment, the confirmation variable is the only one of the two studied which determines whether a subject will misidentify the interview. To state this in another way, only dissonance avoidance and not "wishful thinking", the desire to get what one prefers, played a part in the causation of distortion.

Rating of the Interview.

Prediction 3: For both evaluation of the counselor and client feelings, subjects in the confirmation condition will rate the interviews higher than subjects in the disconfirmation condition.

Before presenting the data for Prediction 3, it is necessary to review the problem concerning the appropriate method of dichotomizing the subjects into confirmed and disconfirmed groups. It will be recalled (see pp. 49-55) that with the finding that most subjects were making an incorrect identification response, and with the possibility that this was the result of constraints due to politeness, a letter was sent to all the subjects informing them of the deception. According to the reasoning previously explicated, it was hoped that this would permit the subjects to be dichotomized more realistically into those subjects who recognized they had been disconfirmed and those who did not, thereby satisfying the theoretical conditions for the creation of dissonance. It was pointed out, however, that if the reason for misidentification did not involve the variable of politeness, but instead represented what the subjects really believed at interview time, a dichoto mization based on the subjects' letter response would not be adequate. We have already seen evidence that the subjects' identification response at interview time did probably represent their real belief as to the kind of interview they had received. It would seem, therefore, that a dichotomization based on the letter response will not achieve its intended purpose.

Since, however, it had been decided at the time of sending the letter to dichotomize the subjects into confirmed and disconfirmed groups on the basis of the letter, one analysis of the data was made in these terms. After presenting the data, we will take a further look at the adequacy of the dichotomization which was used.

Before presenting the data, it should be noted that since the letter became the basis for dichotomization, only those subjects who responded to the letter could be used. This reduced the N to 49. To fill in a cell with an N

of 2, and help maintain the factorial nature of the design, one disconfirmed subject from that cell who did not respond to the letter but had correctly identified the interview at interview time was added. Table 15 presents the resulting cell frequencies.

TABLE 15

CELL FREQUENCIES RESULTING FROM REDICHOTOMIZING SUBJECTS ON CONFIRMATION VARIABLE & USING ONLY THOSE WHO RESPONDED TO THE LETTER

Confirmation	Interview Type	Preference	Non-Preference
Confirmed	Personal	6	8
	Objective	9	7
Disconfirmed	Personal	7	3
	Objective	3	7

As can be seen, the redichotomization of the disconfirmed subjects in terms of the letter response, the maintaining of the original dichotomization on the preference and interview type variables, and the elimination of six subjects from the analysis produced a rearrangement of subjects, widely differing cell Ns resulting. It was this uneven rearrangement that caused the abandonment of the analysis of variance technique and the substitution of the t test for both the main and interaction effects. In the analyses that follow, the t tests for the main effects will be presented in tabular form. The results of the t tests for interactions will be described in the text.

Even though the cell Ns changed markedly through the reassignment of subjects, the factorial nature of the design was preserved. Accordingly, an estimate of the population variance based on within cells variability was used for all main effect tests of Predictions 3 and 4 and the interview type variable.

Table 16 presents the tests of the raw scores for each of the scales.

TABLE 16

MEAN RAW SCORES FOR CONFIRMED AND DISCONFIRMED GROUPS (BASED ON LETTER DICHOTOMIZATION)

Scale	Confirmed (N=30)	Disconfirmed (N=20)	p for t test (one-tailed)
I	7.85	8.22	N.S.
II	20.80	20.40	N.S.
III	26.27	24.78	N.S.
IV	20.28	19.30	N.S.
V	31.67	30.05	N.S.
VI	29.35	30.28	N.S.

It can be seen that, despite the fact that 18 of the 27 individual indices are in the predicted direction (see Appendix 14 for the index means), none of the main effects for the raw scores are significant. Furthermore, none of the interactions are significant.

Table 17 presents the tests of the residual scores for each of the scales. A constant of 10 was added to the difference scores, for all analyses using residual scores, to eliminate negative values.

TABLE 17

MEAN RESIDUAL SCORES FOR CONFIRMED AND DISCONFIRMED GROUPS (BASED ON THE LETTER DICHOTOMIZATION)

Scale	Confirmed (N=30)	Disconfirmed (N=20)	p for t test (one-tailed)
I	9.75	10.22	N.S.
II	10.08	10.47	N.S.
III	10.26	9.68	N.S.
IV	10.10	9.41	N.S.
V	10.34	9.53	N.S.
VI	9.64	10.38	N.S.

Once again, although it is to be expected, none of the main effects involving the confirmation variable are significant. Furthermore, only one interaction - on Scale I - achieves significance. Subjects receiving a Personal interview which was expected rated the counselors as having higher regard for them (M = 10.37) than subjects receiving an Objective interview which was expected (M = 9.20), the resulting t ratio being 2.32 (.05). However, the mean differences are in the same direction for the disconfirmed interviews as well (that is, subjects receiving a Personal interview that was not expected rated the counselor as having higher regard for them than did those subjects receiving an Objective interview that was not expected). As will be seen, however, the main effect on this scale for interview type is significant in the direction of higher ratings for the Personal interview. Therefore, it may be concluded that this interaction results from the feeling of subjects, regardless of the other experimental conditions, that counselors administering a Personal interview had higher regard for them. Accordingly, no special interpretation of this interaction seems warranted.

These results clearly show that, for this dichotomization of subjects into confirmed and disconfirmed groups, despite a mild trend in the predicted direction, subjects identified as disconfirmed, did not react significantly less favorably to the interviews than did subjects identified as confirmed. But it will be recalled that the adequacy of this particular dichotomization has already been called into question by evidence suggesting the subjects' identification response at interview time represented his true belief as to what had happened to him. Hence those disconfirmed subjects who only later made a correct identification response, and were accordingly put into the disconfirmed group for purposes of the present analysis, might well have been reacting as confirmed

subjects at the time they made their ratings. If so, they do not belong in the disconfirmed group and it is not surprising that significant differences between the groups do not appear.

The obvious method of finding out whether these subjects felt confirmed or disconfirmed at interview time is to compare their scores on the scales first with the scores of subjects who recognized the disconfirmation at interview time and then with the scores of those subjects who never recognized the disconfirmation. Tables 18 and 19 present the relevant comparisons.

TABLE 18

MEAN RAW SCORES OF SUBJECTS WHO CORRECTLY RECOGNIZED IMMEDIATELY FOLLOWING THE INTERVIEW THAT THEY HAD BEEN DISCONFIRMED AND THOSE WHO DID NOT RECOGNIZE THIS UNTIL RECEIPT OF THE LETTER

Scale	Interview (N=8)	Letter (N=9)	t test (two-tailed) [1]
I	6.94	10.22	.02
II	19.31	21.89	N.S.
III	22.69	27.06	N.S.
IV	17.12	21.67	.05
V	29.31	30.72	N.S.
VI	28.12	32.11	N.S.

1 The test is two-tailed since the prediction was not made in the original formulation of the experimental design nor was any such comparison, or any analogous one, contemplated.

Examination of the residual scores indicates that the differences obtained in Table 18 mainly reflect differences between the groups on the general attitude factor. The difference on Scale I, however, remains significant, the Interview group mean equalling 9.73, the Letter group mean equalling 11.44 and t equalling 2.33 (.05). Hence this scale reflects a reaction to the interview distinctive to its content and independent of the general attitude factor and the other scales.

TABLE 19

MEAN RAW SCORES OF SUBJECTS WHO CORRECTLY RECOGNIZED THEY HAD BEEN DISCONFIRMED ONLY AFTER RECEIPT OF THE LETTER AND THOSE WHO NEVER REALIZED THEY HAD BEEN DISCONFIRMED

Scale	Recognized (N=9)	Did Not Recognize (N=9)	t test (two-tailed)
I	10.22	7.39	.05
II	21.89	21.39	N.S.
III	27.06	27.94	N.S.
IV	21.67	20.22	N.S.
V	30.72	33.22	N.S.
VI	32.11	29.50	N.S.

The residual scores analysis demonstrates that the significant comparison for Scale I, shown in Table 19, remains so, the Recognized group mean equalling 11.44, the Did Not Recognize group mean equalling 9.03, and t equalling 2.51 (.02). It seems evident from the examination of Table 19 and this last finding that the two groups do not differ on the general attitude factor and that the difference on Scale I is due largely to its distinctive content.

As can be seen from Tables 18 and 19, those who did not recognize they were disconfirmed until confronted with the additional information contained in the letter reacted to the interviews in a manner almost identical to the subjects who never recognized the disconfirmation.

A number of important conclusions arise from consideration of the two tables here and Table 14. First, there are the two related conclusions that the subjects' identification responses at the end of the interview represents what they really believed happened to them and that the use of the post-interview identification response as a measure of the interview distortion is justified. Second, the above data clearly dispose of the interpretation that subjects merely avoided admitting

the disconfirmation for reasons of politeness or compliance. The evidence suggests that they did not "know" they were being disconfirmed, because they distorted what was happening. Finally, it is clear that the only subjects who experienced an appreciable amount of dissonance were the eight who made an immediate correct identification and their ratings, it should be noted, are lower than those of confirmed subjects (see Table 20, p. 113). In fact, the reason that 18 of the 27 individual indices are in the predicted direction is mostly due to those eight fully aware subjects.

While these interpretations are quite consistent with the data, the question remains as to how those nine subjects who recognized they were disconfirmed only after receipt of the letter were able to achieve this after having distorted in the interview. I suggest that these subjects must have had doubts at the time of the interview as to the kind of interview they were receiving. They were successful, however, in putting them aside or in one way or another rationalizing them (in ways previously described) so that awareness of being disconfirmed was eliminated. With disconfirmation successfully dealt with, other influences determined their ratings. Then, upon receipt of the letter, the doubts were re-aroused in some of these subjects and they could correctly make their judgments. But at the time they made their post-interview identifications, these doubts had been suppressed. They therefore produced ratings comparable to the group that never recognized the disconfirmation.

The reasoning above is consistent with a statement by Festinger on the possible nature of the relationship between distortion and dissonance. He states, "One might also expect, however, that at the moment of impact of the new dissonant cognition, effective processes could be initiated which would prevent the dissonant elements from ever being firmly established cognitively. One

might expect to observe such things as attempts to escape or avoid further exposure, erroneous interpretation or perception of the material, or any other technique or maneveur which will help to abolish the newly introduced dissonance and to prevent the further introduction of dissonance" (p. 134) (emphasis supplied).

It should be made explicit, however, that at the time of the decision to send the letter, I expected that subjects who had made incorrect identification responses at the time of the interview but who made a correct identification response to the letter would experience sufficient dissonance to produce at least somewhat lower ratings on the indices than those who had never recognized the disconfirmation. I expected, in fact, that such subjects' scores would fall between those who recognized the disconfirmation at interview time and those who never recognized it. A careful rereading of the theory led me to reject this original expectation. Festinger's statement seems to suggest that the presence of dissonant elements might induce a person to take action to eliminate them. Hence, such initially dissonant elements would no longer produce dissonance. nor produce, in the present study, lower ratings.

Nonetheless, this statement is admittedly rather ambiguous. Such terms as "firmly established cognitively" and "prevent the further introduction of dissonance" and others need clarification. Perhaps under some circumstances, the expectation I originally held may be the correct one. Clearly, further data must be collected to sharpen our understanding of the process of distortion and its relation to dissonance.

Taking into account, then, the data presented in the previous pages, it is my best judgment that the nine subjects who made correct identifications only after receipt of the letter were not experiencing dissonance at the time of the

interview. Hence, they do not belong with the disconfirmed group for the purpose of determining the effects of dissonance on the interview ratings. Therefore, testing prediction 3, utilizing this method of dichotomization, is unsatisfactory. To test the prediction, the disconfirmed group must be aware of the disconfirmation and this did not occur here for the majority of the disconfirmed subjects.

An alternate way, however, remains of testing the prediction. The eight subjects who unquestionably recognized the disconfirmation can be compared to the 27 subjects who were truly confirmed and so indicated at the time of the interview. The test of the prediction by using these two groups of subjects conforms to the intent of the prediction and is a legitimate way of testing it. In fact, the comparison between disconfirmed and confirmed subjects, as defined in the above manner, was meant to be the method of testing the prediction when the design was first formulated. Of course, it was expected at that time that more than eight disconfirmed subjects would be suitable for inclusion in the test. The reasons for the change to the letter dichotomization and for considering this dichotomization to have failed in its purpose have been described in detail. (See pp. 49-55 and pp.109-111) The results are presented in Table 20.

TABLE 20

MEAN RAW SCORES OF SUBJECTS WHO CORRECTLY RECOGNIZED AT INTERVIEW TIME THEY WERE DISCONFIRMED AND SUBJECTS WHO CORRECTLY RECOGNIZED THEY WERE CONFIRMED

Scale	Disconfirmed (N=8)	Confirmed (N=27)	p for t test (one-tailed)
I	6.94	8.02	.10
II	19.31	20.28	N.S.
III	22.69	25.65	.05
IV	17.12	20.43	.01
V	29.31	30.93	N.S.
VI	28.12	29.67	N.S.

When the residual scores are analyzed one significant difference emerges. On Scale IV, the mean for the Disconfirmed group is 8.67 while the mean for the confirmed group is 10.57. The p for a one-tailed t test is .05. By and large, however, the difference between the two groups is on the general attitude factor. The data contained in Table 20, though not powerful, tend to support Prediction 3.

Prediction 4: For both evaluation of the counselor and client feelings, subjects who receive a preferred interview will rate the interview higher than subjects who receive a non-preferred interview.

The test of this prediction, unlike the confirmation variable, was based on the original dichotomization and not the dichotomization based on the letter response. I reasoned, by way of explanation of this procedure, that a subject receiving a preferred interview, regardless of which interview type he thinks he is receiving, is nonetheless getting an experience that jibes with what he wants. This assumes, as must be done (or else the preference variable cannot be measured), that a subject's expressed preference accurately reflects what he wants. It should be noted that analagous reasoning applies to the interview type variable. A subject is still experiencing one or the other kinds of interview regardless of which interview he thinks he is getting.

The results are shown in Table 21.

TABLE 21

MEAN RAW SCORES OF PREFERRED AND NON-PREFERRED INTERVIEWS

Scale	Preferred (N=25)	Non-Preferred (N=25)	p for t test (one-tailed)
I	7.98	8.02	N.S.
II	21.60	19.68	.05
III	26.52	24.82	N.S.
IV	20.46	19.32	N.S.
V	31.60	30.44	N.S.
VI	29.82	29.62	N.S.

The results of the tests of the residual scores are presented in Table 22.

TABLE 22

MEAN RESIDUAL SCORES OF PREFERRED AND NON-PREFERRED INTERVIEWS

Scale	Preferred (N=25)	Non-Preferred (N=25)	p for t test (one-tailed)
I	9.74	10.14	N.S.
II	10.79	9.69	.10
III	10.26	9.79	N.S.
IV	9.77	9.88	N.S.
V	9.91	10.13	N.S.
VI	9.61	10.27	N.S.

The results show that there is an observable trend for subjects to rate a preferred interview higher than a non-preferred interview and that this result is mainly attributable to the general attitude factor. However, despite the fact that 21 of the 27 individually rated indices are in the predicted direction (see Appendix 15 for the means), the difference between the groups is significant on only one scale. Furthermore, none of the interactions (using raw or residual scores) involving the preference variable are significant. Thus there is only tentative support for the prediction in these data.

As noted previously, however, the two counselors differed in the scores their subjects produced. Since Counselor 1's subjects did not produce significant differences between preferred and non-preferred interviews and since it was possible to figure out a plausible explanation, related to aspects of his behavior which, if true, would have altered the nature of the experimental variable, I made a second analysis utilizing only the interviews of Counselor 2 whose interviews probably provide a better test of the prediction. Table 23 presents the findings.

TABLE 23

MEAN RAW SCORES OF PREFERRED AND NON-PREFERRED INTERVIEWS CONDUCTED BY COUNSELOR 2 ONLY

Scale	Preferred (N=14)	Non-Preferred (N=14)	p for t test (one-tailed)
I	8.79	7.79	.10
II	23.11	18.54	.001
III	27.79	23.82	.01
IV	22.11	18.64	.01
V	31.82	29.78	N.S.
VI	30.97	28.68	.10

Only one scale -- Scale II, the counselor's ability and desire to understand their difficulties -- shows a significant difference between the groups following the regression analysis. In that case the t ratio of 2.04 (with a mean of 11.08 for the Preferred group and a mean of 9.16 for the Non-Preferred group) is significant at only .05. It is clear that the differences between Counselor 2's preferred and non-preferred interviews reflect, for the most part, the general attitude factor.

These last reported results, in my opinion, strengthen the tentative support given the prediction by the earlier analysis. However, the prediction that subjects will rate a preferred interview higher, than a non-preferred interview may be considered supported only if Counselor 2's interviews are used.

Interview Type. Since findings from the "rating of the interview" measures are being discussed, results for the interview type variable, for which predictions were not made, should be examined. Tables 24 and 25 present the data.

TABLE 24

MEAN RAW SCORES FOR PERSONAL AND OBJECTIVE INTERVIEWS

Scale	Personal (N=24)	Objective (N=26)	p for t test (two=tailed)
I	8.58	7.46	.10
II	21.19	20.13	N.S.
III	25.38	25.94	N.S.
IV	20.65	19.19	N.S.
V	30.60	31.40	N.S.
VI	29.06	30.33	N.S.

TABLE 25

MEAN RESIDUAL SCORES FOR PERSONAL AND OBJECTIVE INTERVIEWS

Scale	Personal (N=24)	Objective (N=26)	p for t test (two-tailed)
I	10.53	9.38	.01
II	10.47	10.02	N.S.
III	9.13	10.68	.10
IV	10.45	9.24	.10
V	9.47	10.52	N.S.
VI	8.54	11.23	.02

It is evident that neither of the two interview types is consistently favored by its subjects. This is a mild surprise since it was expected, in part from Biddle's study, though not with sufficient confidence to predict it, that the Personal interview would be generally preferred. Instead, each type seems to the subjects to have greater worth than the other in different areas of the interview experience. While more will be said on this in the discussion section, it should be noted that the differential patterning of interview type preferences, presented above, makes good intuitive sense.

Relationship of Dissonance and Discomfort

Prediction 5: Disconfirmed subjects will feel more uncomfortable than confirmed subjects.

Index 2 of the original ungrouped indices was the test of this prediction. Since there is doubt, however, about whether the manifest content of a single index can be taken to be its true meaning to the subjects, a question exists as to whether the statement does reflect the degree of comfort that was felt by the subjects. For what it is worth, however, the test was made in two different ways. The first way was to compare subjects who believed themselves confirmed with those who believed themselves disconfirmed as revealed by the response to the letter. Even though the evidence indicates this does not adequately differentiate those who did and those who did not experience dissonance, it will be tested in this way for the sake of completeness and consistency. Since the distribution of scores on Index 2 is markedly skewed, the Mann-Whitney U test was employed for the comparison. The results for a computed U of 364.5 are significant in the predicted direction at less than the .05 level for a one-tailed test. In large measure, the significance is due to the eight subjects who undoubtedly experienced dissonance. The second, and better, way of testing the prediction was to compare those subjects who correctly recognized, at interview time, that they had been disconfirmed (N=8) and those who correctly realized they were confirmed (N=27). With a computed U of 62, the results are significant at less than .05 for a one-tailed test. Thus if it can be assumed that the question really does measure the subjects' comfort during the interview, the prediction is supported. It should be noted that the support of this prediction adds further weight to the argument that misidentification was for the purpose of avoiding dissonance. (See Prediction 1).

Information Requested About the Counselor:

Prediction 6: Subjects experiencing a disconfirmation interview will: (1) indicate a change in interest in the direction of more interest on more items than will those who receive a confirmation interview: and (2) indicate a selective change for those items that are especially suited for dissonance reduction, again in contrast to those who receive a confirmed interview. Confirmed subjects should either decrease their interest in the items or maintain their former interest level.

Two types of items were differentiated for purposes of this prediction: the "critical" items, i.e., items which I judged to be especially suited for dissonance reduction: and the "general" items, i.e., those items which can be used to reduce dissonance but, presumably, are not as suited for dissonance reduction as those in the critical group. Part 1 of the prediction applies to the two groups combined, part 2 to the critical group only. The remaining seven items of interest were intended as filler items to prevent subjects from realizing the purpose of the critical and general items. They were also meant to determine, in the event that the data supported the prediction, whether the results were caused by an indiscriminate increase in interest or a selective one. See Appendix 5 for the complete wording of the items of information set forth in abbreviated form below.

This prediction, of course, is predicated on the theoretical statement that one way to reduce existing dissonance is to seek out information which will reduce it. Clearly, for the prediction to be tested, it is necessary for the subjects to have experienced dissonance. A test of the prediction therefore requires that subjects be accurately differentiated into groups who did and did not experience dissonance.

The test of this prediction was made using two different groups. The first test used the original way of dichotomizing the subjects, that based on the

letter response. The results are presented in Table 26.

TABLE 26

MEAN CHANGE SCORES ON ITEMS OF INFORMATION FOR THE CONFIRMED AND DISCONFIRMED GROUPS (BASED ON THE LETTER DICHOTOMIZATION)

Item	Critical Conf. (N=29)	Critical Disconf. (N=20)	Item	General Conf. (N=29)	General Disconf. (N=20)
9. Knows what to do in this experiment	+.13	-.08	3. Strong points	-.17	+.08
16. Situation in which he understands clients' problems	-.17[1]	-.30	5. Areas of competence	-.38	-.30
17. Ability to listen to client	-.53[1]	-.25	7. Clients towards whom he feels warmth	+.05	+.12
21. Situations in which he fails to understand	-.22[1]	-.52	8. Respect for clients	-.42	-.22
22. Length of time with project	+.14[1]	+.22	11. Problems where he has been of help	-.17	-.08
			12. Weak points	+.10	-.38
			14. Gaps in his knowledge	-.25	-.40
			18. Clients toward whom does not feel warmth	-.45[1]	-.25
			19. Situations where he has not been of help	-.26[1]	-.18

[1] N=28. The minor fluctuation in condition Ns are due to subjects' omissions in rating the scales.

Clearly, none of these results is significant. This is, however, not unexpected since the evidence has pretty well established that a dichotomization based on the response to the letter does not separate those who experienced dissonance from those who did not.

A second test is a more satisfactory test of the prediction. A comparison was made between those eight subjects who clearly experienced dissonance (i.e., those who recognized, at interview time, that they were disconfirmed) and the 27 truly confirmed subjects who recognized this at interview time. The results are presented in Table 27.

TABLE 27

MEAN CHANGE SCORES ON ITEMS OF INFORMATION FOR SUBJECTS WHO CORRECTLY RECOGNIZED AT INTERVIEW TIME THEY HAD BEEN DISCONFIRMED AND SUBJECTS WHO CORRECTLY RECOGNIZED THEY HAD BEEN CONFIRMED

Item	Critical			Item	General		
	Conf. (N=26)	Disconf. (N=8)	p for t test[1] (one-tailed)		Conf(N=26)	Disconf. (N=8)	p for t test (one-tailed)
9.	+.22[3]	-.50	.10[2]	3.	-.38	+.62	.05
16.	-.17[3]	-.06	N.S.	5.	-.36	-.69	N.S.
17.	-.75[3]	-.06	.10	7.	-.18	+.25	N.S.
21.	-.19[3]	-.19	N.S.	8.	-.08	-.38	N.S.
22.	+.19[3]	+.31	N.S.	11.	-.54	+.69	.02
				12.	-.14	+.31	N.S.
				14.	-.42[3]	-.38	N.S.
				18.	-.46[3]	+.56	.05
				19.	-.02[3]	+.12	N.S.

[1] Since the items are correlated with each other the tests of significance reported here may not be considered independent tests.

[2] A two-tailed test was used since the directional prediction was not supporting.

[3] N 25..

An examination of Table 27 reveals that there is no support whatsoever for the second part of the prediction and at best only a slight trend in the direction of the prediction for the first part (7 of the 14 items show an increase for the disconfirmed group while 10 of 12 show a decrease for the confirmed group).

Perhaps if all the disconfirmed subjects had recognized the disconfirmation so that all of them could have been used for the test, this slight trend in support of part 1 of the prediction might have developed into a clear-cut finding. There is, however, no indication in these data that this might be true for the critical items. Thus, while the prediction is still worth testing where a larger N can be

obtained, the conclusion for the current test is that the prediction is not supported.

Despite this failure, it occurred to me that it would be possible to test a related prediction about this variable. Naturally, this is a post hoc prediction and significant findings would require cross-validation before they could be considered trustworthy. This related prediction utilizes the interest subjects had in securing information about their counselors before the interview. It was reasoned that having volunteered for an experiment and committed themselves to what it entailed, it would be consonant for subjects to request information about positive aspects of the counselor's personality or skills but dissonant to request information about negative aspects. Such information as contained in the negative aspects would be consonant with not entering the situation in the first place. Since, however, individuals have a "need to know" even negative things about future experience and will strive to obtain such information (see Berlyne, pages 206-207 and Mills, Aronson & Robinson, 1958) some interest will exist for negative aspects. The dissonance that would result from seeking negative information, however, should produce differences between information sought about a counselor's positive, as contrasted to his negative features.

Somewhat fortuitously, there were five sets of contrasting items of information which were included in the information form that could be used for such a test. They were:

1. "Strong points as a counselor" vs. "Weak points as a counselor".
2. "Type of client toward whom he feels warmth" vs. "Type of client towards whom he does not feel warmth".
3. "Types of counseling problems where he has been of help" vs. "Types of problems where he has not been of help".

4. "Types of situations in which he shows a capacity for understanding a client's problems" vs. "Types of situations in which he fails to show understanding of a client's problems."

5. "Areas of competence--how well he knows the job fields, tests, etc." vs."Gaps in his knowledge of the fields, tests, etc."

The results are presented in Table 28. The test employed in four of the comparisons was the t test for correlated means since the same subjects rated both items of information for the five pairs, thereby producing matched scores. For the fifth comparison--"areas of competence" vs. "gaps in his knowledge", it was necessary to use the Wilcoxon matched-pairs, signed-ranked test since the distribution for "areas of competence" grossly deviated from the normal distribution.

TABLE 28

MEAN DIFFERENCES IN RATINGS FOR FOUR MATCHED PAIRS OF ITEMS OF INFORMATION, AND T FOR ONE MATCHED PAIR OF ITEMS OF INFORMATION

	Mean Differences (N=55)	r	p for t test (one-tailed)
1. Strong points vs. Weak points	+.447	.582	.01
2. Type of client toward whom he feels warmth vs. Type he does not feel warmth	-.491	.577	.01[1]
3. Types of problems where he has been of help vs. Types where he has not been of help	+.654	.508	.001
4. Capacity to understand client's problems vs. Failure to so understand	+.473	.551	.01
5. Areas of competence vs. Gaps in knowledge.	102.5[2]	.516	.0001[2]

[1] A tw -tailed test was used since the directional prediction was not supported.

[2] T is in the predicted direction; the significance test is based on the normal curve.

Before discussing the results, we must ask the question as to whether these comparisons are independent of each other. Accordingly, Table 29 which contains the correlations of the difference scores, the scores used here, is presented.

TABLE 29

INTERCORRELATIONS OF DIFFERENCE SCORES OF MATCHED PAIRS OF ITEMS OF INFORMATION

Pair	1	2	3	4	5
1	---				
2	-166	---			
3	123	119	---		
4	256	005	278[1]	---	
5	329[1]	162	178	122	---

[1] significant at .05.

As can be seen from Table 29, there is a general positive relationship between the difference scores. The extent of these relationships, however, with but two exceptions, is, in Guilford's terminology, "almost negligible". Therefore, it would appear that the difference scores are relatively independent of each other. Further evidence for this conclusion is found in the fact that the coefficients of determination involved in predicting one difference score from the other four are quite small (for pair 1, .209; for pair 2, .096; for pair 3, .106; for pair 4, .131; and for pair 5, .168). There seems little doubt, therefore, given the high significance levels found in Table 28, that the differences would remain at acceptable significance levels even if the small amount of correlated variance present was removed.

Turning now to the substantive results, it will be seen that four of the five comparisons are in the correct direction but there is one significant reversal for the pair pertaining to the counselor's "warmth". The reason for this is not readily apparent but must relate to the particular meaning of "warmth" for the subjects in this setting. Perhaps before subjects had had experience with counseling, "warmth" was felt to interfere with the counseling process. Whatever the explanation, an interesting change occurs on this pair of items when the items

are rerated following the interview: the mean difference drops to -.109 which is not significant. It is as if the subjects were beginning to realize that warmth is highly relevant in counseling. At the same time, the mean differences between the other pairs remain almost precisely the same -- the mean differences on the post-interview form being: pair 1, .446; pair 3, .709; pair 4, .500; and T for pair 5, 101.5. What this clearly suggests is that the one reversal does not contradict the support for the prediction provided by the other four pairs. That is, not realizing that the warmth of the counselor was an important part of the counseling relationship and not an impediment to it, the subjects' first rating does reflect avoiding dissonant information (in this one case a positive feature of the counselor). As the subsequent data shows, I simply had the "warmth" items reversed in regard to which would produce dissonance and which consonance. If the data following the interview were not available, I could not make this last statement without being open to the charge of revising the initial expectation to fit the obtained data. But with the further information, it is clear that the directionality of the dissonance-consonance relationship was reversed when taken from the subjects' point of view. The conclusion is that the prediction that subjects will be less likely to be interested in information that would increase dissonance is supported.

Prediction 7: Change in information seeking will not be related to the variable of preference.

TABLE 30

MEAN CHANGE SCORES ON ITEMS OF INFORMATION FOR THE PREFERRED AND NON-PREFERRED INTERVIEWS (USING THOSE WHO RESPONDED TO THE LETTER)

Item	Critical		Item	General	
	Preferred (N=24)	Non-Preferred (N 24)		Preferred (N -24)	Non-Preferred (N-25)
9.	-.10	+.16[1]	3.	-.23	+.08
16.	-.08	-.19	5.	-.40	-.32
17.	-.48	-.35	7.	+.21	.00
21.	-.40	-.31	8.	-.17	-.44
22.	+.27	+.08	12.	+.23	-.40
			14.	-.27	-.38
			18.	-.67	-.08[2]
			19.	-.58	+.12[2]

[1] N=25.
[2] N=24.

None of these differences are significant although the difference reaches borderline significance (.10) for Items 12 and 18. Clearly the preference variable plays no role, in this situation, in the subjects' desire for information about the counselor. This finding may add a bit of weight to the possibility of a trend found for the confirmation (dissonance) variable, because the trend, if it is one, seems to operate only for the confirmation variable.

Change in Preference

Prediction 8: Subjects who conform to the required behaviors of a non-preferred interview will increase their liking for such an interview more than will those who receive an interview which is their preference.

Preference 9: The more subjects commit themselves to behaving as required in a non-preferred interview, the more dissonance they should have, other things being equal, and hence the more attitude change toward increased liking.

Prediction 10: The more the non-preferred interview which is conducted is initially disliked, the greater the subsequent attitude change toward increased liking.

Prediction 11: The more the counselor must persuade the subject to participate in a non-preferred interview, the less dissonance and hence the less attitude change toward that kind of interview.

This set of four related predictions pertains to the theoretical prediction that a person who behaves, with at least some volition, in an activity which he does not like, can reduce the dissonance by increasing his liking for the activity. As it turned out, however, it was not possible to test Predictions 9 and 11 since all subjects receiving a non-preferred interview committed themselves to the interview and there was not a single instance of a counselor having to persuade a subject to participate in a non-preferred interview. This was something of a surprise, some opposition obviously having been anticipated.

This leaves Predictions 8 and 10 to be examined. Before commencing, it will be recalled that a non-preferred interview is non-preferred relative to the other interview. It is possible, therefore, for an interview to be non-preferred and yet not be disliked at all, or in fact, somewhat liked. Naturally, it could not be foreseen before the data collection by how much the non-preferred interview would be less liked.

Therefore, to find out the empirical state of affairs, the data were examined. It was discovered that non-preferred interviews were indeed liked by many subjects. If a rating below 5 is considered to indicate dislike for, or indifference to, an interview type, only 27 subjects so reacted to the non-preferred interview. The remaining 29 liked the non-preferred interview, though of course not as much as the preferred interview. Since, of the 27 subjects who disliked or were indifferent to the non-preferred interview, only 12 actually received one, a critical test of the hypothesis is not likely.

With this caution in mind, let us examine the data. We turn first to

Prediction 8. Immediately a problem arises. As has been established, most of the disconfirmed subjects did not recognize that they were being disconfirmed and hence their ratings of the interviews are necessarily influenced by their misidentification. What this means is best explained by an example. Let us discuss a subject who preferred an Objective, was told he would get a Personal, received an Objective but believed, with expectancy, that he received a Personal. In other words, he was disconfirmed but did not recognize it. Now addressing ourselves only to the problem of his preference rating, following the interview, it will be seen that since he still believes he received a Personal, it will be the rating of this interview which will reflect his reaction, not the Objective which he actually received. From this example, it becomes clear that to test Prediction 8, we must examine the ratings of the interview the subjects thought they received, as determined by their identification response following the interview.

Turning now to the data, we find that subjects who believed they had received a preferred interview decreased their rating for the preferred interview by an average of .563 while those who believed they had received a non-preferred interview increased their ratings by an average of .268. While this finding looked promising, it was entirely possible that it could be accounted for by statistical regression since the preferred interviews were necessarily the initially higher-rated interviews and the non-preferred interviews were necessarily the initially lower-rated interviews. To check on this possibility, scores of the pre-interview ratings were divided into high, moderate and low scores and then the direction of change on the second ratings was noted. Since each of the two interviews was rated each time, a total of 112 change scores was possible. The results of this tabulation clearly support the regression hypothesis--high scores

overwhelmingly decrease, moderate scores are split almost evenly between increases and decreases and low scores overwhelmingly rise. Since half of the 112 judgments are simply reratings of interviews the subjects thought they did not get, this must be taken as strong evidence that the effect is due to regression, not dissonance reduction. Under the circumstances, it becomes meaningless to attempt to assess the validity of Prediction 10 since regression effects should operate most strongly for subjects who initially disliked the interview more.

While the finding, therefore, must be that the probable reason for the change score is due to statistical regression and not to dissonance reduction, a conclusive test would require that a control group make the ratings, separated by about a week's time, without an intervening interview experience. It was not possible to run such a control group since this would require the use of subjects comparable to the experimental subjects. To obtain such a group would have been arduous and time-consuming.

In conclusion, the evidence is that the prediction is not supported. Given the fact, however, that the non-preferred interview was liked in the majority of cases, the test of the prediction is considered to be a relatively poor one.

Overall Effects:

Prediction 12: The overall effect of the confirmation variable will be greater than that of the preference variable.

The test was made by comparing disconfirmed subjects who recognized the disconfirmation at interview time and those subjects who received a non-preferred interview. The expectation was that disconfirmed subjects would produce lower scores on the scales than subjects receiving a non-preferred interview. The findings are presented in Table 31.

TABLE 31

MEAN RAW SCORES OF SUBJECTS WHO CORRECTLY REALIZED THEY WERE DISCONFIRMED AND THOSE SUBJECTS WHO RECEIVED A NON-PREFERRED INTERVIEW

Scale	Disconfirmed (N=8)	Non-Preferred (N=28)	p for t test (one-tailed)
I	6.94	8.09	.10
II	19.31	19.68	N.S.
III	22.69	24.98	N.S.
IV	17.12	19.54	.05
V	29.31	30.64	N.S.
VI	28.12	30.11	N.S.

An examination of the residual scores reveals that the differences obtained on the scales are differences on the general attitude factor. When only Counselor 2's non-preferred interviews are used for the test, the differences are not significant although the direction of the mean difference is in favor of the prediction on five of the six scales.

When these results are taken in conjunction with the finding that distortion occurred only for the confirmation variable, the evident conclusion must be that the effects of dissonance are greater than that of the effects of getting an interview that one does not prefer. How general this finding is must be left to experimental test. It is possible that the preference variable would have been more important had the subjects had more definite and firmly fixed preferences than they manifested in the present experiment.

Prediction 13: Subjects will experience greater liking, believe they gained more in helping them choose a vocation, and report higher success for the confirmation condition than for the disconfirmation condition.

Prediction 14: Subjects will experience greater liking, believe they gained more, and report higher success for the preferred condition than for the non-preferred condition.

These two Predictions are tested by preference to three of the four general questions, 1, 2, 3 (see page 70). Doubt, however, has been expressed as to whether the manifest content of an individual index can be taken to be its real meaning to the subjects. With this caution in mind, the tests of the predictions will be made.

Prediction 13 was tested with two different groupings of subjects. The first test used the same 50 subjects used for the analysis of the main effects and the same method of dichotomization. The three indices involved here constitute one-half of the indices forming Scale VI. Since this scale was found to be non-significant for the confirmation variable when based on this dichotomization and since doubts exist as to the adequacy of so dichotomizing the subjects, it is unlikely that significant differences will emerge for these measures when tested in this way. Therefore, a second test comparing those subjects who correctly recognized they had been disconfirmed at the time of the interview and those who correctly recognized they had been confirmed was also employed. There is a better possibility for differences between these groups since the test is based on a more valid categorization of subjects.

Table 32 presents the results.

TABLE 32

MEAN SCORES ON THE SUCCESS, LIKING, AND GAIN INDICES FOR CONFIRMED AND DISCONFIRMED SUBJECTS, STATUS ON THE CONFIRMATION VARIABLE DETERMINED IN TWO WAYS

Index	All Subjects Responding to the Letter			Aware vs. Confirmed Subjects		
	Believed Conf. (N=30)	Believed Disconf. (N=20)	p for t test or U test[1]	Aware (N=8)	Conf. (N=27)	p for t test or U test (one-tailed)[1]
Success	4.12	4.42	N.S.	3.62	3.89	N.S.
Liking	4.83	4.95	N.S.	4.38	4.84	N.S.
Gain	U=264		N.S.	U=99.5		N.S.

[1] Mann-Whitney U test used for Gain index since the distribution grossly deviated from normality.

All three indices fail to reach significance regardless of which grouping is used. Hence the prediction is not supported.

The test of Prediction 14 is presented in Table 33.

TABLE 33

MEAN SCORES ON THE SUCCESS, LIKING, AND GAIN INDICES FOR PREFERRED AND NON-PREFERRED INTERVIEWS

Index	Preferred (N=28)	Non-Preferred (N=28)	p for t or U test[1]
Success	4.33	4.36	N.S.
Liking	5.00	4.86	N.S.
Gain	U=312		N.S.

[1] Mann-Whitney U test used for Gain index since the distribution grossly deviated from normality.

Clearly, Prediction 14 is not supported.

Summary of Results.

This completes the discussion of the predictions that were made in Chapter II. Table 34 summarizes the status of the 14 predictions.

TABLE 34

SUMMARY OF RESULTS

Prediction	Measure	Result
1. Misidentification will be more frequent in the disconfirmed than in the confirmed condition.	Questions asking the subjects which interview they received	Supported
2. Misidentification will be equally present in the preferred and non-preferred conditions.	Questions asking the subjects which interview they received	Supported
3. Confirmed subjects will rate the interviews higher than disconfirmed subjects.	The six scales derived from the 27 indices.	Supported

Table 34 Summary of Results (continued)

	Prediction	Measure	Result
4.	Subjects receiving a preferred interview will rate the interviews higher than those receiving a non-preferred interview.	The six scales derived from the 27 indices.	Supported [1]
5.	Disconfirmed subjects will feel more uncomfortable than confirmed subjects.	Index 2. "I felt comfortable and at ease with him."	Supported [2]
6a.	Disconfirmed subjects will utilize the items of information to reduce dissonance.	Changes in interest in items of information	Not supported
6b.	Subjects will show more interest in items reflecting positive aspects of the counselor than negative ones (a post hoc prediction).	Items of information before the interview	Supported
7.	Change in information seeking will not be related to the variable of preference.	Changes in interest in items of information	Supported
8.	Subjects behaving in a non-preferred interview will increase their liking for such an interview.	Changes in ratings of the interviews believed received	Not Supported
9.	The more subjects commit themselves to behaving in a non-preferred interview, the more their liking for that interview will increase.	Changes in ratings of the interviews believed received	Not tested
10.	The more the non-preferred interview is initially disliked, the more the subject's liking for that interview will increase.	Changes in ratings of the interviews believed received	Not supported
11.	The more the counselor must persuade the subject to participate in a non-preferred interview, the less attitude change there will be for that interview.	Changes in ratings of the interviews believed received.	Not tested
12.	The overall effect of the confirmation variable will be greater than that of the preference variable.	The six scales derived from the 27 indices	Supported

Table 34 Summary of Results (continued)

Prediction	Measure	Result
13. Subjects will experience greater liking, success and gain for the confirmed condition than for the disconfirmed condition.	The success, liking and gain indices	Not supported[2]
14. Subjects will experience greater success, liking and gain for the preferred condition than for the non-preferred condition.	The success, liking and gain indices	Not supported[2]

[1] [2] **Support exists if only Counselor 2's interviews are used for the test. These predictions are based on the rather questionable single indices.**

The above summary of the findings of the experiment concludes the Results chapter. We turn in the next chapter to a discussion of the results, the nature of the problems encountered in the methodological and theoretical foundations of the study, and to some of the practical implications of the study.

CHAPTER IV

DISCUSSION

The matters to be discussed in this chapter fall into two different parts. First, there are the related areas concerned with: (1) the results, (2) problems concerning the present formulation of dissonance theory, and (3) methodological problems revealed in the study. Second, there is the question of the applicability of the results to the clinical counseling situation. We shall take up these matters in the order introduced.

Results and Theoretical and Methodological Considerations

A perusal of Table 34 shows that this study provides fairly good support for the theory of cognitive dissonance from which many of the predictions were derived. The data support three important original predictions. (1) Disconfirmed subjects -- but not confirmed subjects -- would misperceive the interviews they received. The evidence also demonstrated that misperception was for the purpose of dissonance avoidance. (2) Subjects who recognized at interview time that they had been disconfirmed would produce lower scores on the scales than would those who had been truly confirmed. The data also demonstrated that those who recognized at interview time that they had been disconfirmed produced lower scores on the scales than did those disconfirmed subjects who did not so recognize. (3) The overall effect of the confirmation variable would be greater than that of the preference variable. Whether this result would obtain when preferences are strongly held, not the case here, is open to question. In addition, a post hoc prediction that information seeking before the interview took place would be influenced by the desire to avoid dissonant information was supported.

In contrast to these positive results, the data related to the following

three predictions do not support them. (1) Subjects who received a non-preferred interview would increase their liking for such an interview more than those who received a preferred interview. As pointed out earlier, however, since a majority of the subjects expressed close to equal liking for the interviews, the conditions were not optimal for testing the prediction. (2) Confirmed subjects would experience greater liking, believe they gained more and report higher success than disconfirmed subjects. Doubt exists as to the adequacy of the tests because of the use of questionable single indices for the tests. (3) Disconfirmed subjects would seek information that would serve to reduce dissonance. This was the original test of the information seeking variable.

Thus, the theory proved useful and received support. It does, however, have important weaknesses which should be faced. Problems arising from these weaknesses have been referred to, or discussed, in the pages of this thesis. Here I shall bring these discussions together.

The most general criticism pertains to the vagueness of parts of the theory. I have previously commented on the essentially undefined status of important constructs such as "obverse" and "firmly established cognitively". To these terms may be added such others as: (1) the term "would follow from the other" found in the basic construct of the theory--two cognitive elements are in a dissonant relation if, "Considering these two alone, the obverse of one would follow from the other"; (2) the term "number and importance of the elements" which determines the amount of dissonance; and (3) the term "cognized" found in subsidiary statements that require that for dissonance to exist both disparate elements must be cognized. The first is ambiguous because there are a number of ways in which one element could follow from the other--logically, experimentally, culturally, etc. --and such a determination is often difficult to

make. Furthermore, this determination is extra-theoretical: that is, its determination is arrived at, not by using the constructs of the theory, but from data derived from the body of psychology. The second is ambiguous because it too is extra-theoretical and is conceptually a quantitative construct but without a metric. Since the amount of dissonance is a quite important precondition to prediction, the failure to be precise is a serious shortcoming. The difficulty of inventing a suitable metric is compounded by the ambiguity of some of the basic constructs of the theory. Until these are better defined, it is difficult to see how a satisfactory metric can be formulated. The third is ambiguous because the operations which define when an element is "cognized" are hard to specify.

Given the general vagueness of the theory, it is only to be expected that some of the more specific theoretical derivations should contain vagueness. This is particularly so in regard to the use of distortion as a means of dissonance avoidance. Just what is the process of experience distortion? Does the subject become aware of the dissonant cognitions and then distort. Or, is there some kind of incomplete awareness, whatever that means, that something is amiss, followed by some sort of defensive process (such as rationalization) which prevents any further awareness of the dissonant cognitions, neutralizes the dawning awareness and produces stability? My opinion is that the theory is most consistently interpreted by assuming the latter to be the correct alternative but admittedly ambiguity characterizes the problem. To say merely that a cognition may not become "firmly established" is little more than an evasion of this critical problem.

Furthermore, the theory is often not a source of predictions of the possible outcomes of dissonance. For example, distortion is not an inevitable result of a dissonant experience. The subject may recognize the dissonance and

choose other ways of handling the situation. But under what conditions will he distort rather than choose some other method to reduce dissonance? A statement by Festinger may be taken to suggest that distortion should not occur when the message "has been stated too openly and too distinctly to permit effective distortion" (p. 135). But even if this is a correct interpretation of Festinger's meaning, it clearly raises more questions than it answers. When is a message openly stated? How can this be translated into the terms of the theory?

The interesting fact about Festinger's statement on distortion cited above, is that, despite its vagueness, it is probably correct. In the present study, there was clearly some overlap in the content areas covered by the two interviews. There was considerable misperception. In Biddle's experiment, previously discussed, the interviews were easily differentiable. They were correctly identified by the subjects with resultant decreased liking for the non-expected interview.

The above comments on dissonance theory clearly reveal several facts about the theory. First, the theory is under-used by the workers involved with it. That is, as pointed out above, the setting up of the cognitive elements is not usually guided by the theory but stems rather from other, extra-theoretical sources. This is done even when it might be possible to utilize the theory for this purpose. Perhaps this is the theory's legacy from originating, in large part, in data stemming from post-decision processes. For if one is only concerned with post-decision behavior, there is less need to wonder about the preceeding psychological events. Second, the theory needs tightening through better definition of the constructs. And, third, while not denying the theory's ability to predict (and often non-obviously), it is undeniable that so long as considerable vagueness exists, it creates, at best, problems in choosing between

possible alternatives and it allows, at worst, results contrary to prediction to be rationalized. This latter effect of vagueness may result in aspects of the theory becoming untestable.

As an example of these points, recall the total failure of the disconfirmed subjects to use the "critical" information seeking items as predicted. Was this due to my poor selection of the "critical" items or is it evidence against the theoretical statements from which the prediction derives. The theory provides no standards on this matter since the determination of what information can be used to reduce dissonance is extra-theoretical. Hence it could always be claimed that the theory was not properly tested using a given set of information items.

Festinger and other workers are, of course, aware of some of these problems and much of the experimental work that has gone on employing the theory is with the purpose of tightening the concepts. But, as the above discussion has indicated, there is indeed much work to do.

Dissonance theory does not include constructs for individual differences. This is not necessarily a criticism of the theory since a theory may address itself to whatever areas the theorist deems important. Comments on this omission are, therefore, of a different nature from those made above. The earlier comments addressed themselves to weaknesses in the content areas the theory does attempt to order to its constructs. The area of individual differences is one which might be worth examining in further revisions of the theory.

The reason for the above statement stems from the fascinating, and often inexplicable, reactions of subjects in the disconfirmed condition. They seem to demonstrate different ways of handling dissonance which might be related to personality.

As described in the results section, better than half of the subjects

attempted to rationalize in one way or another the fact that the interview did not go quite as expected. Interestingly enough, while a few of the subjects then came to the apparently obvious conclusion that they had received the other kind of interview, most apparently were satisfied with their rationalizations, probably since they were functionally valuable in avoiding dissonance. While the determinants of which of these two courses the subject took are not clear, there is at least nothing startling about this behavior. What is confusing, however, is the subsequent reaction to the letter of some of the subjects who rationalized but who had not correctly identified the interview at interview time. For it might be expected that, with this definite information, they would all make a correct identification. But actually, only half of these subjects did, the other half maintaining their previous position.

Turning now to the 11 disconfirmed subjects who did not comment on the disparity at all, we find this group includes several who made a correct identification at interview time. Apparently they felt no need to comment on the disconfirmation. Then, there are a group of disconfirmed subjects who, despite their silence following the interview which they misperceived, correctly identified the interview in response to the letter. And, finally, there exist those subjects who never correctly identified the interview nor expressed any doubt about the kind of interview they were getting. Were they totally unaware of what was happening or were their defensive operations more complete?

Surely, these varying reactions must reflect personality to some degree. Since the questions through which these reactions were revealed were originally intended for a purpose other than finding out about misperception and rationalization, it was not possible to question the subjects further about their reactions without interfering with the data collection for these other purposes. The data are thus

unsystematically collected in the sense that if the subject did not volunteer the information, it was not possible to obtain it. Perhaps extended questioning would clear up some of the questions raised above, concerning the different types of reaction.

These reactions, it is believed, are of some importance and should be systematically investigated. In the process, it might be possible to tighten some of the constructs of dissonance theory that are presently vague such as the method by which dissonance will be resolved. It might also provide data that could later be used to allow the theory to encompass individual differences within its structure.

A great deal more could be said about the variety of problems raised above, but they are best reserved for future discussions. Accordingly, I will now turn to two other problems revealed in the conducting and results of the experiment. These other problems are associated with methodological considerations.

The first is concerned with the subjects' way of indicating their reaction. Our findings clearly show that the use made of the scales by subjects is often quite idiosyncratic. Different subjects apparently employ different parts of the scale range to reflect what appears to be the same attitude. While this fact has long been recognized by psychologists, there is a temptation to go ahead and use such scales anyway because of the ease of constructing and scoring them. While results can be obtained in this way, as shown in the present experiment, it is a remarkably inefficient way of collecting data and may obscure important reactions to the experimental conditions. One solution might be to use difference scores, derived from administering the same scales to the subjects before and after the experimental experience. Differences scores, in effect, partial out the part of the scale producing the score thus eliminating, to some extent, the

idiosyncratic use of different parts of the scale ranges. However, the analysis may then become complicated by regression and ceiling effects.

The second methodological problem relates to the meaning of the indices. As has been repeatedly contended, a serious question exists as to whether the manifest content of an individual scale reflects its real meaning when rated by a given subject. In addition, Edwards (1959), among others, has shown the high saturation of social desirability in items of this nature. This means that the subjects' evaluative attitude toward the person or experience, reflected in rating the person or event in a more or less socially desirable way, is often a more important determinant of his response to the item than is his reaction to the content. It is quite possible, therefore, that the high loading on one factor, which was found for the scales used, reflects just this overall evaluative attitude. A positive attitude may then have been reflected by rating the counselor and interview in a socially desirable way: a more negative attitude may have been reflected by rating the counselor in a less socially desirable way.

It is tempting, though perhaps extreme, because of problems such as described above, to advocate a moratorium on use of scales, such as used in the present experiment, until further understanding of their limitations and usefulness is attained. In any event, it is the writer's belief that, before they are used in experimentation, they be subjected to extensive pre-testing to pin down their meaning and determine their relationships to other psychological phenomena.

Applications to Counseling

This chapter on the discussion of the results would not be complete unless some of the potential usefulness of this experiment to the clinical counseling situation were discussed. In the discussion, use of both the present

and Biddle experiments will be made.

For the initial interview at least, both experiments make it clear that subjects who recognize that the counselor is acting contrary to expectation will find less value in the interview and tend to like the interview and/or the counselor less than where the counselor has conformed to expectation. The strength of this statement comes from the fact that these results were obtained when expectancies were created in two different ways: (1) by informing the subjects of the way most counselors behave in a counseling interview, in the Biddle experiment: and (2) by telling the subject what kind of interview they would receive in the present experiment.

There are, however, two important qualifications to this conclusion. First, from the Biddle study, it appears that the violation of client expectations, in and of themselves, will create little if any discomfort or disturbance. Rather, the results of both experiments show that the expectations must be created by some outside authority or information source informing the clients either that certain expectations are proper for counselor behavior or that a certain kind of experience will occur. Client expectations that are not formed in either of these ways have not, as yet, been shown to produce lower ratings when a disconfirmation of expectancy exists. Of course, a subject may not like the interview he is receiving for other reasons, such that other kinds of interviews are more to his preference. The second qualification is that the subject recognize that he is not receiving an experience in line with his expectation. As has been shown, if it is possible, the subject will act to prevent awareness of a disconfirming experience. Thus a counselor need not fear a less positive client reaction if the subject fails to recognize the disconfirmation of an expectancy. He may have to contend, however, with potential disruption arising from the subject's defensive needs to

maintain his unawareness of the expectancy disconfirmation. The conculsion, then, is that, unless the counselor has therapeutic reasons for doing otherwise, he should be careful to avoid disconfirming a client's expectancies, formed in either of the two ways described above and perhaps in other, not yet investigated, ways as well.

A second conclusion is that clients who receive the kind of interview they prefer will feel more positive toward such an interview. While this fact hardly means that a counselor must restrict himself to doing only what the client likes throughout therapy, it does suggest that at least for the initial stages of therapy or counseling, for most situations, he ought not to deviate too far from the client's preferences, lest the client feel less inclined to return.

A third conclusion stems from the finding that <u>each</u> interview type - Personal and Objective - is regarded by subjects as having value or usefulness to them, but in different areas of interview experience, in contrast to the other possibility of one interview type being regarded as more <u>generally</u> valuable or useful. The finding accordingly suggests that the most useful counseling approach to take is that which employs a combination of both kinds. Utilization of counselor behaviors involved in the Personal type will result in clients' feeling that the counselor has <u>some</u> regard for them and will increase their willingness to talk about things of personal importance. Utilization of counselor behaviors involved in the Objective type will serve to reassure the client that the counselor is competent and can be of help in vocational counseling problems. This finding provides evidence that counseling centers that employ a combination of the two approaches are more likely to achieve success than those that restrict themselves to one type or the other.

CHAPTER V

SUMMARY

In this thesis, an attempt was made to study the effects of the disconfirmation of an expectancy, in a situation analagous to vocational counseling where such events are often of considerable importance. Another aim was to compare the effects of such a disconfirmation with the effects of "preference".

To derive specific hypotheses for an experiment of this nature, a number of theories were reviewed to determine their nature and suitability to the problem to be studied. These theories were termed "disparity" theories since all are concerned with a state in which one element of a structure does not fit with another element. From among them, cognitive dissonance theory as put forth by Festinger was chosen, for reasons that were enumerated, as the source of theoretical predictions.

Briefly, dissonance theory states that dissonance, seen to act as a motivator, will come into existence when "the obverse of one (cognitive) element would follow from the other". Dissonance is postulated to be an unpleasant state which the person will attempt to eliminate, reduce or avoid. Such techniques as distortion, rationalization of one form or another, or information-seeking, are some of the possible ways of effecting this goal.

For the experiment, an outline for two vocational counseling type interviews, 20 minutes long, were developed. These interviews, constituting the first independent variable, were called a Personal and an Objective interview and to a considerable extent correspond to two different kinds of interviews in use by vocational counselors. The Personal interview was oriented toward finding out something about the personality of the subject. The Objective interview

was oriented toward discussion of the subject's vocational interests and vocational and educational experiences while avoiding as much as possible discussions of his personality.

A second independent variable, the preference variable, was created by having the subject indicate his preferences for both types of interviews, one-half of the subjects receiving their preference.

A third independent variable was created by telling each of the subjects that he would receive one or the other of the interviews but for one-half of the subjects substituting the other, non-expected interview. It will be noted that for disconfirmed subjects this arrangement fits the conceptual definition of dissonance. The three independent variables described above were arranged in a 2x2x2 factorial design.

The dependent variables consisted of a number of measures. (1) The subject had to identify the interview he had received. (2) Subjects were given 27 indices to rate (subsequently reduced to six scales). These pertained to the subjects' reactions to the interview and counselor. (3) Subjects were given a number of scales, both before and after the interview, which pertained to information they would like to have about the counselor. (4) Subjects rated the interviews, (before and after they had completed their interview), to indicate their preference for the interviews. Their difference in ratings for the interview they believed they received was the measure used.

The experiment was conducted in two sessions. In the first session the subject was first oriented to the nature of the experiment, was then administered the "before" measures, and finally was provided with an expectancy as to the kind of interview he was supposed to receive. In the second session the interview itself was administered (by two experienced vocational counselors),

and the data were collected for all but one of the dependent variables. In addition to these sessions, a letter was sent to all subjects after the interview informing them that some subjects had been disconfirmed and asking them to indicate if they were one. The response to the letter completed the data collection.

The general predictions, analyzed by several techniques (predominantly the t test) were that:

1. Misidentification of the interviews would be more frequent in the disconfirmed than in the confirmed condition, would be for the purpose of avoiding dissonance, and would not be due to the desire to get the kind of interview one preferred. The prediction was SUPPORTED.

2. Subjects who recognized at interview time that they had received a disconfirmed interview would rate the interviews lower (on the six scales) than subjects who recognized they had been confirmed. The prediction was SUPPORTED.

3. Subjects who received a non-preferred interview would rate the interviews lower than would subjects who received a preferred interview. The prediction was SUPPORTED. [1]

4. Subjects who recognized at interview time that they had received a disconfirmed interview would utilize the items of information to reduce dissonance. This prediction was NOT SUPPORTED. A related post hoc prediction that subjects would show more interest in items reflecting positive aspects of the counselor than in negative aspects, in four of the five tests made, was SUPPORTED.

5. Subjects who conformed to the required behaviors of the non-preferred interview would increase their liking for such an interview; and further, the greater the initial dislike for the interview, the more the increase. This prediction was NOT SUPPORTED.

6. The overall effect of the confirmation variable, for the conditions of this study, would be greater than that of the preference variable. This prediction was SUPPORTED.

Most of the predictions stemming from dissonance theory were supported. While some satisfaction with dissonance theory was expressed, many of the problems in the theory, most notably the vagueness of certain important constructs, was

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[1] The prediction was supported if only Counselor 2's interviews are used for the test.

discussed. The problem of the meaning of the indices used in this experiment and the idiosyncratic use of scales by subjects was reviewed. Finally, applications of this experiment, and a previous one in the same area, to the clinical counseling situation were indicated.

APPENDIX 1

EXPERIMENTER'S SPOKEN STATEMENTS

Procedures and Instructions

First Session

In this particular experiment we are testing a number of different approaches to counseling that have been used in counseling practice and in previous experiments. As you know, the kind of counseling that we are concerned with is that which is oriented toward selection of careers and/or majors leading to career selection. For volunteers, we are requesting only those people who are undecided about what major or career to select and/or feel that they might be able to profit from counseling. The reasons for this are twofold. First, these are real interviews conducted by fully trained counselors conducted as one would be in a regular agency. It has been found that the more involved the person is and the more relevant counseling is for him, the more he gets out of it and profits. And, secondly, inasmuch as there will be several sessions as well as the possibility of several interviews, if you are not really interested you will soon become bored and this would not be desirable from your viewpoint or ours. As for the several interviews, this means that if you wish to, you can continue with further interviews beyond the first one.

Accordingly, if you are still interested, would you please write your name and class on these papers and indicate the areas of study you have been interested in at one time or another.

(After there has been time for those Ss to leave who feel that they cannot meet the requirements, the Experimenter says as follows:) One other thing. If

you have been in counseling before, we would rather you did not participate. Since this is an experiment, we would have to test you separately (and this is not feasible from the practical point of view) and it would be difficult to know what the effect of your previous experience would be.

As I mentioned when I first started talking to you today and when I originally called you, we are testing two different kinds of interviews. Obviously, if we are to find whether there are differences in the two kinds of interviews, which, by the way, will be taped, we will have to ask you a number of questions. Therefore, in addition to the interview you will be asked to fill out a number of questionnaires, some before the interview, some after, and some both before and after.

Now, the first thing we want you to do is to answer a couple of questions. All you have to do is to place a vertical line at the point of the scale that best represents your attitude toward the question.

The questions are as follows:

1. Indicate the degree of concern with what major and/or career field you are going to enter.

1	4	7
not concerned at all	moderate concern	very concerned

2. Would you like assistance in helping you to reach a sound decision?

1	4	7
no assistance wanted	willing to accept some assistance	very much desire assistance

Now. I am going to hand out a description of the two kinds of interviews that we are using in this experiment. The two kinds of interviews are commonly used in counseling practice and both kinds have their advocates. After you have looked them over, I would like you to decide which of the two you would prefer

to have by using the scales on the sheet you have. We have worked out some questions you might ask yourself if you have trouble making a decision but in the final analysis you should decide by using whatever reasons you, yourself, consider the most important. Some of the criteria are as follows: 1) Which kind of interview do you think would make you most comfortable?; 2) Which kind of interview do you feel would be of most help to you?; and 3) Which kind of interview seems most interesting?

Okay, here are the descriptions of the interviews. Look them over until you understand what they are about and I will answer any questions that you have.

(After this procedure), Okay, on the form you still have, you will notice two questions pertaining to which kind of interview you would prefer. You will note there are two 7-point scales. Once again, I want you to indicate, on each scale, the degree to which you would like that kind of interview.

1. Objective Interview

1	4	7
would not like this kind at all	would neither mind nor not mind	would like this one very much

2. Personal Interview

1	4	7
would not like this kind at all	would neither mind nor not mind	would like this one very much

If you have indicated that your preferences are the same for both, please state which one you would want if you were required to choose between them.

Now I might mention that we need this information to complete our study of the effects of the two kinds of interviews but we will assign you to one type or the other purely by chance so that only some of you will receive the kind of interview that you would prefer. By assigning you to one type of interview or another by

chance, we are able to neutralize the differences between you that we cannot control. Later this period, we will assign you to one treatment or the other.

(Collect questionnaire forms and description sheets). Next on the agenda is this form. It consists of incomplete sentences which you are to complete in any way you desire, so long as it expresses your feelings or thoughts. The purpose of this is to see whether or not the group of subjects being used in this experiment is similar to the general college population. (The Experimenter then consults table of random numbers, writes, waits five minutes, and says to Subjects):

"Take your time and I will check in with you later." Leaves. Assignments are then made based on 1) equal numbers in each condition, plus 2) equal degree of preference for each condition whenever possible, plus 3) equal desire for counseling.

(After 20 minutes, E reappears and collects forms when all subjects are finished). Alright, now I will tell you the kind of interview you will get. I will tell you individually so that I am clear who you are and you are sure to get it straight. Then we will have one more task to do and that will be all for the day. If you are not happy about the interview you will get, then you can leave the experiment at this point, if you so choose. (E then individually tells each S, "You will get_____interview.").

Next is this form. (E hands out information form). You will note that this form asks you to indicate, for each item of information, how much you would want information about the interviewer in each of the categories, if you could get this information. You should keep in mind that you have never seen this person before and your contact with him will be your first. If you have any questions, please ask them now.

(After forms are filled in and collected). We are just about done. The only thing now is to arrange a time and place. I will now give you a time and then if that time is okay with you, you should come to Room 3418 at that time. (As S leaves, E again reminds S of room, time and interview type).

Appendix 2

PRELIMINARY QUESTION FORM

Name_____

Class_____

1. Areas of study which have interested you:

2. Indicate the degree of concern with what major and/or career field you are going to enter by drawing a vertical line at the point of the scale that best represents your attitude toward the question:

1	2	3	4	5	6	7
not concerned at all			moderate concern			very concerned

3. Would you like assistance in helping you to reach a sound decision?

1	2	3	4	5	6	7
no assistance wanted			willing to accept some assistance			very much desire assistance

4. Indicate the degree to which you would like an <u>OBJECTIVE</u> interview:

1	2	3	4	5	6	7
would not like this kind at all			would neither mind nor not not mind			would like this kind very much

5. Indicate the degree to which you would like a <u>PERSONAL</u> interview:

1	2	3	4	5	6	7
would not like this kind at all			would neither mind nor not mind			would like this kind very much

Appendix 3

TYPES OF INTERVIEWS

As you know, we are experimenting with two quite different types of interviews. Briefly, they may be described as follows:

Type I, Objective.

In this kind of interview, the discussion centers about the kinds of job experiences that you have had, the value, if any, they have had for you, and the types of professions or careers you are interested in or have at one time considered. In short, we try to find out on the basis of past experience what kinds of areas of work are of interest to you. We also review any plans you may have for work experience in the future, such as summer jobs, etc. Secondly, we can discuss the tests that have proven useful in the area of vocational counseling -- that is, we describe their characteristics, what they prove, places you can go to take them, etc. Finally, the study and experience requirements needed to enter given career fields may be discussed.

Type II, Personal.

The purposes of this kind of interview would be to trace the personality and motivational background of the problem you have in deciding on a career field on the assumption that these underlying factors play a big part in both career decision and career problems. In this type of interview, the emphasis is on trying to find something out about what kind of a person you are and to focus, whenever appropriate, on the personality and motivational roots of your interests or indecisions about selecting a career field. Sometimes your feelings and attitudes for significant people and events in your life may be included in the discussion. Here, we would not be concerned with telling you

about job fields and their requirements nor would vocational tests ordinarily be discussed for the first few interviews, at least.

Appendix 4

SENTENCE COMPLETION

Sentence Completion

Complete these sentences in any way you like

1. I like people at parties who
2. People are easily swayed
3. If I am doing a job and someone interrupts me,
4. I think a mature adult
5. One of the nicest things that has has happened to me is
6. The type of teacher that I like the most is
7. The best way to keep a friend
8. The nicest kind of people are
9. When I am praised, I
10. When people say that people need authority,
11. My greatest ambition is
12. When I realized I was not prepared to do the job, I
13. When I see others doing better than me,
14. When I found that the course of action I favored was in the minority,
15. The most important thing a man should look for in a woman,
16. One of the most upsetting things that can happen to a person
17. When I couldn't think of a topic to write,
18. The thing I want most out of education
19. When, after ignoring his advice, I failed in the task, I
20. It is extremely foolish to
21. A friend who always tries to help

Appendix 4 (continued)

22. It is easy to get into trouble when
23. The thing that will get me most angry is
24. When he told me that I would have to work alone,
25. When my supervisor doubted that I could handle the job,
26. When I go home for vacation
27. It made me angry when my friend
28. Freedom to decide things for yourself
29. When my date insisted on having dinner in an expensive restaurant
30. If I had to do it over again,
31. When I realized I could not meet their expectations, I
32. The most important thing you should expect from a close friend
33. I have always felt that
34. When the guys made fun of me,
35. When he offered to help,
36. When I get down in the dumps, I like to
37. The thing that means the most to me
38. When Dad offered to help me make the decision,
39. My greatest trouble with people is
40. I often get irritated when
41. When the guys put pressure on me to change my vote,
42. I do my best work if my supervisor
43. The thing that makes me the happiest
44. My greatest need now
45. To get along well in a group, you have to
46. The chief advantage of a college education is

Appendix 4 (continued)

47. When my best friend criticized me for what I had done, I

48. When my boss encourages me

49. If everyone showed more understanding,

50. When my girl said she was through with me,

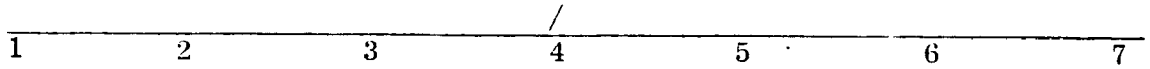
Appendix 5

INFORMATION FORM

Information Form

Instructions: On this form are listed a number of items of information related to the counselor. Indicate on the 7 point scale attached to each item how much interest you have in finding out information about the counselor for that item, if you could get this information. Do the same for all the items. Use a vertical line to indicate your interest.

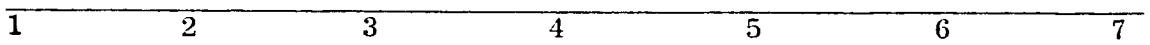
Example: counselor's age



1	2	3	4	5	6	7
no interest			moderate interest			very high interest

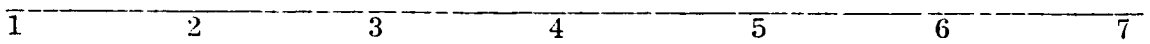
The vertical mark in the example indicates a moderate degree of interest in the item.

1. Professional background and training



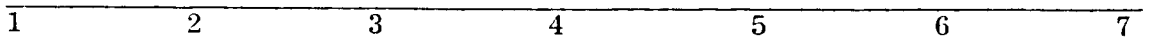
1	2	3	4	5	6	7
no interest			moderate interest			very high interest

2. The mood he is in on the interview day



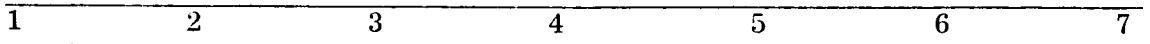
1	2	3	4	5	6	7
no interest			moderate interest			very high interest

3. Strong points as a counselor



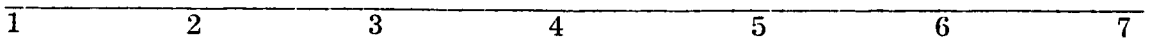
1	2	3	4	5	6	7
no interest			moderate interest			very high interest

4. Nature of his relations with associates



1	2	3	4	5	6	7
no interest			moderate interest			very high interest

5. Areas of competence--how well he knows the job fields, tests, etc.



1	2	3	4	5	6	7
no interest			moderate interest			very high interest

Appendix 5 (continued)

6. What religious group he belongs to

1	2	3	4	5	6	7
no interest			moderate interest			very high interest

7. Type of client toward whom he feels warmth

1	2	3	4	5	6	7
no interest			moderate interest			very high interest

8. How much he respects his clients

1	2	3	4	5	6	7
no interest			moderate interest			very high interest

9. How well he knows what he is supposed to do in this experiment

1	2	3	4	5	6	7
no interest			moderate interest			very high interest

10. How well he likes his job

1	2	3	4	5	6	7
no interest			moderate interest			very high interest

11. Types of counseling problems where he has been of help

1	2	3	4	5	6	7
no interest			moderate interest			very high interest

12. Weak points as a counselor

1	2	3	4	5	6	7
no interest			moderate interest			very high interest

13. Intelligence

1	2	3	4	5	6	7
no interest			moderate interest			very high interest

Appendix 5 (continued)

14. Gaps in his knowledge of the fields, tests, etc.

1	2	3	4	5	6	7
no interest			moderate interest			very high interest

15. Types of situations in which he shows a capacity for understanding a client's problems

1	2	3	4	5	6	7
no interest			moderate interest			very high interest

16. Ability to listen to a client's point of view

1	2	3	4	5	6	7
no interest			moderate interest			very high interest

17. Type of client toward whom he does <u>not</u> feel warmth

1	2	3	4	5	6	7
no interest			moderate interest			very high interest

18. Types of counseling situations where he has <u>not</u> been of help

1	2	3	4	5	6	7
no interest			moderate interest			very high interest

19. The seriousness with which he views his task

1	2	3	4	5	6	7
no interest			moderate interest			very high interest

20. Types of situations in which he fails to show understanding of a client's problems

1	2	3	4	5	6	7
no interest			moderate interest			very high interest

21. Length of time the counselor has been with the project

1	2	3	4	5	6	7
no interest			moderate interest			very high interest

Appendix 6

RATINGS OF THE INTERVIEW INDICES AND OPEN-ENDED QUESTIONS

Using the following rating scales, evaluate the degree to which:

1. You feel the interview was a success

1	2	3	4	5	6	7
not at all successful			moderately successful			highly successful

2. You liked the interview you received

1	2	3	4	5	6	7
did not like at all			neither liked nor disliked			liked very much

3. You feel you gained something of value in helping you choose a vocation, by means of the interview

1	2	3	4	5	6	7
nothing at all gained			some gain			a great deal of gain

4. You would be willing to see this counselor again

1	2	3	4	5	6	7
would prefer not to			would consider it			would very much want to see him again

INSTRUCTIONS: Each of the following statements describes something you might or might not have felt during your time with the counselor. Please read each item and indicate your response. Mark, as before, the point on the rating scale which best reflects your feeling. There are no right or wrong answers. Some people would feel one way; some another. Please be sure to answer every item.

Use this scale: 1) no, not at all; 4) difficult to say; 7) yes, definitely so.
(NOTE: The above describes what the numbers 1, 4, and 7 mean. As before, you may use any part of the scale you wish).

1. I felt I had to be careful of what I said to the counselor

1	2	3	4	5	6	7
no, not at all			difficult			yes, definitely so

2. I felt comfortable and at ease with him

1	2	3	4	5	6	7
no, not at all			difficult			yes, definitely so

Appendix 6 (continued)

4. I felt I could unburden myself to him or could do so in future interviews

1 2 3 4 5 6 7
no, not at all — diff. — yes, defin.

5. I felt I was treated like a person instead of just another case.

1 2 3 4 5 6 7

6. I was afraid to disagree with him or would be afraid to disagree with him in future interviews.

1 2 3 4 5 6 7

7. I felt he was trying to help me.

1 2 3 4 5 6 7

8. I felt he was "understanding".

1 2 3 4 5 6 7

9. He seems to be the kind of person whom I would like to have as a close friend.

1 2 3 4 5 6 7

10. I felt free to reveal very personal things or would so feel in future interviews.

1 2 3 4 5 6 7

11. I felt he treated me like somebody special

1 2 3 4 5 6 7

12. I was hesitant to tell him unfavorable things about myself or would be hesitant in future interviews.

1 2 3 4 5 6 7

13. I felt he understood what I was talking about

1 2 3 4 5 6 7

14. I found it easy to communicate my thoughts and problems.

1 2 3 4 5 6 7

15. I felt I could talk about whatever I wanted to talk about.

1 2 3 4 5 6 7

16. I felt he liked me.

1 2 3 4 5 6 7

17. I felt I could show my feelings as well as talk about my problems.

1 2 3 4 5 6 7

18. I was left with the feeling of having enjoyed being with him.

1 2 3 4 5 6 7

19. I felt free to tell him favorable things about myself or would feel free to tell him such things in future interviews.

1 2 3 4 5 6 7

20. I felt he knew a lot about counseling techniques.

1 2 3 4 5 6 7

Appendix 6 (continued)

21. I felt the counselor took his job seriously.

1 2 3 4 5 6 7

22. I felt the counselor communicated well with me.

1 2 3 4 5 6 7

Now answer the following question:

To what extent to dyou feel the counselor had good reason for what he did and said in the interview?

1 2 3 4 5 6 7
low medium high

How well did the counselor conform to what you expected he would do and say?

Briefly describe what you talked about.

Briefly describe what the counselor said.

Appendix 7

RERATING OF PREFERENCE FOR INTERVIEWS AND IDENTIFICATION RESPONSE

At the start of the experiment, you indicated how much you liked one interview or another; at this time, indicate the degree to which you now like the:

1. OBJECTIVE interview

1	2	3	4	5	6	7
do not like this at all			neither like nor dislike			like this very much

2. PERSONAL interview

1	2	3	4	5	6	7
do not like this at all			neither like nor dislike			like this very much

What kind of interview did you receive?

Appendix 8

INTERVIEW REALISM INDICES

Please answer the following questions by putting a vertical line at the point which best represents your feeling.

1. To what extent would you say your interview behavior was influenced by your knowledge that this interview took place in an experimental setting rather than at a counseling center?

1	2	3	4	5	6	7
not at all			moderately			very much so

2. Would you have acted differently if this interview had taken place in a counseling center?

1	2	3	4	5	6	7
behavior would have been the same			some aspects would have been different			behavior would have been quite different

3. To what extent did you feel you were playing a part (role) in the interview rather than behaving as you would have were you in a counseling center?

1	2	3	4	5	6	7
not at all			moderately so			all playacting

Appendix 9

EXPERIMENTER'S QUESTION SHEET FOLLOWING COMPLETION OF EXPERIMENTAL FORMS[1]

1. What was your overall impression of the experiment (in any way you wish to describe).

2. What was the purpose of the experiment? Anything you feel we were after.

3. How much did you look at the interview description form?

4. Questions you did not understand or found hard to answer:

5. Talk to anyone about the experiment or did anyone talk to you about it.

6. Feedback:

    a. If you wish to have further interviews, arrangements have been for you to be seen at the Counseling Division. Here is what you should do if interested.

    b. At the Counseling Division, these two real distinct kinds of interviews are not used though they are in other places. At Counseling, it is a blending.

    c. Please do not talk about this experiment to anyone until I talk to you about it in the Fall. This is important. I will be glad to give feedback at that time. Thank you.

[1] The subject did not see this sheet. Questions were asked from it by the experimenter.

Appendix 10

LETTER INFORMING THE SUBJECTS OF DISCONFIRMATION

_____
(date)

Dear Mr.

As part of the experimental design of the Vocational Counseling Experiment, a number of subjects did not get the kind of interview that they were told they would get. Instead they got the other kind. The purpose of this letter is to ask you to recall what kind of interview (Personal or Objective) you were told you would get and compare this to the kind you actually received; then check the statement that best applies to your recollection of the interview you actually received.

[ ] I received the kind of interview I was told I would get.

[ ] I did NOT receive the kind of interview I was told I would get.

Thank you for your cooperation in this matter and in the experiment in general. We sincerely hope that this experiment has had some benefit for you and will add to the knowledge of counseling, hence helping to make it more effective in assisting clients. Again, let me remind you to call me in _____ if you are interested in the results.

A self-addressed, stamped envelope is enclosed for your reply.

Sincerely,

Appendix 11

EXPERIMENTER'S SPOKEN STATEMENTS TO CONTROL SUBJECTS

Procedures and Instructions

Thank you for coming.

I will now briefly describe what we will be doing during this hour. First, let me briefly outline the nature of the problem. Some time ago, the experimental project with which I am working gave one of two kinds of a vocational counseling interviews to a number of interested subjects. Before they received the interview we gave them a description sheet of the kinds of interviews we were using in the experiment. They read over the descriptions of the interviews and that is what I want you to do now. (Pass out sheets). Please read the descriptions carefully, looking them over until you understand what they are about and I will answer any questions which you might have. (When Ss are finished, collect sheets).

Now I am going to play one of the actual interviews for you. It is very important that you listen carefully to it. Later, I will ask you some questions about the interview. There may be places where you have difficulty hearing what the counselor or client are saying but these should not occur too often. Just follow it as best you can. (Play tape).

Now I am going to return the description forms to you, ask you to read them again, and then on this form, write down the kind of interview you have been listening to. Then on the scale provided on the sheet, rate, by drawing a vertical line, how closely you thought the interview conformed to one kind or the other. For example, if you thought it was clearly one type, say a "personal" type, you would mark it toward the end of the scale on the side of the scale that has "clearly personal" written under it. If you thought it was clearly an "objective" interview, you would

mark it toward the part that says "clearly objective" under it. If you think it was one type of interview but not so clearly so, you would mark it more toward the middle of the scale on the appropriate side, where it says "probably personal" or "probably objective"; and, finally, if you thought it was not possible to tell or that it could have been either, use the mid-point of the scale. Note, however, that the labels under the scale are just to orient you. You may use any part of the scale you like. In making your decision, try not to be influenced by how interesting the interview was. Rather, make your decision on what the client and counselor said and what subjects were discussed. (Subjects rate.)

Finally, if you have any comments you would like to make about the interview or about the problem of deciding which of the two types it was, use the space below question 2. (Collect all sheets).

Thank you for your time. I will see to it that you get an information sheet describing the purpose of this session and your part in it.

Appendix 12

CONTROL GROUP RATING FORM

Name_____

Sec. No._____

1. Type of Interview_____

2. Scale

1	2	3	4	5	6	7
Clearly Objective	Probably Objective		Could have been either		Probably Personal	Clearly Personal

3. Additional Comments

Appendix 13

MEANS ON THE PREFERENCE VARIABLE FOR INTERVIEWS CONDUCTED BY EACH COUNSELOR
(N=56)

	Counselor 1		Counselor 2	
Scale	Preferred	Non-Preferred	Preferred	Non-Preferred
I	7.43	8.39	8.79	7.79
II	19.64	20.82	23.11	18.54
III	25.32	26.14	27.79	23.82
IV	19.21	20.43	22.11	18.64
V	30.96	31.50	31.82	29.78
VI	28.36	31.54	30.97	28.68

Appendix 14

MEANS FOR EACH INDEX ON THE CONFIRMATION VARIABLE (N=50)

Index	1	2	3	4	5
	Conf Disc	Conf Disc	Conf Disc	Conf Disc	Conf Disc
	4.12 4.42	4.82 4.95	2.80 3.28	5.18 5.12	4.55 4.48
Index	6	7	8	9	10
	3.47 3.72	4.38 4.50	5.47 5.00	4.72 4.48	4.90 4.78
Index	11	12	13	14	15
	5.32 5.38	5.68 5.50	5.08 5.05	5.20 4.80	6.13 5.72
Index	16	17	18	19	20
	5.43 4.65	4.47 4.82	5.00 4.42	6.02 5.90	4.92 4.72
Index	21	22	23	24	25
	6.37 6.60	4.93 4.18	5.57 5.28	4.77 4.70	5.48 5.60
Index	26	27			
	5.42 5.30	5.97 5.58			

Appendix 15

MEANS FOR EACH INDEX ON THE PREFERENCE VARIABLE (N=56)

Index	1		2		3		4		5	
	Pref.	N-Pref.	Pref.	N-Pref.	Pref.	N-Pref.	Pref.	N-Pref.	Pref.	N-Pref.
	4.33	4.36	5.00	4.86	2.82	3.34	5.16	5.29	4.69	4.54
Index	6		7		8		9		10	
	3.62	3.70	4.48	4.39	5.39	5.18	4.82	4.36	4.95	4.79
Index	11		12		13		14		15	
	5.74	4.93	5.77	5.27	5.32	4.73	6.16	5.75	5.27	5.07
Index	16		17		18		19		20	
	4.79	4.52	4.71	4.62	5.93	5.89	4.98	4.77	6.50	6.38
Index	21		22		23		24		25	
	4.82	4.70	5.70	5.29	4.96	4.55	5.59	5.43	5.05	5.71
	26									
	6.07	5.55								

DATA OF THE STUDY

Rating of the Interview

Actual Experimental Condition: Confirmed, Preference, Personal

Group	Measure				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16'
I	S	C	I	L																
	1	1	P	P	4	5	3	6	3	3	4	5	4	4	5	6	4	6	6	6
	2	2	P	NR	NR	NR	1	6	5	3	4	6	4	5	6	4	4	6	6	6
	3	1	P	P	5	4.5	1	4	5	2	4	4	4	4.5	7	6.5	5	3	7	5.5
	4	2	P	P	5	5.5	4	6.5	4.5	4	4.5	5	7	5	7	6	7	7	7	5
	5	2	P	P	6	6.5	5	6.5	4	5	5	6	6	5	7	6	6	6	7	6
	6	1	P	P	5	5	1	7	5	4	5	6	6	5	7	7	6	7	6	6
	7	1	P	NR	4.5	3.5	4	4.5	4	4.5	4	5	5	3	NR	4.5	5	3.5	5	3.5
	8	2	P	P	1.5	4.5	1	4	4	4	4	4	4	5	6	7	3.5	5	6	6.5

		17	18	19	20	21	22	23	24	25	26	27
I	S											
	1	5	3	7	4	7	5	6	4	5	4	6
	2	6	4	6	6	7	6	6	6	4	3	6
	3	3	4	7	6	7	7	7	7	6	5	5.5
	4	6	6.5	5.5	7	7	4.5	4	1	4	7	7
	5	6	7	7	6	6	6	6	6	7	6	6
	6	6	7	7	6	7	6	7	7	5	4	6
	7	3	4	6	5	4.5	6	5	2.5	5	5	6
	8	4	1.5	7	4.5	7	6	3	4	6	1.5	6.5

Actual Experimental Condition: Confirmed, Preference, Objective

	Measure				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
II	S	C	I	L																
	9	1	0	P	6	5	5	5	3	2	4	4	3	5	5	5	5	6	4.5	4
	10	2	0	0	4.5	5	5	4.5	5.5	3	4.5	6.5	5	4	5	5.5	4.5	5.5	5	6
	11	1	P	P	4	4.5	2	4	2.5	2	4	4	4	4.5	5	6	5	6	5	5.5
	12	2	0	0	4	5	3	6	5	4	5	6	5	5	5	6	5	4	7	6
	13	2	0	0	NR	6	4	6.5	5	4.5	NR	6	7	5	7	6	7	4	7	6
	14	1	0	0	4	4	3	3	NR	2	4	6	3	5	6	6	2	6	7	6

		17	18	19	20	21	22	23	24	25	26	27
II	8											
	9	4.5	4	4	4	7	4	5	5	5	6	6
	10	4.5	5.5	6.5	4	5.5	4	5.5	4.5	5	5	5.5
	11	4	3.5	6	4	6	2.5	6	4	5.5	5.5	4.5
	12	4	3	6	6	7	5	6	5	4	7	6
	13	6.5	6	6.5	6	7	7	7	6	6.5	2	7
	14	3	5	3	3	3	3	5	4	6	5	6

S Subject
C Counselor
I Identification Response following the Interview
L Identification Response to the Letter
NR No Response

Rating of the Interview (continued)

Actual Experimental Condition: Disconfirmed, Preference, Personal

Group III	Measure				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	S	C	I	L																
	15	2	O	P	7	7	7	7	7	6	6	7	7	7	7	6	6	6	7	2
	16	1	P	NR	6	6	6	6	7	6	6	5	4	7	6	5	6	6	7	4
	17	2	NR	P	4	6	1	4.5	7	7	7	7	7	6	7	6	7	5	7	7
	18	1	P	P	1	4	1	7	2	1	4	4	2	4	5	4	1	2	7	2
	19	2	P	P	3	3.5	1	3	2.5	1	4	4.5	5	2.5	5	6	5	3.5	4.5	2.5
	20	2	O	P	6	6	4	5	5	5	5	6	6	6	7	5	7	7	7	3
	21	1	O	P	4.5	4.5	2.5	5	5	4	4	4	4	5	4	5	4	6	5	5
	22	1	P	P	3	3	1	3	4	2	3	4	3	4	3	6	5	2	6	4

III	S	17	18	19	20	21	22	23	24	25	26	27
	15	7	5	7	6	7	6	7	7	7	1	7
	16	4	3	1	5	7	7	7	7	7	7	7
	17	7	5	7	7	7	1	7	5.5	7	7	5
	18	4	6	7	2	7	2	6	2	6	7	6
	19	4.5	3	6.5	3	7	2.5	5.5	5	6	5.5	5
	20	6	4	3	6	6	6	5	6	6	6	6
	21	5	4	5	6	5	5	5	5	5	4	6.5
	22	2	3	3	3	7	3	2	4	5	5	7

Actual Experimental Condition: Disconfirmed, Preference, Objective

IV	Measure				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	S	C	I	L																
	23	1	P	P	4	5	3	4	5	6	6	7	5	7	6	6	6	6	7	6
	24	2	P	P	6	5	3	6	6	4	4	7	6	7	7	6	7	7	7	7
	25	2	P	P	2	4	3	3	4	4	4	5	5	4	5	5	4	4	6	7
	26	2	P	P	3	5.5	1.5	6.5	6.5	3	4	6	4	6	5	7	5	6.5	5.5	7
	27	1	P	P	5.5	5.5	1	5.5	4	1	4	4	4	4	4	7	4	7	7	6
	28	1	P	O	4	6	2	6	6	4.5	4	7	6	4	6	6	6	6	6	7

IV	S	17	18	19	20	21	22	23	24	25	26	27
	23	5	7	7	5	7	5	7	6	6	6	6
	24	6	6	7	6	6	6	7	4	6	4	7
	25	4	5	7	5	7	3	6	6	5	6	5
	26	5	6	7	6	7	6	4	5.5	7	7	6.5
	27	3	5.5	7	2	7	4	4	4	4	7	6
	28	6	5.5	7	6	7	6.5	6.5	6	5.5	6	6

Rating of the Interview (continued)

Actual Experimental Condition: Confirmed, Non-Preference, Personal

Group	Measure				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
V	S	C	I	L																
	29	2	P	P	4	4	1	4	3	4	4	4	2	4	4	6	5	3	5	5
	30	2	P	P	2.5	4.5	1	4	5	4	4.5	5	5.5	4.5	4.5	5	5.5	3	7	2.5
	31	1	P	P	5	6	3	6	4	4	4	4	3	4	4	6	4	4	5	6
	32	2	P	P	5.5	5	4	5	5	5	5	5	4	5	5	6	5.5	6	6	6
	33	1	P	P	4	3	4	5	4	5	5	5	5	6	5	5	6	6	6	5
	34	1	P	P	4	5	3	6	6	6	5	6	7	6	4	5	6	5	7	4

Group	S	17	18	19	20	21	22	23	24	25	26	27
V	29	3	4	5	5	4	5	4	4	4	5	6
	30	4	5.5	6	5.5	7	5	5.5	5	5.5	5.5	6.5
	31	3	5	7	5	7	6.5	7	3	5	7	4
	32	5.5	6	7	5	7	6	6	5.5	6	6	5
	33	5	5	4	5	2	6	7	4	7	6	7
	34	6	1	7	5	6	4	5	4	5	6	5

Actual Experimental Condition: Confirmed, Non-Preference, Objective

Group	Measure				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
VI	S	C	I	L																
	35	2	O	O	3	3	1	5	5	2	3	4	2	3	3	2	3	5	7	6
	36	2	O	O	4.5	4	3	5	3	2	4	5	4	4	4.5	3	5	4	4.5	5
	37	2	O	O	3	4.5	1.5	4.5	2	2.5	4	6	5	4	4	4	4	3.5	3.5	4
	38	1	O	P	5	5.5	3	6	5	4.5	4	5	4.5	5	5.5	5.5	5	6	6	4
	39	1	O	P	5	5	4	6	5.5	4	4.5	6.5	5	6.5	5.5	4	4.5	6	6.5	7
	40	2	O	O	5	6	5	4	4	4	4	6	4	5	4	7	5	6	5	3
	41	1	O	NR	6	6	5	5	6	4	5	6	5	5	5	6	5	5	5	7
	42	1	O	O	5	5	4	5	5	4	4	6	5	7	6	7	7	6	7	6

Group	S	17	18	19	20	21	22	23	24	25	26	27
VI	35	2	6	3	2	7	2	6	5	5	6	7
	36	4	5.5	6	3	6.5	1.5	5	4.5	4.5	6	5.5
	37	5	5.5	5.5	5	6.5	5	3.5	4	5	5.5	5.5
	38	5.5	5	7	5.5	5.5	5.5	6	6	6	5.5	5
	39	5	3.5	6	5	7	6	4.5	6	6	6.5	6
	40	4	5	6	4	7	2	5	4	4	2	5.5
	41	5	6	7	5	7	4	6	5	5	6	5
	42	5	7	7	6	7	7	5	5	7	7	7

Rating of the Interview (continued)

Actual Experimental Condition: Disconfirmed, Non-Preference, Personal

Group	Measure				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
VII	S	C	I	L																
	43	2	O	NR	6	6	3	7	6	4	4	6	2	6	4	5	6	5	6	6
	44	1	O	O	1	3.5	1.5	5	4	1	5.5	6.5	5	5	6	7	4	2.5	5.5	6
	45	1	P	NR	4	5	4	5	4	3.5	4	4	4	4	7	6.5	6	3.5	7	6
	46	2	O	P	5	4	1	4	6	5	6	5	5	5	5	6	6	6	6	6
	47	2	O	P	4	4	5	4	4	4	4	5	4	5	5	5	4	4	5	5
	48	1	O	O	6	6	5	6	4	5	5	6	6	6	6	2	6	6	6	3

		17	18	19	20	21	22	23	24	25	26	27
VII	S											
	43	6	3	6	6	5	6	5	3	5	5	6
	44	1.5	5.5	6.5	5	6.5	6	6.5	5	7	6.5	7
	45	4	3.5	7	4	7	5	6	4	7	7	6.5
	46	6	6	7	5	7	6	6	6	6	6	6
	47	5	4	4	4	6	4	4	4	5	4	5
	48	5	4	3	5	6	5	4	5	5	5	6

Actual Experimental Condition: Disconfirmed, Non-Preference, Objective

	Measure				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
VIII	S	C	I	L																
	49	2	O	O	4	4	2.5	5.5	5	2.5	4	4.5	3.5	5	5	6.5	5.5	4	4.5	6
	50	1	P	O	5	6	5	6	1	4	4	2	3	3	3	3	2	2	2	2
	51	1	P	P	3.5	5	3.5	5.5	6.5	1	4	6	5	4	5.5	5.5	6.5	7	7	6
	52	2	O	O	3	4	3	4	3	2	4	4	3	3	5	6	4	4	5	3
	53	2	P	NR	4	6	4	6	5	5	4	4	6	4	5	4	6	4	6	7
	54	1	P	P	4	4	2	7	4	1	4	6	4	4	5	7	4	5	7	3
	55	1	P	O	6	6.5	6	6.5	6.5	6.5	6	6.5	6.5	5.5	7	6.5	7	6	7	6
	56	2	O	O	5	5.5	5.5	6	5.5	4	4.5	6	4	5.5	5.5	6	6	5	6.5	6

		17	18	19	20	21	22	23	24	25	26	27
VIII	S											
	49	4	6	6.5	6	6	3.5	5	4	5.5	6	5
	50	2	2	7	3	7	3	2	2	3	6	4.5
	51	5	5	7	5.5	7	5.5	7	5.	5	6.5	6
	52	3	4	6	4	7	2	5	3	4	3	3
	53	6	3	6.5	4	7	6	6	6	6	7	5
	54	5	2	3	5	7	4	4	6	7	6	4
	55	7	6	6	6	7	6	6.5	5	6	6	5.5
	56	5	5.5	6	5	6.5	4	5.5	4.5	5.5	6	6

Appendix 16 (continued)

INFORMATION SEEKING (BEFORE SCORES)

Group	Measure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	16	17	18	19	20	21	22
I	S																					
	1	5	6	5	6	6	4	7	6	6	6	5	4	4	5	6	6	7	4	4	5	3
	2	7	4	7	1	6	1	5	1	7	6	7	7	6	7	7	6	7	7	7	7	5
	3	7	5.5	6	4	7	1	6	6	5	6	5	5	5	6	6	6	4	4	6	6	2
	4	6,5	7	3.5	2	3	1	1.5	4	6.5	4.5	2	1.5	1.5	2.5	4.5	6.5	5.5	5	6	6	2
	5	6	6	6	6	6	2	5	6	5	6	6	7	6	5	7	6	6	6	6	6	7
	6	7	4	7	5	7	1	3	6	7	7	7	4	7	7	7	7	4	4	7	4	7
	7	6.5	2.5	4.5	1.5	6	1.5	2	3	2	3	6	4.5	1.5	5	4.5	5.5	2	4	6	3.5	1
	8	5.5	5.5	7	6	7	1	4	5.5	7	6.5	2.5	2.5	4	3	4	6.5	4.5	3	7	3.5	1
II	S																					
	9	6	5	5	3	7	1	5	5	4	4	5	5	5	6	5	5	5	6	6	5	2
	10	4	2.5	4	4	5	1.5	5	5	5	6	5	3	1.5	3	6	6	4	4	5	5	2.5
	11	4.5	2.5	5.5	1.5	5.5	1.5	1.5	1.5	5.5	5.5	5	5.5	1.5	4	5	4	1.5	4	4	4	5
	12	1	3	1	1	7	1	3	4	3	1	2	1	1	6	4	6	3	2	4	3	1
	13	7	2	6	3	7	2	3	4.5	7	5	6	5.5	4	6.5	6	6	4	7	7	7	1.5
	14	7	5	7	5	7	1	5	6	7	6	7	5	5	7	7	7	5	7	7	7	4
III	S																					
	15	7	4	5	5	7	1	4	5	6	5	7	6	7	5	5	6	5	6	7	4	4
	16	6	7	5	2	6	1	5	6	7	7	5	6	3	5	6	7	3	5	7	6	4
	17	5.5	4	6.5	4.5	7	1	1	5	6.5	5.5	7	7	4	7	7	7	4	7	7	7	4
	18	6	1	5	4	7	1	2	6	7	7	7	1	7	7	5	6	6	6	7	3	5
	19	5.5	4	5	4	4.5	3	3.5	4	4.5	3.5	3	5.5	2.5	5	4.5	4	5	5	4	4.5	2.5
	20	6	5	6	6	7	3	7	7	7	5	6	6	4	6	7	4	6	6	7	7	5
	21	5.5	5.5	6.5	2.5	5.5	2.5	4.5	4.5	5.5	3.5	6.5	5.5	4.5	3.5	6.5	6.5	6.5	3.5	6.5	6.5	2.5
	22	5	7	6	1	7	1	5	3	7	6	7	7	5	5	5	5	5	6	7	6	3
IV	S																					
	23	5	4	3	2	6	2	2	4	6	5	4	4	5	5	4	6	5	5	6	5	5
	24	6	2	5	1	5	1	5	6	7	4	1	3	4	5	5	6	5	4	5	5	2
	25	7	5	6	3	7	1	2	5	2	3	5	6	6	6	6	7	1	3	6	6	2
	26	5	2	6	1.5	6	1	2	2	4	5	7	4	4	5.5	5.5	6	3	6	5	5	2.5
	27	6	4	7	4	7	1	2.5	2	7	5.5	6	7	4	5.5	5	4	2.5	7	6	2.5	4
	28	7	7	7	4	7	1	5.5	6	5	6	6	7	4	7	6	6.5	6	6.5	7	5.5	4

Appendix 16 (continued)

INFORMATION SEEKING (BEFORE SCORES)

Group	Measure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	16	17	18	19	20	21	22
V	S																					
	29	7	7	6	7	7	1	3	4	7	1	7	5	6	6	6	7	4	1	7	6	5
	30	6	5	5	6	7	3	4	5	6	6	5	6.5	5	5	4	5	4	5	6	5	6
	31	7	6	5	2	7	1	7	7	6	6	6	3	7	5	NR	NR	NR	NR	NR	NR	NR
	32	6	5	7	6.5	7	1	6	6	7	7	7	7	4	6.5	6	6.5	6.5	6.5	7	6	4
	33	7	5	6	4	7	2	5	6	7	7	7	6	6	7	7	7	7	4	6	7	5
	34	5	3	7	5	6	1	5	6	6	5	7	6	5	6	6	6	7	6	6	5	5
VI	S																					
	35	5	3	4	2	7	2	2	2	4	6	5	4	7	6	3	6	2	5	6	4	2
	36	6	3	6	2	6	1	5	5.5	5.5	5.5	5.5	6	5.5	5	5	5.5	5.5	3.5	5.5	5.5	5
	37	6.5	5.5	6.5	4.5	6.5	3.5	6.5	4.5	6.5	5.5	6.5	6.5	5.5	6.5	6.5	6.5	5.5	5.5	6.5	5.5	5.5
	38	5	4	3	1	3	1	4	4	5	6	5	4	4	5	6	6	4	6	6	5	4
	39	4.5	6	6	6	5	1	4	5	5	6	6	6	5.5	6	6	6	5	5	5	6	2
	40	2	4	3	1	5	1	1	1	6	5	5	1	5	1	6	7	1	2	4	1	1
	41	6.5	4.5	5.5	5.5	5.5	4	4	1	6	6	5	5	6	5	6	5.5	4	4	6.5	5.5	4
	42	6	7	7	6	7	4	4	4	7	4	7	6	6	6	4	5	3	4	7	4	5
VII	S																					
	43	5	4	7	6	7	4	6	6	7	7	7	4	4	5	7	5	5	5	6	6	6
	44	7	3	7	5	7	1	5	6	7	5	6	7	4	7	7	4	4	6	6	5	5
	45	5.5	4	3.5	6	6.5	1	4	4	6	3	4	5	6	6	5	5	4	4	5	6	6
	46	7	5	7	5	7	4	7	7	7	7	7	7	4	7	7	7	7	7	7	7	4
	47	5	6	6	4	5	3	4	4	7	6	6	6	5	5	5	5	5	6	6	4	5
	48	4	3	5	2	7	2	3	5	5	4	4	3	4	5	7	7	6	4	6	6	5
VIII	S																					
	49	4	3	4	5	5.5	1	5	5.5	5	4	4.5	4	4	3.5	5	5.5	4	4.5	5	4	2
	50	4	2	4	1	6	1	4	5	6	7	6	4	4	6	6	6	4	5	6	6	6
	51	7	5	5.5	4	7	1	4	5	6	7	7	5	4.5	6	6	6	4	6	7	6	4
	52	7	6	4	1	7	1	3	6	7	5	3	4	6	5	7	2	3	2	6	7	3
	53	7	2	6	5	7	1	4	6	6	7	5	6	4	6	7	6	6	4	6	4	2
	54	7	5	7	1	7	1	4	7	7	7	7	4	5	4	7	7	4	6	7	7	4
	55	6	4.5	5	5.5	4.5	3.5	4	6	5	5	5	6	5.5	6	5	6	3.5	3.5	4.5	3	4.5
	56	5.5	1.5	4.5	2.5	6.5	1.	4	5.5	6.	5.5	6.	6	6	6	6	5	5.5	5.5	5.5	5.5	3.5

Group	Measure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	16	17	18	19	20	21	22
I	S																					
	1	6	5	6	6	6	4	6	6	7	5	5	5	4	5	6	6	6	5	5	6	5
	2	6	4	6	2	6	1	3	3	6	6	6	6	6	6	6	6	3	6	6	6	5
	3	6	4.5	5	2.5	5	1	4	3	6	6	5.5	5	5	5.5	6	6.5	4	5	4	5	3
	4	6	3	4	1	3	1	2	4	7	4.5	2	1	1.5	1.5	5.5	6	2.5	1	5	3	1.5
	5	5	4	5	5	6	2	6	6	7	6	7	6	5	6	6	7	5	6	6	6	7
	6	7	5	7	4	7	1	6	7	7	7	6	5	7	6	7	7	6	4	7	6	7
	7	4.5	5.5	3	1.5	3	1	2	2.5	2	3.5	2	3	1.5	2	2.5	2	1.5	3	3	2.5	1
	8	5	2.5	4	4	6	1	3	5.5	6.5	5.5	3.5	3.5	3	3.5	4	5	4	4	5.5	4	3.5
II	S																					
	9	7	2	4	4	4	1	4	5	4	3	5	4	5	4	4	4	4	4	5	4	3
	10	5	4	4.5	3.5	5	2	4	4	4.5	5	4.5	5	2.5	4	4.5	4	3.5	4.5	6	5	3.5
	11	5	1.5	5.5	2.5	5.5	1.5	2.5	2.5	5	6.5	5.5	2.5	1.5	3.5	5.5	3.5	1.5	2.5	5	1.5	3.5
	12	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	13	7	2	7	3	7	1	4	5.5	6.5	5	6	6	4	6	5.5	6	4	6	7	6.5	1
	14	6	4	7	4	7	1	4	6	7	4	7	7	6	7	7	6	4	7	7	7	3
III	S																					
	15	7	5	5	6	7	1	4	5	7	7	6	6	6	5	6	7	5	5	6	5	6
	16	3	3	6	7	5	1	5	5	4	7	7	7	4	5	7	6	7	4	5	6	2
	17	4	4	6	4	7	1	3	4	6	4	7	7	5.5	6.5	6.5	5.5	4	7	5.5	4	4.5
	18	6	7	4	5	7	1	4	6	6	6	7	5	4	4	5	6	6	4	5	5	5
	19	6	3	5.5	5.5	6	2.5	3.5	4.5	5.5	5	2.5	6	5	5.5	5	3	3.5	5	5.5	5	6
	20	4	4	5	5	6	2	5	4	6	3	3	5	3	6	6	5	4	4	5	3	1
	21	5.5	5.5	6.5	1.5	4.5	2.5	4.5	5.5	3.5	2.5	5.5	4.5	3.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	3.5
	22	4	6	7	1	6	1	5	3	7	5	6	6	6	6	5	5	4	6	6	5	2
IV	S																					
	23	3	5	4	5	5	2	4	4	5	5	5	4	3	4	3	5	3	5	5	4	4
	24	5	3	5	1	5	1	4	3	5	5	5	4	4	4	6	3	4	2	6	5	2
	25	6	2	6	3	7	2	2	4	4	2	5	6	6	7	7	6	2	6	6	6	3
	26	6	4	5.5	2	6	1	4	5	3	4	6	5.5	4	5	6	5.5	3	3	6	4	3
	27	4	2.5	6	1	7	1	3	2.5	7	4	7	7	4	5.5	6	5.5	1	4	4	6	3
	28	6	4	6	4	6	2	5.5	6	5.5	6.5	6	6.5	5.5	6	6	6	6	6.5	6	5.5	5

INFORMATION SEEKING (AFTER SCORES)

Group	Measure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	16	17	18	19	20	21	22
V	S																					
	29	7	7	7	5	7	1	7	5	7	4	5	3	5	7	6	7	5	4	6	4	6
	30	6	6	4.5	6	6	2	1	4	7	5	6	4.5	6	6	6.5	5	4	6	6	5	3
	31	7	7	7	1	7	1	4	4	7	7	7	4	7	4	NR	NR	NR	NR	NR	NR	NR
	32	6	4	5	5	6	1	6	5	6	6	6	5	6	6	6	6	6	6	6	5	4
	33	6	6	6	5	7	2	5	5	6	7	6	7	5	7	6	5	6	5	6	7	7
	34	6	6	7	6	6	1	6	5	7	6	6	6	5	6	6	6	6	6	7	7	5
VI	S																					
	35	2	6	4	2	3	2	3	4	6	5	3	4	7	3	3	6	3	3	6	3	4
	36	6	4	5.5	3	5.5	3.5	4	4.5	5.5	6.5	5.5	5	4.5	5	5	6	5.5	5	4.5	5.5	4
	37	7	3.5	7	5.5	7	2.5	4.5	3.5	7	4.5	5	6	6	6	6.5	3.5	4	6	5.5	5.5	4
	38	5	3	5	4	6	2	4	6	6	5	5	5	4	6	7	6	5	6	5	6	4
	39	4.5	6	4	5	5.5	1	5	5.5	6	6	5	5.5	5	4	5	5.5	4.5	4.5	5.5	5	3.5
	40	5	2	1	1	5	1	1	1	5	3	4	1	5	1	1	3	1	1	4	1	1
	41	6	4	6	4	6	3	4	3	6	5	5	5	6	5	5	5	4	5	6	6	5
	42	7	5	5	4	6	3	4	4	6	4	6	4	4	4	5	4	3	3	4	4	4
VII	S																					
	43	6	4	7	4	7	2	6	6	6	5	7	3	4	6	7	6	4	5	5	5	4
	44	6.5	2.5	6.5	4.5	6.5	2.5	3.5	3	6	4	5	5.5	4.5	6.5	4.5	5	3	4.5	5	3	4.5
	45	5	3	5	6.5	4	1	4	6	7	5	4	4	5	5	4	5	5	5	6	5	6
	46	6	5	7	5	7	5	6	6	7	5	7	5	5	7	6	6	5	7	7	7	4
	47	6	5	6	5	6	3	5	5	6	6	6	6	5	5	5	5	5	6	5	6	6
	48	6	5	6	5	7	4	6	6	7	5	6	5	4	5	6	7	5	4	7	5	6
VIII	S																					
	49	4.5	1.5	5	1	5	1	2	4	4.5	5	5	3	4	2.5	4.5	4.5	4	5.5	4	4	3
	50	6	1	5	1	6	1	4	3	5	6	6	5	4	5	5	6	4	4	5	5	2
	51	6	4	5	4	7	1	1	4	6.5	7	5	5.5	4	6	6.5	7	2	6	7	5.5	4
	52	6.5	4	4	2	6	1	5	3	7	5	7	5	6	7	7	4	6	5	4	6	5
	53	6	4	5	4	6	1	4	4	6	5	6	5	4	5	6	7	4	5	6	6	4
	54	7	5.5	7	4	7	1	5	6	7	7	5.5	5	4	4	7	7	5.5	4	7	5.5	5
	55	5.5	3	5	5	4.5	2.5	3.5	5	6	4.5	5.5	4	6	5.5	5.5	5.5	4.5	5	6	4.5	6
	56	6	1.5	5.5	2.5	5.5	1	5	5.5	5.5	5.5	6.5	5	4.5	4.5	5.5	5.5	4.5	4.5	5.5	4.5	2.5

Appendix 16 (continued)
PREFERENCE FOR THE INTERVIEWS*

Group	Measure	1	2	3	4	C	H	1	2	3
I	S									
	1	1	7	4	7	5	5	1	1	2
	2	6	7	3	6	5	6	2	2	2
	3	4	5	5	4	6	5	2	2	2.5
	4	1	7	1.5	7	4	7	1	1	4
	5	6	6.5	5	7	7	7	2	2	1
	6	4	5	5	6	6	6	2	1	2
	7	5.5	6.5	6	5.5	7	6	4.5	3	1.5
	8	3.5	6	4	5.5	2.5	4	2	2	2
II	S									
	9	6	5	5	5	5	6	4	2	4
	10	6.5	4.5	5	4	6	5	1	1	1
	11	5.5	3.5	4.5	4.5	3.5	3.5	2.5	2.5	3
	12	7	2	5	2	3	5	4	3	3
	13	7	7	6.5	6	6	5.5	1	1.5	1
	14	7	7	7	6	6	6	1	1	1
III	S									
	15	6	7	7	7	7	6	1	1	1
	16	4	7	4	7	3	7	1	1	1
	17	5.5	6	NR	NR	7	5.5	NR	NR	NR
	18	4	5	4	4	6	6	1	1	1
	19	6	6.5	3	6	5.5	5	3	1.5	2
	20	5	7	6	7	7	7	3.5	3.5	2
	21	3.5	5.5	5.5	5.5	6.5	5.5	3.5	1.5	2.5
	22	4	6	2	6	6.5	6	5	5	4
IV	S									
	23	6	5	5	6	5.5	5	2	1	2
	24	6	5	4	6	3.5	6.5	2	1	1
	25	7	2.5	6	3	5	6	2	1	1
	26	5.5	4.5	6	6	6	6.5	2	2	1.5
	27	7	7	4	6	7	7	3	1.5	1.5
	28	6	4	6	5	6	5.5	1	1	1

Group	Measure	1	2	3	4	C	H	1	2	3
V	S									
	29	7	6	6	4	7	6	5	5	5
	30	7	5	6	4	6	5	4.5	3.5	3.5
	31	6	4	6	4	3	4	4	1	4
	32	6..	5.5	6	5.5	6	5.5	1	1	1
	33	7	4	6	5	6	6	5	5	6
	34	6	5	6	5	7	5	6	4	3
VI	S									
	35	3	7	5	5	7	7	NR	NR	NR
	35	6	6	5.5	5.5	6	5.5	NR	NR	NR
	37	5.5	6.5	3.5	6.5	6.5	6.5	2.5	1	3.5
	38	4	7	6	5	5	6	3	1	1
	39	4	6	5	5.5	5.5	5	1.5	1	1.5
	40	4	5	4.5	5.5	3	4	2	1.5	5
	41	5.5	6.5	5	7	6.5	6.5	1	1	1
	42	6	7	5	7	7	7	2	2	2
VII	S									
	43	7	6	6	6	7	7	2	1	1
	44	6.5	4.5	6	4	6.5	5.5	6	1	5.5
	45	4.5	4	5	3	4.5	5.5	1	1	1
	46	7	6	4	5	4	4	1	1	1
	47	6	3	4	4	5	4	1	1	2
	48	5.5	3.5	6	4	5	6	4	4	4
VIII	S									
	49	5	6	5	5	6	6	3	1.5	2.5
	50	6	6	6	6	7	6	2	1	2
	51	5	6	7	6.5	6	5	1	1	1
	52	4	6.5	5	3	7	5	3	2	2
	53	5	7	4	7	5	6	1	1	1
	54	5.5	7	7	7	7	7	4	2	1
	55	5	6	3.5	7	3	6.5	2	2	2
	56	4	6	5	5	5.5	5.5	2.5	1	2

* Key:

1 Objective Before
2 Personal Before
3 Objective After
4 Personal After

C Concern
H Help

Realism Scores 1 2 3 (1 high 7 low)

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