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YONTEF, Gary Marshall, 1938-
COMMUNICATION DISPLACEMENT, COMMUNICATOR
EVALUATION AND ATTITUDE CHANGE AS A FUNCTION
OF INVOLVEMENT, DISCREPANCY AND ORDER OF
PRESENTATION.

University of Arizona, Ph.D., 1970
Psychology, clinical

University Microfilms, Inc., Ann Arbor, Michigan

COMMUNICATION DISPLACEMENT, COMMUNICATOR EVALUATION
AND ATTITUDE CHANGE AS A FUNCTION OF INVOLVEMENT,
DISCREPANCY AND ORDER OF PRESENTATION

by

Gary Marshall Yontef

A Dissertation Submitted to the Faculty of the

DEPARTMENT OF PSYCHOLOGY

In Partial Fulfillment of the Requirements
For the Degree of

DOCTOR OF PHILOSOPHY

In the Graduate College

THE UNIVERSITY OF ARIZONA

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THE UNIVERSITY OF ARIZONA
GRADUATE COLLEGE

I hereby recommend that this dissertation prepared under my
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Gary Yontef

PREFACE

The writer undertook this dissertation as a clinical psychology student venturing into the field of social psychology in an effort to find a methodological approach sophisticated enough to bring clarity to some of the difficult and complex problems in clinical psychology. Because of the administrative requirement that the chairman of a clinical psychology student's committee be a clinical psychologist, the chairman of the committee and formal dissertation director agreed to having a social psychologist informally provide the actual direction of the project. The writer extends a special expression of gratitude to Dr. Glenn White for his time and efforts in directing this dissertation without formal recognition. The writer also expresses gratitude to Dr. R. A. Ruiz, the original committee chairman, for his aid and flexibility in agreeing to this arrangement. Appreciation is due also to Dr. Marvin Kahn who assumed committee chairmanship at the last minute when Dr. Ruiz left The University of Arizona. The writer is grateful to the entire committee for cooperation in speedily reviewing drafts of the dissertation. Members of the faculty of psychology, political science and sociology at the University of Arizona, and their students, were very cooperative in the search for subjects.

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ABSTRACT

The social judgment-involvement approach was extended by studying the evaluations and judgments 363 undergraduate male students made to two 300-word communications--one favoring aggressiveness and one favoring submissiveness. Subjects chose their most acceptable response to five hypothetical situations from seven alternatives that ranged along a continuum from very aggressive to very submissive. The most aggressive and submissive subjects were divided into three levels of involvement on the basis of their responses to three questions after each situation. The 48 most involved and 48 least involved of these subjects formed two involvement groups.

In the second session the subjects read the two communications in two orders of presentation. After each communication the subjects evaluated the communication by choosing the behavior they thought the communicator would advocate in each of the hypothetical situations. Semantic Differential Scales measured the intensity of associations to the communicators, evaluation of the communicators, and potency and activity judgments of the communicators. The second session was concluded by the subjects' choosing their preferred responses to the situations for a second time.

The data were analyzed with two-way analyses of variance with two levels of involvement and/or discrepancy.

Subjects judged the communication that was in their latitude of rejection more extreme than the communication that was in their latitude of acceptance ($p < .001$), and had more negative associations to this distant communicator ($p < .001$). The far communicator was judged more negatively when it was in the second position ($p < .005$), and there were greater differences in the evaluation of the two communications when the far communication was in the second position ($p < .025$). These findings all confirm the social judgment-involvement theory.

The strong effect of involvement on judgment of communications was supported by the findings that involved subjects had more intense associations ($p < .005$) and made more positive judgments of the communicators ($p < .001$). Although prior evidence by A. D. Pepitone and M. Manis suggested that discrepant communications would be judged less favorably and less potent by involved subjects than uninvolved subjects, the present findings show that the far communicator was more positively received ($p < .01$) and judged more potent ($p < .025$) by involved subjects than less involved subjects.

Involved subjects had a primacy effect in intensity judgments and less involved subjects had a recency effect

($p < .025$). This suggests a U-curve effect for ego-involvement similar to that found with familiarity by R. Rosnow and J. H. Goldstein.

Implications of the study and indications for future research were discussed.

INTRODUCTION

The distortion of cognitive functioning by emotions and beliefs is an important topic in clinical psychology. It is often assumed in the clinical literature that such distortion is a function of mental illness. To Freud the perception, evaluation, and memory of patients are distorted by unconscious conflicts. Often the degree of distortion is seen as a mark of the degree of pathology (English and Finch, 1954, p. 44; White, 1964, p. 78; Engel, 1962, p. 325; Coleman, 1964, p. 236). The tenability of this viewpoint depends on the degree to which non-patients distort or do not distort their perception, evaluation and memory. The conditions under which there is a lack of correspondence between cognitive processes and "reality" is one clinical problem amenable to laboratory experimentation. Judgment is a cognitive process that has received experimental attention and was also explored in this study. Judgment refers to deciding, forming an opinion or an estimate (Webster's New World Dictionary of the American Language).

Historically, two lines of research into the relation between judgment and external stimuli have developed more or less independently. In one, stimulus-judgment

relations are studied under stimulus conditions which minimize emotional and social influences. In the other line of research, systematic judgmental variations are studied as a function of personality, motivational or social factors (Sherif and Hovland, 1961). Muzafer Sherif uses an approach which treats these separate approaches within a single theoretical framework. This framework, the social judgment-involvement approach, appears to have the kind of methodological sophistication needed to adequately deal with the complex phenomena pertinent to clinical psychology (Sherif, 1967). Social judgment-involvement research uses concepts developed in psychophysical laboratories to explain distortions in cognitive judgments in social situations. For example, Sherif has found that underlying the reactions elicited by controversial communications is a judgment process in which the individual uses a set of categories for comparing and evaluating stimuli. Sherif and his colleagues have been interested in specifying the variables that determine any differences in the judgment process underlying the reaction to controversial stimuli and the reaction to the stimuli used in the psychophysical laboratory.

One important area of social judgment-involvement research has been the study of attitudes. In the 1950's there was an upsurge of interest in attitude research.

(Greenwald, Brock and Ostrom, 1968, p. 5; Sears and Abeles, 1969). Sherif notes that prior to that time attitude research was primarily of a survey type (Sherif and Hovland, 1961, p. 2; Hovland, Janis and Kelley, 1953, p. 4; and Hovland, 1959). These surveys gathered opinions with little effort to determine the processes underlying the expression of an attitude. In devising a research strategy to correct this trend, Sherif turned to the research on psychophysical judgments (Sherif, Sherif and Nebergall, 1965, p. vii).

This strategy led to a new definition of attitude:

Operationally an attitude may be defined as the individual's set of categories for evaluating a stimulus domain, which he has established as he learns about that domain in interaction with other persons and which relate him to various subsets within the domain with varying degrees of positive or negative affect (Sherif and Sherif, 1967, p. 115).

He conducted research designed to specify the conditions under which judgments of external stimuli would be influenced by social and emotional factors and the direction and degree of such influence. With Carl Hovland of the Yale Communication and Attitude Change Program he conducted a basic research program pulling together the research on psychophysical judgments and the research on attitudes (Sherif and Hovland, 1961, p. vi).

Judgment Research

Judgmental research has explored three types of experimental tasks. The first type of task is that

traditionally used in psychophysics and is concerned with keenness of discrimination and with receptor processes. Since the research is concerned with the simple question of whether the organism can make certain discriminations between stimuli, a paired comparisons procedure is typically employed. Stimuli are presented to the subject in pairs and the subject makes a distinction concerning the physical characteristics of the two stimuli, e.g., weight, color, size, etc. Motivationally neutral stimuli are used and efforts are made to instruct the subject and structure the situation so that prior experience, current mood, etc., have little influence on the results (Sherif and Hovland, 1961, p. 6).

Attitude research typically uses one of the other two judgmental tasks. In a placement or categorization task the subject places a stimulus relative to more than two other items along whatever dimension the stimuli are being judged. A third type of judgment also involves placement or categorization, but in terms of subject preference, i.e., under "acceptance-rejection instructions [Sherif and Hovland, 1961, p. 77]." Placement research can be conducted with stimuli and procedures minimizing or maximizing learning and motivational-attitudinal-affective factors. Stimuli can be motivationally neutral, or can be related to motivational factors measured or manipulated by the experimenter.

The stimuli in judgmental research are usually presented in a series. Traditional psychophysical experimenters use a well-graded stimulus series and use an explicit external stimulus as a criterion or standard (anchor) against which judgments are made. The anchor was provided to enable subjects to "build a judgment scale corresponding to the range and relative positions of the stimuli in the series [Sherif and Hovland, 1961, p. 32]." Although research has shown that subjects form a scale even without such an external standard (Sherif, 1948, p. 48), judgments are always made relative to anchors of some sort.

When judgments are made in non-laboratory social situations, not only may there not be an explicit external standard provided for each judgment, but a well-graded stimulus series is frequently missing (Sherif and Hovland, 1961, p. 32). Sherif does not see this as rendering basic judgment experimentation irrelevant for the study of social judgments. Rather it indicates to Sherif the need for specification of how judgments are made under a variety of exact stimulus conditions.

"A judgment always involves a comparison between two or more stimuli [Sherif and Hovland, 1961, p. 8]." In making a judgment the subject uses a reference scale which forms the background against which the specific stimuli are placed (Sherif, 1948, p. 47). The reference scale is influenced by the external stimulus and conditions of

presentation, current social influences and internal anchors which the subject has acquired from prior experience. When the stimuli are neutral, the stimulus series well-graded and an explicit external anchor(s) is (are) provided, social and internal influences are minimized.

Subjects in psychophysical experiments make judgments either in terms of objective physical measurement units, or that can be translated into such units (Sherif, Sherif and Nebergall, 1965, p. vii). In experiments emphasizing accurate judgments, errors tend to be "constant errors," i.e., the discrepancies between the subjective midpoint of the scale, and the value of the standard stimulus (anchor), which is usually near the middle stimulus of the series (Sherif and Hovland, 1961, p. 20). These errors have two characteristics.

First, the size and direction of constant errors vary with the procedure and with the stimulus arrangements under which judgment is rendered. . . .
Second, constant errors in traditional psychophysical experiments are, on the whole, deviations from objective stimulus values in the same direction for all individuals rendering judgments under a given experimental condition [Sherif and Hovland, 1961, p. 20].

As an example, stimuli near the anchor are judged more accurately than stimuli distant from the anchor (Sherif and Hovland, 1961, p. 31; Sherif, Taub and Hovland, 1958). When an explicit anchor near the center of the series is provided, judgments are more accurate near the center of the series. In a well-graded series without an explicit

anchor, the end stimuli become anchors, and stimuli near these anchors are judged more accurately than stimuli in the middle of the scale (Volkman, 1951).

In some conditions judgments of subjects differ systematically in direction and degree from that of other subjects (Sherif and Hovland, 1961, p. 20). The degree to which judgment is affected by factors other than the actual characteristics of the stimuli is approximately inversely proportional to the degree of clarity and structure of both the stimuli and the method of presentation. To the degree that standards are not determined by the situation, the subject uses internal standards and social norms as reference points with which to make a judgment. Sherif (1935) has shown that the autokinetic phenomenon is influenced by judgments made by others, and that such influence carries over to judgments made in later autokinetic experiments, i.e., social influences produce an internal anchor which becomes a part of the internal reference scale of the individual subject for that judgmental task.

Since the judgment of attitude-relevant items is not a simple discrimination task and involves placement or categorization in the absence of a well-graded stimulus series, such judgments are "influenced by the whole background of similar stimuli which constitutes the basis for an appropriate reference scale [Sherif and Hovland, 1961,

p. 117." This reference scale is predominantly influenced by current social norms and the internal reference scales from past social experience. Therefore, research ascertaining social and emotional influences must be arranged to allow these forces to be manifested.

Sherif notes that

Social reference scales that individuals in human groups use in judging political, religious, ethical, and aesthetic matters cannot be gauged against an objectively graded stimulus series. They are psychosocial in origin and can be gauged against social realities [Sherif and Hovland, 1961, p. 137].

The individual's preferred category is one category within his reference scale.

This position within the scale represents his own stand on the issue and serves as a major anchor in judgment. If the issue is a significant one to him, he is willing to tolerate only slight deviation from this category and finds further deviation obnoxious. On a social reference scale, we may refer to the range of positions that includes an individual's stand and other positions that he will tolerate as his latitude of acceptance. Beyond this, other positions on the issue are rejected, and that range of positions is his latitude of rejection [Sherif and Hovland, 1961, pp. 13-14].

Attitude

Early attitude studies treated cognitive judgments as if they could be separated from the affective-emotional-motivational factors. Thus on survey questionnaires subjects were asked for their views, and the subjects replied, even if they barely had a transitory opinion, much less an

established attitude (Hovland, 1959). Since the preferred position of an involved subject becomes a salient anchor, the judgments of an involved subject are made with a more salient internal anchor than an uninvolved subject. Sherif and Hovland note (1961, pp. 146 ff) that studies of attitude change have resulted in change toward the communication, change away from the communication and no change at all. The view of the social judgment-involvement approach is that this is due to the relation between the position of the communication and that of the recipient. Contrary to the studies that are concerned only with amount of change, Sherif prefers an emphasis on the underlying processes and intervening events (discussion in Hovland, Janis and Kelley, 1953, p. 4).

Attitude studies which do not separate subjects with established attitudes from those without are vulnerable to mixed and confusing results. (Below one controversy concerning cognitive dissonance theory will be discussed as a case in point.)

Within limits of alternatives set by the structure of external stimulus conditions, motives bring about variations in perceiving, judging, and reacting to objects, events and people [Sherif, 1948, p. 412].

Even in simple psychophysical judgment research motives have been found to effect judgment. There is some experimental evidence that for normal subjects there is no simple,

one-to-one correspondence between what is perceived and "what is out there." Experiments have shown that judgment is affected by prior experience (Allport and Pettigrew, 1957; Riesen, 1950; Ittelson and Kilpatrick, 1951), the motivational relevance of the stimuli (Wittreich, 1959; Levine, Chein and Murphy, 1942; Schafer and Murphy, 1943; Postman, Bruner and McGinnies, 1948; Jenkin, 1957), physical stimulus context (Kohler, 1947), and the judgment of others in the experiment or in the subject's reference group (Sherif, 1935; Asch, 1951, 1952, 1956; Crutchfield, 1955).

Since "cognitive" and "affective-motivational" processes interact in complex ways, even in these experiments using concrete physical stimuli, a rigid separation of cognitive and motivational processes in research using social stimuli is not defensible (Sherif, Sherif and Nebergall, 1965, p. ix). Social judgments are affected by all of the variables affecting judgments of more concrete stimuli, but social norms and influences within the organism itself produce greater judgmental variance.

One judgment made about an ego-involving stimulus can influence another judgment about that stimulus, i.e., the placing of a stimulus in one category may affect how one places it in a different type of category. For example, if a communicator is categorized as very deviant, this may

influence whether he is categorized as a person to whom one should listen. If one judges a statement to be repugnant, other judgments about that statement are likely to be biased by that judgment (Sherif and Hovland, 1961, pp. 101-110; Hovland and Sherif, 1952; Kelley, Hovland, Schwartz and Abelson, 1955; Sherif and Hovland, 1953).

Reaction to a message or other communication reflects a judgment process which includes its evaluation (favorable or unfavorable) as well as its categorization as similar to or discrepant from one's own stand. If he has an established stand on the topic, the person's subsequent actions relative to the message are not independent of his judgments. . . . Therefore, the social judgment-involvement approach does not view evaluation, categorization, and subsequent behavior as events that are independent of one another (Sherif, Sherif and Nebergall, 1965, p. ix).

Many of the contradictory findings in attitude research can be clarified by treating the evaluations underlying attitude as a single process of judgment formation. Judgments are made according to multiple anchors. To the degree a subject is uninvolved in a topic, his answer to a questionnaire item or experimental judgment will be influenced by anchors other than his preferred position. Some contradictory findings of the effect of persuasive communications can be clarified with this analysis (Sherif and Hovland, 1961, pp. 146 ff). The subject who is uninvolved or presented with a highly structured situation will be more influenced by external anchors, social and physical (Sherif, 1967) than a subject who is highly involved. The greater

the discrepancy between an uninvolved subject's own position or expectations and the experimental stimulus, the greater will be the attitude change toward the stimulus. If a truly discrepant communication is presented to an involved subject, however, the communication will be less effective, and will be displaced in categorization away from the position of the subject. A "contrast" will be seen between the subject and his view and the communication and communicator.

A different viewpoint is provided by the "cognitive dissonance" theory (Festinger, 1957). According to this theory communications discrepant from one's own view create dissonance, which motivates the organism to adopt one of several alternative actions: change toward the communication, change the communicator's position or denigrate the source of the communication. Attitude change is seen as a linear function of the amount of discrepancy. In recent formulations the proviso is added that this is for subjects who are involved. However, there is in that framework no theory or operational measure of ego-involvement (Sherif and Sherif, 1967, p. 134; Sherif and Cantril, 1947). The cognitive dissonance approach predicts that a communication highly discrepant from one's own position will produce more change toward the position of the communication than a moderately discrepant one.

The social judgment-involvement approach conceptualizes the various reactions to a communication as

interrelated aspects of a judgment process in which the person places the communication is discrepant in some degree, evaluates it (praising or debunking it), and experiences pleasure or irritation at being exposed to it [Sherif, Sherif and Nebergall, 1965, p. x].

Predictions of attitude change and communication evaluation based on derivations of the judgment process are quite precise.

In our approach, a communication that concerns an issue in which the person is highly ego-involved (hence, important to him) is categorized by the person using his own position as a standard for comparison. Thus, proportional to its discrepancy, the communication is seen as more discrepant than it is, is evaluated unfavorably, and arouses irritation. When a communication is extremely discrepant, change toward that communication is never a possible alternative for a highly involved person. In such circumstances, our formulation predicts resistance to change and reentrenchment in the person's own position. To the extent that the person is less ego-involved in the issue (it is less important) and that the advocated position is not extremely discrepant, the person will displace the communication closer to his own position and react to it more favorably so that the possibility of attitude change toward communication is greater [Sherif, Sherif and Nebergall, 1965, p. x].

By adopting the strategem of treating the evaluations underlying attitude as a single process of judgment formation Sherif and his colleagues avoid the need to adopt a special explanation for each "separate alternative" in terms of individual differences. The parsimony and completeness of the Sherifian framework offers advantage in social psychological research. Moreover, Sherif (Sherif and Hovland,

1961) cites evidence that the relation between attitude change and distance from the subject's own position is curvilinear and not linear. The linear result obtains only when the parameters do not include truly discrepant communications (e.g., Segall, 1959) or subjects that are ego-involved (Sherif and Hovland, 1961, p. 167 ff; Hovland and Pritzker, 1957; Freedman, 1964; Manis, 1960).

Involvement in this context means that the subject has an attitude which is important to his view of himself (Sherif, Sherif and Nebergall, 1965, pp. 68 ff, 181). Such arousal might be equivalent to the physiological arousal produced by an intrinsically important issue. However, arousal created by an extraneous experimental manipulation does not insure that the subject has an attitude or is involved in the topic. A suddenly aroused subject who has not been ego-involved in the topic would not be expected to have salient internal anchors on the topic (Sherif and Hovland, 1961, pp. 171 ff, 196).

Social Judgment-involvement Research

In this section two studies will be discussed: the prohibition issue in Oklahoma (Hovland, Harvey, and Sherif, 1957) and the 1956 Presidential campaign (Sherif, 1960; Sherif and Hovland, 1961). The social-judgment research has been summarized in Sherif and Hovland (1961, pp. 131 ff),

and Sherif, Sherif and Nebergall (1965, pp. 23 ff). More recent research is discussed in Sherif and Sherif (1967).

The same paradigm was used in both experiments. In the first of two sessions data were secured on the subjects' most acceptable position and other positions they would accept (latitude of acceptance), the position most objectionable and other positions they rejected (latitude of rejection) and stands which were neither accepted nor rejected. In the second session the subjects heard a tape recording of a speech advocating a stand. There were three speeches advocating varying positions which were played to different groups. The position of the subjects was then reassessed. The position of the communications on both issues ranged from one end of a continuum to the other, with a total of nine possible positions.

Subjects with extreme positions tended to reject positions not in their latitude of acceptance; moderate subjects tended to be indifferent toward positions removed from their own. Subjects with extreme positions had a wider latitude of rejection than those with more moderate positions, and the latitude of rejection of subjects with extreme positions was greater than their latitude of acceptance. The range of acceptance did not differ between moderate and extreme subjects.

The following specific hypothesis was advanced for subjects for whom their own stand constituted the main anchor:

When the position in communication is susceptible to alternative interpretations, displacements of the position advocated will vary as a function of its distance from the subject's stand. The greater the discrepancy between the subject's own stand and the position advocated, the greater the displacement away from the subject's position ("contrast effect"). When only a small discrepancy in positions exists, there will be a tendency for displacement toward his own stand ("assimilation effect") [Sherif and Hovland, 1961, p. 149].

This was confirmed, supporting Sherif's theory that reaction to the communication and the perception of the communication would vary according to the subject's own position. Wet subjects thought the dry communication was drier than it was and subjects near the communication were more accurate in their judgment than more distant subjects. Another study found that undisguised extreme communications are not appreciably displaced regardless of the position of the subjects (Sherif and Hovland, 1961, p. 153). It was also found that subjects rated communications close to their own as fair and impartial, and distant communications unfair and biased. This confirms an earlier prediction by Hovland, Janis and Kelley (1953).

Both studies also confirmed the experimenters' hypothesis concerning attitude change. With the subject's own stand as an internal anchor, the introduction of a distant standard (communication) was predicted to have little effect. A standard close to his own position would be expected to be assimilated into the latitude of acceptance. The following hypothesis was advanced:

With small discrepancies between the position of communication and that of the subject, changes of opinion in the direction advocated by communication will occur. With large distances between the stands taken in communication and by the subject, opinion changes will be infrequent. Changes in the direction opposite to that advocated by communication will be more frequent when the discrepancy between the stands taken in communication and by the subject is large [Sherif and Hovland, 1961, p. 157].

Subjects in groups with extreme views were much less likely to change toward the distant communication than moderates, and then they mostly increased the number of "also acceptable" items, rather than change preferred position.

There was little attitude change in the election study (Sherif and Hovland, 1961, p. 163). It was found that subjects with moderate positions change more frequently toward communications advocating an extreme position that was near their own position than one advocating an extreme position remote from their own. The moderate subjects changed their most acceptable position more than those with extreme views ($p < .001$).

Summary

Clinical psychology has been concerned with the influence of emotions and beliefs on judgment. Experimental approaches to the study of judgment in normal subjects were reviewed. Psychophysical experimenters have studied judgment by minimizing affective factors. This is done by

using noncontroversial stimuli, well structured situations, well-graded series of stimuli, and by providing clear criterion stimuli (anchors). An alternate approach has been provided by Muzafer Sherif. His approach, the social judgment-involvement approach, involves the use of concepts and methods borrowed from the psychophysical approach and adding variables to account for the differences that occur in situations of interest in social and clinical psychology.

Sherif's strategy is to focus on the process underlying attitude formation. He defines attitude as a set of categories for evaluating a stimulus domain and for relating to subsets within that domain with varying degrees of positive and negative affect. Judgments toward controversial stimuli are made with sets of categories, the establishment and application of which are determined by anchors, as in any judgment process. The judgment of controversial stimuli, however, is heavily influenced by social variables and by the preferences of ego-involved subjects. These influences are conceptualized as additional criteria or anchors. Uninvolved subjects do not have a strong personal preference to serve as an anchor.

To Sherif the process of making judgments toward communications is unitary and involves categorizing and making evaluative judgments of communication and communicator. Communications near anchors are seen more accurately

than communications distant from anchors. Involved subjects have strongly held beliefs that act as anchors. Communications advocating positions at marked variance from a strongly held belief are seen as more distant than they in fact are. The more vague the communication and the fewer the external anchors, the more the judgments of involved subjects are influenced by their own view. Conversely, the uninvolved subjects lack such an internal anchor, and are influenced to a greater extent by social anchors and specific characteristics of the communication or communicator.

MULTIPLE ANCHORS: THE PRIMACY-REGENCY ISSUE

In life out of the laboratory, people are exposed to multiple communications on the same topic. There has been a welter of studies using more than one communication or giving contradictory information within one communication. Most of the studies have been concerned with whether there is an advantage to the first or last of two communications. This literature has been extremely contradictory and confusing. Sherif states that: "There is little doubt that these conflicting findings could become coherent if researchers would consider the degree of involvement of their subjects in the controversy [Sherif, Sherif and Nebergall, 1965, p. 1837]."

Lund (1925) measured the attitude of three groups of his regular classroom students on three political issues. Each group was given a written communication for and against an issue, with the order counterbalanced. Attitudes were assessed after each communication and it was found that the first communication had an advantage. Lund called this the Law of Primacy in Persuasion. Kowner (1936) confirmed these findings.

Other researchers, however, failed to confirm this. Cromwell (1950) found no order effect using weak

communications, and with strong communications he found that the second communication had the advantage--a recency effect. Hovland and Mandell (1957) replicated Lund's experiments, and found that only one of three groups had a primacy effect. They conducted an additional study using two issues that were more current. One group had a weak primacy effect ($p < .08$), three groups had a recency effect (one with $p < .01$).

Hovland and Mandell commented that Lund had not found a primacy effect with all of his groups, and that since he had not published his actual data or statistical results, the data could not be reanalyzed. Moreover, Lund's experiments were confounded by his being the communicator and the subjects' teacher. It is entirely possible that the first communication was more effective by virtue of the students' expecting to learn this communication from their teacher, and that they became confused when the second communication contradicted the first.

A review of the many contradictory findings and theories relating to order effects would be beyond the scope of this proposal (Hovland, Mandell, Campbell, Brock, Luchins, Cohen, McGuire, Janis, Feierabend, Anderson, 1957). A delineation of some of the salient issues in order-effect research, however, is relevant to the current study.

Salient Issues in Order-effect Research

Activities between the First and Second Communications

Different theorists have predicted different effects of activities occurring between the first and second communications. Since Lund had a questionnaire between the communications, Hovland and Mandell postulated that primacy was increased as a result of the questionnaire's committing subjects to a definite impression of the first communication. This prediction was not confirmed. However, Hovland, Campbell and Brock (1957) found that public commitment did enhance the primacy effect.

Luchins, arguing from a position based on einstellung (set), predicted that intervening activities would minimize the primacy effect. Luchins (1957a, 1958) used communications that gave a description of the behavior of a fictitious person. In a series of experiments using several dependent measures, he found that information presented first was most effective. Luchins' experiments provide striking support for a primacy effect.

Luchins (1957b), in another experiment, gave subjects several conditions and successfully used set theory to predict the degree to which the conditions reduced primacy. The conditions included: prior warning against premature judgment, warning between the communications,

a task between communications involving the manipulation of numbers, and no task or warning. Luchins (1958) has also shown, contrary to Hovland (Hovland and Mandell, 1957; Hovland, Campbell, and Brock, 1957), that a questionnaire following the first persuasive communication would produce a recency effect. Schultz (1963) and Lana (1964a, 1964b) support these results, although they explain them differently. Insko (1964) and Miller and Campbell (1959) also found a recency effect with time intervals between communications. Rosenbaum and Levin (1968) found a recency effect when subjects were aware that there would be two contradictory statements.

The evidence suggests that delays between communications decrease the effect of the first communication, whether the delay is occupied with questionnaires, experimental warnings, irrelevant tasks or waiting. The only exception seems to be public commitment between communications. Luchins' reasoning (1958) that the interpolated activities reduce primacy by "completing" the first "set," leaving the subjects free to be influenced de novo by the second communication, seems as viable as any at the present time. This leaves Lund's results unexplained (see Rosnow, 1966). The best guess at this time seems to be that the contaminating factor of Lund's being teacher and communicator was the significant variable.

The Number of Communicators

Another variable that has been shown to influence order effects is whether the communications are presented by a single or by separate communicators. Primacy has most consistently been found using a single communicator (Lund, 1925; Luchins, 1957a, 1957b; Janis and Feierabend, 1957; McGuire, 1957; summary, Hovland, Mandell, Campbell, Brock, Luchins, Cohen, McGuire, Janis, Feierabend, Anderson, 1957, p. 141). The discrepancy in such situations seems to lend added weight to the initial communication. The results with two communicators are more varied.

Cromwell (1950) and Hovland and Mandell (1957) did not find a primacy effect. Rosnow (1962) created a primacy effect with two communicators by reducing experimentally created anxiety immediately before presenting the communications. When the anxiety was reduced after the communications there was a recency effect. Rosnow interprets this according to laws of learning (contiguity). Hovland, Campbell and Brock (1957) had two communicators and a primacy effect by eliciting a commitment effect following the first communication. Rosnow and Lana (1965) found a primacy effect with two communicators when the subjects had information about the topic prior to hearing the communications. Manis and Blake (1963) found displacement toward an initial (immunization) communication using prestigious sources.

Familiarity, Salience, Prior Knowledge

Schultz (1963) assumed that people seek activation and that communications have greater influence when they arouse subjects ("sensory-variation hypothesis"). He had four postulates. He supported the notion that primacy ("true primacy") occurs on the first presentation of a communication (Postulate One), i.e., when it is novel. To Schultz this influence is due to the arousal value of the first stimulus. Set theorists (Asch, 1946; Anderson, 1965; Anderson and Norman, 1964; Luchins, 1957a, 1957b, 1958) also predict a primacy effect on the very first presentation of the communication (low familiarity) due to the forming of a set. Using a fictitious person, Luchins could be sure that the recipient of the communication did not already have a frame of reference or set and thus that the first communication would establish a set. On the other hand, those using controversial public issues cannot be sure that the recipient does not have a set resulting from prior information. Thus, one reason for Hovland and Mandell's failure to find a primacy effect may have been the presence of prior information (frame of reference) which superseded the effect of the first communication.

The set theorists and Schultz also agree on two causes of the recency effect: Postulate Two: when the subject gives an opinion following the first communication,

added influence will accrue to the second communication because the subject will seek novelty. Postulate Three: a task between communications will dissipate the activation of the first communication, and, therefore, increase the influence of the second communication.

There is more controversy over the effect of what Schultz calls "experimentally-induced primacy studies." Since such studies, e.g., with controversial political issues, are not truly novel presentations (less activation occurs), there may be prior knowledge and set; hence, the first communication shows less influence than in "true primacy" studies. This is Schultz's fourth postulate. To the degree that activation is increased, there will be a primacy effect. Thus, Schultz predicts a primacy effect with high familiarity, interest or salience. Set theorists do not adequately handle this phenomenon.

Rosnow and Goldstein (1967) manipulated prior knowledge (familiarity) and prominence or distinctiveness of the subject's impression just prior to receiving the communications (salience). They repeated Luchins' experiment with subjects' judgments of a person on the basis of communications containing a description of a behavior sequence, only they used a well-known football player rather than a fictitious person. Where Luchins found a primacy effect, Rosnow and Goldstein found a weak over-all recency effect,

and an association between recency and the familiarity of the recipients with the football player. Thus prior knowledge was thought to lead to a recency effect. Although Rosnow and Goldstein interpret set theory as predicting that a negative-positive order of information presentation would elicit more negative change than a positive-negative order of presentation, the present writer does not agree. The set prediction would be made only if there were no prior set. This does not cover the Rosnow and Goldstein situation.

There is an apparent conflict between Schultz's prediction of a primacy effect with high familiarity and Rosnow and Goldstein's finding of a recency effect with prior knowledge. In addition, Thomas, Webb and Tweedie (1961) found no difference in primacy effect between groups experimentally provided with information (familiar) and groups not given information (unfamiliar). Rosnow and Goldstein attempt to account for this difference with their "U-curve hypothesis." They postulate a curvilinear relationship between probability of occurrence of primacy and recency and the familiarity of the subjects with the content of the communication. According to this view, very high or almost negligible levels of familiarity both result in an increased probability of a primacy effect. A moderate degree of familiarity is postulated to result in a recency effect. Lana (1961) and Rosnow and Lana (1965) obtained primacy

effects with very high familiarity and recency with moderate familiarity.

Although Lana controlled familiarity by giving various amounts of information to the subjects before exposing them to the communications, these studies dealt with political issues and no group could be assumed to be unfamiliar with the topics. Therefore, even the low familiarity group may have had a prior set. Asch (1946), Luchins (1957a, 1957b) and Anderson (1965) obtained primacy with very low familiarity or total lack of familiarity. Since Rosnow and Goldstein (1967) obtained a recency effect with familiarity, this must be assumed to represent moderate familiarity if the U-curve hypothesis is correct. Schultz obtained primacy with high familiarity. However, as appealing as this hypothesis is, it has little explanatory power in the absence of an independent measure of familiarity that can be obtained across experimental conditions. If the level of familiarity in Rosnow and Goldstein's experiment cannot be compared with that in Schultz's, the theory can explain the facts only post hoc and with circular definitions.

Set theorists and Rosnow and Goldstein agree that the initial communication assumes greater importance when salience is low. In their 1967 article Rosnow and Goldstein report an experiment in which they repeated their experiment concerning judgments about the football player--but after the football season was over. During the season (high

salient) they had found that negative communications in the second position were more effective in producing negative change. They predicted that under low salience (off season) the set prediction would hold and the negative communication would be more effective in the first position. This was supported only in the high familiarity group ($p < .0003$). Also, Lana (1962) found that high controversial topics produce a primacy effect and that medium interest topics produce a primacy effect, but that high interest topics produce no order effect.

Social Judgment-involvement and Order Effects

The existence of such confusion suggests the need for a fresh vantage point and the control of unanalyzed variance. The social judgment-involvement approach may provide that vantage point and the difference between ego-involved and uninvolved subjects may account for much of the uncontrolled variance. This study is only a beginning in the study of the relationship between order effects and ego-involvement.

According to the present model, the order effects problem can be viewed as a problem of multiple anchors. Judgments involve categorizing a stimulus using several anchors as a guide. These anchors are provided by the physical stimulus and its manner of presentation, social norms and internal anchors. With two communications there are anchors or guides provided by both communications and

the stimulus conditions include the order of presentation. For example, Luchins (1958) has pointed out that a communication which is very clear or too vague will not show a primacy effect. The judgment-involvement approach would state that a communication containing insufficient clarity would not serve as an adequate anchor, and subjects would form their frame of reference on the basis of internal anchors and social norms.

The judgment of multiple communications will include judgments, perception, and evaluation of communicator and communication. Order effect research to date has focused on attitude change to the relative neglect of displacement and evaluation of communicator. Neglected aspects of judgment with multiple communications are emphasized in the present study. If the communications are definite enough to provide anchorage, but sufficiently lacking in clarity to allow displacement, judgment will depend on the frame of reference of the subject and the social atmosphere. While the former is of concern here, the latter is in need of further research.

The key to the internal anchorage issue is ego-involvement. Most of the studies in the area assume the presence of an attitude by asking survey questions which elicit an opinion, without considering the importance of the issue to the subject. Only to the degree the subject is ego-involved will he have a frame of reference which will be

conducive to judgment distortions. The general social controversy over an issue does not prove that any particular subjects are ego-involved nor that they are involved equally. An uninvolved subject is not likely to have thought through the issue and is more likely to be swayed by a position effect and changed by discrepant communications. The intervening questionnaire, a matter for systematic investigation with the present model in future research, is postulated to have a differential effect depending on the involvement of the subject. In summary, order will be a more important variable for low-involved subjects than high-involved subjects.

Ego-involvement should handle the variance covered by subject interest and topic controversy with increased precision. However, even if the present experiment has positive results, there will remain to be spelled out the exact relation between ego-involvement, prior information and familiarity per se, and salience. Presumably, ego-involved subjects have a more salient attitude, although this might be altered by experimental manipulations assuring salience of certain subjects who may not have had a salient view prior to the manipulation. It is possible that familiarity without involvement affects order effects. Future research using ego-involvement and familiarity in the same experiment is warranted.

Judgments are made by the contrast and assimilation of stimuli in relation to anchors. To the extent that the subject has an attitude important to himself, displacement will be made with reference to the subject's own attitude and neither the first stimulus nor the second can be expected to have clear-cut anchor properties which would supersede the internal anchor. To the degree the subject lacks such an internal standard, the judgment will be made with the first communication serving as anchor. When the second communication is discrepant from the first, the model predicts contrast in judgment and negative evaluation of the second communicator and communication.

When the first communication is near to the subjects', and the second distant, the primacy effect is expected to be enhanced. When the first communication is discrepant from the opinions weakly held by a subject (uninvolved) the two positions will be seen as closer than they are in fact. The first communication will be assimilated toward the subject's own position, which will minimize the contrast which prevails with the second communication (near the subject's). No order effect is predicted with this interaction.

There are two studies which are relevant to this particular interaction effect (order by discrepancy). Janis and Feierabend (1957) used a single communication which

advanced a pro civil defense position while admitting some con arguments. The pro position was initially favored by an overwhelming percentage of the subjects. The communication was low in salience and the experiment was designed to give the communicator high prestige. It was found that a pro-first order was more effective than a con-first order (primacy). A corresponding effect in the writer's experiment would involve increased displacement and rejection of the second communication when the first communication was the near one. While Janis and Feierabend reason that the pro communication motivates approach behavior and the con motivates avoidance behavior, the present writer reasons from the social judgment involvement model.

McGuire (1957) used communications containing predictions that specific pleasant and unpleasant changes from status quo would occur. The pleasant first order resulted in more acceptance of the communicator's position, hence, McGuire reasoned that positive reinforcement of the communicator occurred which led to increased attention to the communications. The present experimenter predicted that increased attention would result in systematic displacement of the second communication, whereas subjects not concentrating were expected to produce more random responses which would tend to cancel out. The far-near order would decrease attention and correspondingly produce less displacement and less extreme evaluation of the second communication.

Summary

Many experimenters have tried to determine the effects of multiple communications on the judgment process. An early attempt was made by Lund (1925) who found that the first of two communications had an advantage. Subsequent research revealed that the effects of multiple communications was very complex and a simple primacy effect was not supported. Experimental evidence indicates that any activity or time interval between the two communications increases the influence of the second communication. The only exception to this seems to be that a public commitment to a position after the first communication seems to increase the influence of the first communication.

Another variable that was found to effect the relative influence of the two communications is whether they are delivered by one or two communicators. Experiments using a single communicator have consistently found a primacy effect. Experiments using two communicators have had mixed results.

The relative influence of the two communications greatly depends on how familiar the subject is with the topic, how much prior knowledge he has and how salient the topic is for him at the time of the experiment. The first of two communications on a topic that is truly novel for the subjects is more influential than the second communication.

A subject very familiar or interested in a topic may also show a primacy effect because of the activation of that interest by the first communication. Rosnow and Goldstein (1967) predict a primacy effect with very high or very low familiarity or interest and a recency effect with moderate familiarity or interest (U-curve hypothesis).

The field of order research has been quite confusing with experiments yielding results contrary to virtually any generalization. The present experiment is seen as a first step toward accounting for some of this variance by taking into account the ego-involvement of the subjects. Very involved subjects are unlikely to be influenced by order since they have strong guidelines for judging that are provided by their internal anchor (own position). Such involved subjects are, on the other hand, more likely to have a differential reaction to the near and far communications. Uninvolved subjects are most likely to show the reverse. Detailed predictions derived from this attempt to use the social judgment-involvement theory to clarify communicator's research are provided in the Predictions section.

THE PRESENT STUDY

Contributions

The present study made several changes from past studies in the social judgment-involvement approach.

Change in Type of Attitude Studied

Carolyn Sherif (Sherif, Sherif and Nebergall, 1965, pp. 183 ff) conducted unstructured interviews to determine which topics were ego-involving to undergraduate students. She found that "none of the topics mentioned spontaneously in the interviews was a controversial social issue [Sherif, Sherif and Nebergall, 1965, p. 183]." She found that the issues of personal importance clustered around interpersonal relations. She states: "How controversial a topic is to the individual is not perfectly correlated with the amount of public controversy surrounding the issue [Sherif, Sherif and Nebergall, 1965, p. 184]." This points to the need to study attitudes toward personal behavior in interpersonal situations. The writer's clinical observation led to an independent judgment that attitudes toward interpersonal situations are more significant determinants of the behavior over which patients are in conflict than attitudes on political issues. In studying the process of expressing

attitudes, Sherif has focused on subjects who are ego-involved in public issues. The writer's strategy has been to focus on attitudes toward personal behavior in interpersonal situations.

Sherif (1948, p. 580) gives several examples of social attitudes experienced by individuals in personal terms. "My religion. . . ." "I am a Democrat." These indicate a stable mode of response of the organism. Such attitudes connect personal identity and attitudes on public policy. However, there are ego-involving attitudes which do not involve attitudes toward social policy or group identifications. These may involve a personal "code" of behavior which is not represented in statements in the third person, nor by statements in which the person's attitude consists of identity with a specific group.

Attitudes can be placed along a continuum from the most personal to the most public. Some attitudes refer to belief that all people in society should belong to a certain group or adhere to a certain standard--or incur formal sanctions. Other attitudes refer to a belief that individuals in general should behave a certain way or that it is desirable for people in general to belong to a certain group--but without formal sanctions. Some attitudes refer to the public (political) activities of one person. Other attitudes extend only to the personal behavior of one

individual. The following statements are examples of three different points along the continuum:

1. The government should adopt measures to encourage women to be housewives.
2. Women should be housewives.
3. I should be a housewife.

Social judgment-involvement research has used the closed shop issue (Sherif, Hovland and Volkhart, 1948); the prohibition issue in Oklahoma (Hovland, Harvey and Sherif, 1957); the Presidential election campaign of 1956 (Sherif, 1960; Sherif and Hovland, 1961); the Presidential election campaign of 1960 (Sherif, Sherif and Nebergall, 1965); farm-policy (Whittaker, 1965); right-to-work (Elbing, 1962); desegregation (La Fave and Sherif, 1962); reapportionment of state legislatures (Reich and Sherif, 1963); and the Vietnam War (Peterson and Koulack, 1969). On such well-debated social issues communications and positions of involved subjects tend to be well crystallized and accessible to measurement, and communications are readily found representing almost any degree of extremeness or moderation. The attitudes toward some interpersonal situations, e.g., sexual morality, have also been well debated. Attitudes toward such issues as personal assertiveness have not been formulated as clearly.

The writer proposes to investigate subjects' attitudes towards their own assertiveness in interpersonal

situations. Although these attitudes may not be entirely conscious, they are real and influential (Hovland, et al., 1953, p. 7). They are revealed in phenomenological reports and can be inferred from behavior. The writer had hypothesized that if such attitudes could be elicited, they would be subject to the same influences as any other attitude judgments and should have the same effect on cognitive judgments.

Eagly (1967) and Johnson (1966) report research on the effects of exposure to evaluations of one's self that are discrepant from one's own evaluation. Eagly gave subjects four situations and asked how they would probably behave. The subjects rated their own and a partner's responses on a scale of assertiveness. The responses were "rated" independently, and the subjects were exposed to the ratings, which were rigged to be discrepant from the subjects'. Half of the subjects received evaluations on the behavior of their partner and half received them on their own behavior. The latter were assumed to be highly involved, the former only minimally involved. The subjects rated the rater and the accuracy of the ratings. It was found that highly involved subjects changed more toward positive discrepancies than negative, and subjects with low involvement changed their ratings more toward the negative than the positive. Eagly concluded that college students are more attracted to a

negative evaluation of their fellow students than a positive one, and that the positive incentive value of a favorable rating was more attractive to involved subjects than the accuracy of their ratings. The perceived distance between rates and subject did not vary as a function of involvement.

Eagly assumed that being rated as more assertive is a positive incentive. There is no cited evidence that being seen as more assertive (positive discrepancy) is viewed positively by the subjects. There is the real possibility that subjects would view either an increase or a decrease of assertiveness beyond a certain latitude of acceptance as negative. Further, the fact that subjects would most likely be more involved in ratings of one's own behavior than in a temporary partner's does not mean that the subjects are ego-involved in ratings of their own assertiveness. Some subjects may not really be ego-involved, i.e., have an established attitude, on their own assertiveness.

Eagly's content was slightly different than that employed by the present writer. Eagly was concerned with "what would you do?" The present study deals with "how assertive is it acceptable for you to be?" While both topics involve personal rather than political issues, the topics are not identical. Some subjects might think that they would respond with a degree of assertiveness that is

less than preferred, either due to being less or more assertive than the subject believes is correct.

The present study deals with a continuum, with aggressiveness at one end and submissiveness at the other. Aggressive refers to being "full of enterprise and initiative; bold and active; pushing Webster's New World Dictionary of the American Language, 1955, p. 287." This includes Eagly's (1967) concept of assertiveness--the tendency to assert oneself in relation to other people. Submissiveness refers to submitting without resistance, being docile or yielding (Webster's New World Dictionary of the American Language, 1955). Eagly refers to this as the tendency to behave dependently and weakly (1967).

Johnson (1966) had subjects rate themselves on fifteen bipolar adjectives. Subjects were then exposed to an expert's rating of themselves on these adjectives. The ratings were systematically varied so as to be discrepant from the subjects' ratings of their selves in varying degrees. Johnson found that discrepancy had a marked effect on the five alternative behavioral responses to the rating that were measured. The subject matter of the study was the "self" in general, adjectival form--and not one's attitude about specific behaviors. Johnson did not measure or manipulate involvement.

The current study focused on attitudes of the acceptability of concrete behaviors and not on "self" in general nor on how assertive one views oneself as being.

Change in Measure of Own Position and Displacement

Self-report questionnaires, with subjects responding with their general opinion, were not used in this study. Subjects were exposed to a number of concrete situations and asked which response of a number of possible behaviors they find most acceptable for themselves in that situation. At a second session the subjects were exposed to communications offering general guidelines for interpersonal behavior, and then were asked to state how the general communication would be applied in the same interpersonal situations as the subjects had previously been exposed to. The subjects' attitudes were reassessed using the same situations. It was hoped that this would elicit the subjects' attitudes on their own preferred behavior in such situations and the effects of such attitudes on judgment. The application of a general communication to a specific situation seems to relate more closely to judgments in personal life-situations than would placement on an abstract continuum.

As noted above, Eagly (1967) asked the subjects how they would behave. The questions were open-ended. The present study asked the subjects to mark their preferences

for behaviors: the questions were not open-ended, and as noted, dealt with acceptability and not probability. The situations used in this study covered a wider range of assertiveness than did the situations in Eagly's experiment. Eagly purposely used situations in which strongly assertive and strongly submissive reactions would be unlikely. The situations used in the present experiment will be discussed in a later section. Eagly used the following situations: being disappointed in a discussion group started by friends, perceiving unhelpful attitudes by a professor on a paper to be written, being unhappy with the way a club was going to spend money, taking a difficult course in college. Eagly chose these situations so the subjects' reactions would be moderate and the raters could be more extreme than the subjects. In the present study the subjects were encouraged to be more extreme, since these wider parameters are more likely to elicit the discrepancy reactions which Eagly did not find.

Change in Medium

Although there are numerous uses of written communications in attitude research, the social judgment-involvement approach seems to have exclusively used tape recorded oral communications. The use of a written communication is an innovation only in that it was used within the social judgment-involvement framework. It seems that there is a

tendency for attitude research to use reactions to a number of short items, descriptions of fictitious or real persons and adjective lists. Sherif (Sherif, Sherif and Nebergall, 1965, p. 147) notes the need to experiment with complex communications, but he cites only experiments with oral communications and one which uses combinations of three sentences that had been studied separately (Weiss, 1963).

Written communications are frequently important contributors to attitude formation. Psychological, sociological, psychiatric, and religious attitudes are often expressed in writing. Newspapers carry columns with such communications: "Dear Abby," medical and psychiatric columns, sermonettes, editorials, etc. Recently, published paperback books with social attitude messages have sold thousands of copies, e.g., Eric Berne's Games People Play, Everett Shostrom's Man the Manipulator, Norman Vincent Peale's The Power of Positive Thinking, etc. Judgments about them are made in terms of what the message says, what the concrete implications are, and in terms of the evaluation of communication and communicator. The use of such written communication adds a dimension to the social judgment literature. The writer hypothesized that even a clearly worded, written, general communication would be subject to great displacement when the subjects would have to apply the attitude of the editorial to a concrete situation not spelled out in the communication.

Ego-involvement

The social judgment-involvement approach has used two measures of ego-involvement: membership in a relevant group, and profile of the latitudes of neutrality-rejection (involved subjects have smaller latitudes of neutrality and larger latitudes of rejection). Some attitude researchers have assumed ego-involvement was created by an experimental manipulation or by logical relevance of the topics for the subjects. This appears to be less precise than the measure used here: for each situation the subjects were asked how likely it is that this would occur to them, how central it would be in their life if it did, and how important it would be to them that they respond according to the preferences they set down in this study.

Independent and Dependent Variables

The combination of independent and dependent variables proposed have not previously been combined into a single study. The writer studied the judgment of a communication (displacement), judgment of a communicator, and attitude change as a function of degree of involvement, distance between subject and communication, and the order of presentation. The last independent variable has been a frequent topic of research in social psychology, sociology and political science, but has not been systematically

approached within the social judgment-involvement framework. It was hoped that the study of order in combination with involvement and distance would clarify some of the confusions in this area.

It might be predicted from experiments with the evaluation of communications, that the communicator would be negatively evaluated as the distance of the communication from the subject increases and as ego-involvement increases. Sherif theorizes that the communicator is debunked as a function of the same forces that lead to displacement of a communication (Sherif, Sherif and Nebergall, 1965, p. 227). The cognitive dissonance theorists treat debunking the communicator as an alternative to attitude change rather than as part of a single judgment process (Festinger, 1957). Although there has been research on the formation of attitudes toward a person on the basis of adjective lists (Asch, 1946), short descriptions of their behavior (Luchins, 1957a), and their rating of the subject (Eagly, 1967), this research does not provide definite data on the evaluation of a communicator without any cues except a written communication advocating a position. Evaluation of the communicator was measured by Semantic Differential scales.

Eagly and Manis note that "the effects of involvement upon the recipient's evaluation of the communicator and

his message have not been studied systematically [Eagly and Manis, 1966, p. 484]. In the Eagly and Manis study, junior high school subjects were exposed to two communications that advocated stricter control of teenagers by adults, a position not in agreement with the view of most subjects. One communication talked of reducing male delinquency and was assumed to be ego-involving for male subjects. The other communication discussed mothers choosing clothes for their daughters, which was assumed to be ego-involving for female subjects. Subjects rated the communications and the communicator. The communicator was rated on two measures: how well-informed the communicator is, and whether the communicator had a good personality. The communicator was not seen or heard since the communication was in writing, and the communicator was not personally known to the subjects. Involved subjects rated the communicator lower than uninvolved subjects. Eagly and Manis had no individual measure of subject involvement in the issue, nor did they study the judgment of the communicator as a function of the distance from the position of individual subjects.

Pepitone (1950) has shown that subjects ascribe more power to board members that are friendly than those that are not. Manis (1961) has shown that subjects see communicators as agreeing with their own position if the communicators have enough prestige regardless of the characteristics of

the communication. The writer hypothesized that a communicator with views close to the subject's would be seen as more powerful and active than a communicator more distant from the subject. In addition, the experimenter hypothesized that a communicator discrepant from the subject would be negatively evaluated. Involved subjects were predicted to show these effects more strongly than those not ego-involved.

Predictions

The following specific predictions were made by using the social judgment-involvement paradigm in conjunction with the experimental findings that have been reviewed.

Attitude Change

1. Involved subjects will show less attitude change toward the distant communication than uninvolved subjects. This is due to the distant communication's being at marked variance from the strong internal anchor of the involved subjects.
2. Subjects will change more toward the distant communication when it is in the first position than when it is in the second position. This effect will be increased for uninvolved subjects. When the distant communication is in the second position, it will be following the strong anchor resulting from the near communication reinforcing

the internal anchors of the subjects. Uninvolved subjects were expected to be influenced more by order than involved subjects, since the uninvolved subjects lack a strongly held belief of their own to use as a standard (anchor).

Application of Communication

1. Involved subjects will apply the communications differently than uninvolved subjects. Involved subjects were expected to show more systematic displacement of the communications than uninvolved subjects since they would be more influenced by an internal anchor.
2. Uninvolved subjects will show differential application of the first and second communication regardless of distance. Involved subjects will not have this effect. The first communication will become an anchor to subjects lacking an internal anchor and cause greater displacement of the second communications.
3. Subjects will apply the far communication differently than the near communication. This effect will be increased for involved subjects. The far communication will be seen as more extreme, especially by subjects whose internal anchor is particularly strong.

4. Subjects will judge the far communication more distant when the far communication is in the second position than when it is in the first position. This effect will be increased for involved subjects. This will occur because the far communication in the second position will follow the reinforcement of the subjects' internal anchor by the near communication. Since the internal anchor is stronger for involved subjects, the far communication in the second position will be seen as more extreme in comparison to this far communication in the first position for involved subjects than uninvolved subjects.
5. Subjects will judge the communications more discrepant from each other when the far communication is in the second position. This effect will be increased for involved subjects. Since the far communication is expected to be judged more extreme in the second position, especially by involved subjects, the difference between communications should be greater than when the far communication is in the first position and judged less extreme.

Intensity of Judgment of Communicator

1. Involved subjects will have more intense associations to the communicators than uninvolved subjects. Involved subjects will have more positive associations to the near communicator and more negative association to the far communicator leading to greater over-all intensity judgments.
2. Uninvolved subjects will have more intense associations to the first communicator. Involved subjects will not have this effect. Uninvolved subjects will read the first communication without having given the topic a great deal of thought and will, therefore, make more extreme judgments about the first communicator. When the uninvolved subjects read the second communication, they will be more prepared and have more moderate reactions. Involved subjects will not be influenced by order because they will be guided to a greater extent by their own position (internal anchor).
3. Subjects will have more intense associations to the far communicator than the near communicator. This effect will be increased for involved subjects. It was found in the pilot studies that

the far communicator elicited vehement comments whereas the near communicator did not. Distance should effect subjects who have internal anchors more than those who do not.

4. Subjects will have more intense associations to the distant communicator when the distant communicator is in the second position than when it is in the first position. This effect will be increased for involved subjects. The far communicator will seem more extreme when he follows a near communicator than when he is first in order and the contrast is not as clear. Involved subjects will have especially intense reactions when their own position is reinforced by the first communicator and this is followed by a communicator very much at odds with the involved subject's own position and that of the first communicator.
5. Subjects will have greater differences in the intensity of their associations to the first and second communication when the far communication is in the second position than when it is in the first position. This effect will be increased for involved subjects. Since the far communicator is expected to elicit a more

intense response in the second position, the difference between reactions to the two communicators should be greater than when the far communicator is first and the contrast is less clear.

Evaluative Judgments of Communicator

1. Subjects will have more negative associations to the far communicator than the near communicator. This effect will be increased for involved subjects. The denigration of the far communicator is expected when the far communication is classified as distant by the subject, and the subjects with stronger internal anchors will denigrate the author of the communication differing from his own strongly held position more than the subjects without a strong internal anchor.
2. Subjects will have more negative associations to the distant communicator when the distant communication is in the second position than when it is in the first position. This effect will be increased for involved subjects. The far communicator will seem to contrast more with the subjects' views when he follows the near communicator, especially for subjects with a strong internal anchor.

3. Subjects will have greater differences in the negativity of their associations to the first and second communicators when the far communication is in the second position. This effect will be increased for involved subjects. Since the far communicator will be more negatively evaluated in the second position, the difference between the two communicators should be greater than when the far communicator is seen first and less negatively evaluated. This should be increased for subjects with strong internal anchors.

Judgment of Potency of Communicator

1. Uninvolved subjects will judge the first communicator more powerful than the second communicator. Involved subjects will not have this effect. Since the first communication was expected to have greater influence on uninvolved subjects than the second communication, it was expected that it would be judged more potent.
2. Subjects will judge the near communicator more powerful than the far communicator. This effect will be increased for involved subjects. This prediction extends the findings of Pepitone (1950) and Manis (1961).

3. Subjects will have greater differences in how powerful they judge the first and second communicator when the far communication is in the second position. This effect will be increased for involved subjects. When the near communication is in the first position, involved subjects are expected to be very receptive and make high potency judgments. When this is followed by the far communication, the involved subjects will find it unsatisfactory in contrast to their preferred position and will judge it less potent. Therefore, there will be a great difference in how potent the two communications are rated. By contrast, when the far communication is in the first position, it is expected that involved subjects will have a mixed reaction. The near communication should then be well received as a potent solution to the issues raised by the far communication. Uninvolved subjects should not show this effect very strongly since the near communication in the first position does not reinforce a strong internal anchor and since the far communication should not be as farfetched to the uninvolved subject.

4. Subjects will judge the near communicator more powerful when the near communication is in the first position than when it is in the second position. This effect will be increased for involved subjects. This and the following prediction test the primacy effect for the far and near communicators considered separately.
5. Subjects will judge the far communicator less powerful when the far communication is in the second position. This effect will be increased for involved subjects.

Activity Judgments of Communicator

There was little evidence to guide the experimenter in predicting the effects of order, distance or involvement on activity judgments. This is much more exploratory than the other dependent variables.

1. Uninvolved subjects will judge the first communicator more active than the second communicator. Involved subjects will not have this effect.
2. Subjects will judge the near communicator more active than the far communicator. This effect will be increased for involved subjects.
3. Subjects will have greater differences in how active they judge the first and second communicator when the far communication is in the second

position. This effect will be increased for involved subjects.

4. Subjects will judge the near communicator more active when the near communication is in the first position than when it is in the second position. This effect will be increased for involved subjects.
5. Subjects will judge the far communicator less active when the far communication is in the second position. This effect will be increased for involved subjects.

METHOD

Two pilot studies and the experiment itself were conducted during part of two periods of class time in several undergraduate psychology, sociology and political science classes at The University of Arizona. Most of the subjects were freshmen and sophomores. Approximately 1,150 questionnaires were administered. Since responses for male and female subjects on the topic of aggression are quite different, only the data from the male subjects were used for this experiment. There were 363 males who attended both sessions and correctly completed the experimental tasks.

In the first session subjects were tested for their own position and degree of ego-involvement. In the second session subjects were exposed to two written communications and asked to apply the position of the communications, evaluate the communicators, and then they were tested for attitude change. A clear and standardized set of written and oral instructions were developed in the pilot studies so that when the experimental sessions were conducted, by two female assistants, instructions could be delivered verbatim with a minimum number of questions. The verbatim instructions were recorded on tape and this was used except

where the room was too large for the recorder to be heard and at the same time lacked a public address system.

The position of the subjects was tested by asking them to picture themselves in five hypothetical situations (Appendix A), such as:

Please imagine that you are planning to go out of town to visit relatives. At the last minute you decide you would rather spend the time with your steady girl friend/boy friend. You decide to surprise her/him and take her/him to a music festival you know she/he has wanted to go to but couldn't afford. You buy tickets and drop by her/his apartment without calling first. When you arrive you find her/him making love with a man/woman (that you don't know). Your girl friend/boy friend says heatedly: "I'm going to give it to you for spying on me."

After each situation the subjects were asked to choose which response they most preferred for themselves in that situation. There were seven responses (Appendix B) that formed a continuum from the most aggressive ("Attack using the strongest weapon you can find") to the most submissive ("Apologize and admit you are at fault"). After each situation the subjects were asked three questions that formed the measure of their ego-involvement (Appendix B): "How likely is this situation ever to happen in your life?" "If this situation happened to you" of how much concern would it be to you. "How important would it be to you that you do the right thing in such a situation?" There was a choice of five responses to each of the involvement questions.

In the second session, subjects read the two communications (Appendices C and D). The communications were 300-word statements ostensibly answered by "experts in human relations" to the question: "Doctor, what advice do you have on how people can function better in interpersonal situations." Half the subjects received the statements in one order, half in reverse order. The communications were written with a goal of equating everything except the course of action advised. Except for one communication advising more aggressive behavior and the other more submissive behavior, the only intentional differences between them were minor variations needed to make the communications appear to come from different people.

The communication was applied by asking subjects to choose which of the seven actions the communicator would advise in each of the five situations. The evaluation of the communicator was measured by using eleven Semantic Differential dimensions (Appendix E). Attitude change was tested at the end of the experiment by giving the original questionnaire, with the involvement questions eliminated.

In order to be sure subjects held beliefs near one communication and distant from the other, the most aggressive and submissive male subjects were used for data analysis. More subjects were selected in both the aggressive and submissive groups than would be used since they were to be divided into levels of involvement. To be sure the groups

really did differ on the level of their involvement, the aggressive and submissive subjects were divided into three instead of two groups and only the most involved and least involved subjects were used in the final analyses. This method of dividing subjects also insured that the statistical cells had an equal number of aggressive and submissive subjects. This procedure for dividing subjects and the actual number in each group was chosen before the data were collected in order to meet the needs of the design.

The preferred responses of the subjects to the five situations were summed. The 72 most aggressive and 72 most submissive subjects were separately divided into three groups on the basis of level of involvement. The 24 most involved of the high aggressive subjects and the 24 of the submissive subjects were combined into a high involved group. The 24 least involved of the high aggressive subjects and the 24 least involved of the submissive subjects were combined into a low involved group. The statistical analyses had an N of 96.

The order of the seven responses was validated by asking judges to rank order them from most aggressive to most submissive. A preliminary version was confirmed by 20 graduate students in psychology. They agreed with the experimenter's order with a median rank order correlation of 1.00 and a mean correlation of .954. The final

version was confirmed by ten clinicians and graduate students with a median rank order correlation of 1.00 and a mean correlation of .975.

Summary

Undergraduate students at The University of Arizona were tested in two experimental sessions. The most aggressive and submissive subjects were separately divided into three levels of involvement with the most and least involved being used for the statistical analysis. The subjects read two communications advocating different behavior ideals and then judged what behavior the communicators would advise in the five hypothetical situations. Semantic Differential scales were used to evaluate both communicators. The subject's own responses to the five situations were used as a measure of his starting and ending position. The communications were presented to half of the subjects in one order and to half of the subjects in the opposite order. The resultant statistical analysis had two levels of involvement and either two levels of order of presentation or two levels of distance between the subject's position and the communication.

RESULTS

All hypotheses were tested with one of two types of two-way analysis of variance. In one analysis (BS) both variables were between subjects. In the other analysis (RM) one variable was between subjects (involvement) and one was a repeated measure (order of presentation and/or distance of the communication from the position of the subject).

Attitude Change

The attitude change hypotheses were analyzed in a single two-way analysis of variance (Table 1). The experimenter predicted an involvement effect, an order-discrepancy effect and an involvement by order-discrepancy effect. As with all of the analyses, there were two levels of involvement. There were also two order-discrepancy groups: far-near and near-far, depending on whether the communication that was discrepant from the position of the subject was presented first or second. The dependent measure was the difference between each subject's beginning and ending own position score. Own position was measured by the sum of the most preferred of the seven responses to each of the five hypothetical situations. The data were converted into a scale in which 25 represents no change, each

unit of change toward the distant communication was added to 25, and change away from the distant communication ("boomerang" effect) was subtracted. No significant main or interaction attitude change effects were found. The overall mean was 25.901, i.e., with seven responses to choose from in each of five situations, there was an average change of only .961 positions per subject.

TABLE 1
BS Analysis of Variance Change
toward Distant Communication

Source	df	MS	F	P
Involvement	1	.33	.032	NS
Order-discrepancy ^a	1	22.45	2.149	NS
Interaction	1	7.65	.732	NS
Within cells	92	10.45		

^aFar-near compared to near-far.

Application of Communication

The application of the communication, or judgment the subjects made about what was implied in the communication, was measured by asking subjects to check the one response for each situation that the communicator would advise. The five judgments made for each communicator were summed. It was hypothesized that what view subjects attributed to the communication would vary with how discrepant the communication

was from the subjects' views. For example, the aggressive communication was expected to be seen as more extreme by submissive subjects than by aggressive subjects. In order to equalize the scores of subject ratings of the aggressive and submissive communications, the raw scores were converted into Z scores based on the scores of the entire subject population. The higher the Z score--regardless of sign, the more distant the subject judged the far communication to be from his own position. Thus the more extreme that a submissive subject judged the aggressive communication, the more extreme his raw scores were in relation to other subjects and the higher the Z score.

As predicted there was a very significant difference between the Z scores of the far and near communications ($p < .001$, Table 2). The far communication was judged as

TABLE 2

RM Analysis of Variance Application of
Communication: Distance and
Involvement

Source	SS	df	MS	F	P
Total	1226367	191			
Between subjects	620332	95			
Involvement (I)	1205	1	1205	.183	NS
Error (b)	619127	94	6586		
Within subjects	606035	96			
Distance (D) ^a	91219	1	91219	16.971	<.001
Interaction (I x D)	3988	1	3988	.734	NS
Error (w)	510828	94	5434		

^aFar communication compared to near communication.

more extreme than the near communication. No significant involvement or involvement by distance interaction was found.

The experimenter also reasoned that a communication first in order of presentation that states a position similar to that of a subject (near communication) would be an external anchor that strengthens the subject's internal anchor (own position). A subsequent communication discrepant from the subject's position would seem, by contrast, more extreme to the subject than if the same communication were presented before the subject's belief was strengthened by exposure to the near communication. However, in application of the communication no significant order or order by involvement interaction effects were found (Table 3). This was measured by comparing the Z score of the first and second communication.

TABLE 3
 RM Analysis of Variance Application of Communication:
 Order and Involvement

Source	SS	df	MS	F	P
Total	1226367	191			
Between subjects	620332	95			
Involvement (I)	1205	1	1205	.183	NS
Error (b)	619127	94	6585		
Within subjects	606035	96			
Order (O) ^a	4360	1	4360	.682	NS
Interaction (I x O)	361	1	361	.065	NS
Error (w)	601314	94	6395		

^aC₁ compared to C₂.

No difference in Z score of the far communication was found between subjects who had the far communication in the first position and those who had it in the second position (Table 4). It had been predicted that subjects receiving the near-far order of presentation would have greater differences between the Z scores of the near and far communications than those with the far-near order. No significant confirmation was obtained (Table 5). In short, order does not appear to have significantly influenced the application of a general communication to concrete situations.

Judgment of Communicator

Intensity of Judgment

Intensity of judgment was measured by the extremeness of answers to all the semantic differential scales regardless of direction. As predicted, involved subjects had significantly more intense associations to the communicators than uninvolved subjects ($p < .005$, Tables 6, 7, and 8).

No significant order or distance effects were found (Tables 6, 7, 8, and 9). No difference was predicted or found between the intensity of the judgments toward the first communicator compared to the second (Table 6). It was hypothesized that the far communication would be judged with more intensity and that involved subjects would show the effect more than uninvolved subjects. No confirmation

TABLE 4
 BS Analysis of Variance, Application
 of Far Communication

Source	df	MS	F	P
Involvement	1	.52	.515	NS
Order ^a	1	.29	.287	NS
Interaction	1	.01	.003	NS
Within cells	92	1.01		

^aFar C₁ compared to far C₂.

TABLE 5
 Analysis of Variance, Difference between
 Application of C₁ and C₂

Source	df	MS	F	Sig
Involvement	1	.03	.053	NS
Order-discrepancy ^a	1	1.70	2.616	NS
Interaction	1	.13	.203	NS
Within cells	92	.65		

^aFar-near compared to near-far.

TABLE 6

RM Analysis of Variance, Intensity of Judgment:
Order and Involvement

Source	SS	df	MS	F	P
Total	8169	191			
Between subjects	4591	95			
Involvement (I)	485	1	485	11.022	<.005
Error (b)	4106	94	44		
Within subjects	3578	96			
Order (O) ^a	51	1	51	1.425	NS
Interaction (I x O)	162	1	162	4.520	<.05
Error (w)	3365	94	36		

^aA communicator 1 compared to communicator 2.

TABLE 7

RM Analysis of Variance, Intensity of Judgment:
Distance and Involvement

Source	SS	df	MS	F	P
Total	8169	191			
Between subjects	4591	95			
Involvement (I)	485	1	485	11.022	<.005
Error (b)	4106	94	44		
Within subjects	3578	96			
Distance (D) ^a	76	1	76	2.059	NS
Interaction (I x D)	28	1	28	.759	NS
Error (w)	3474	94	37		

^aFar communicator compared to near communicator.

TABLE 8

BS Analysis of Variance, Intensity of Judgment
of Far Communicator

Source	df	MS	F	P
Involvement	1	405.55	11.084	<.005
Order ^a	1	12.44	.340	NS
Interaction	1	237.86	6.501	<.025
Within cells	92	36.59		

^aFar communicator 1 compared to far communicator 2.

TABLE 9

BS Analysis of Variance, Difference in Intensity
Judgments of Communicator 1 and Communicator 2

Source	df	MS	F	P
Involvement	1	29.96	1.219	NS
Order-discrepancy ^a	1	.31	.014	NS
Interaction	1	11.99	.542	NS
Within cells	92	22.12		

^aFar-near compared to near-far.

was obtained (Table 7). The experimenter predicted that subjects receiving the near-far order of presentation would show greater differences between the intensity of associations to the two communications. No significant main or interaction effects were found.

No differences were found between the intensity of judgment of the far communication in the first and second position (Table 8). As mentioned above the involved subjects did respond with greater intensity than uninvolved subjects ($p < .005$). The experimenter had predicted (hypothesis 4, p. 52) that involved subjects would especially show increased intensity of judgment to the far communication when it was in the second position. It had been reasoned that when the strong internal anchor of the involved subject was reinforced by the first communication, the subject would react with increased intensity to the second (far) communication. Although a significant interaction effect was obtained ($p < .025$, Table 8), it was in the reverse direction. Uninvolved subjects made more intense responses to the far communication in the second position, but the involved subject made more intense responses to the far communication in the first position. Involved subjects reacted with more intensity when the first communication diverged from their already strong internal anchor; uninvolved subjects reacted generally with much less intensity, but showed more

intensity to the far communication when their weak internal anchor was first reinforced by an external anchor (near communication). Involved subjects appeared to be sufficiently committed to their basic attitude to react intensely without any external anchor. In fact, answering the questions after the near communication when it was in the first position seems to have allowed the involved subjects to react to the far communication with decreased intensity.

It was reported (above) that involved subjects had more intense associations to both communicators than uninvolved subjects. No difference between the first and second communication per se was predicted or found (Table 6). It was predicted that the uninvolved subjects (but not the involved subjects) would have more intense associations to first communicator than the second communicator. A significant order by involvement interaction was found ($p < .05$, Table 6), but was not as predicted. Involved subjects had more intense judgments of the first communication and uninvolved subjects had more intense associations to the second communication. These results are similar to those obtained when the far communication alone was analyzed. (See preceding paragraph.)

Evaluation Judgments

Negative evaluation judgments were measured by a low score on semantic differential evaluative scales. Subjects

had more negative associations to the communicator who wrote the far communication than to the communicator who wrote the near communication ($p < .001$, Table 10). Although this was as predicted, the prediction that the effect would be increased for involved subjects was not confirmed, i.e., the difference in the evaluation of the two communications was no greater for involved than uninvolved subjects. The involved subjects had much more positive associations to both communicators than the uninvolved subjects ($p < .001$, Table 10) and even rated the far communicator significantly more positively than the uninvolved subjects ($p < .01$, Table 11). Although no advance hypothesis was offered in this area, one would intuitively expect the involved subjects to have less positive associations to a distant communication than uninvolved subjects. However, rather than reject opposing communications, involved subjects in this attitude area seem to have more positive associations to a relevant but discrepant communication, whereas uninvolved subjects show less enthusiasm for any communication on this topic.

The experimenter predicted more intense associations to the far communication when it was in the second position (discussed above), and also more negative associations to the far communication when it was in the second position (hypothesis 2, p. 53). The latter hypothesis was confirmed ($p < .005$, Table 11). It was predicted that this would be exaggerated for involved subjects, but no interaction effect was found.

TABLE 10
 RM Analysis of Variance, Evaluation of Communicator:
 Distance and Involvement

Source	SS	df	MS	F	P
Total	4339	191			
Between subjects	948	95			
Involvement (I)	190	1	190	23.56	<.001
Error (b)	758	94	8		
Within subjects	3391	96			
Distance (D) ^a	478	1	478	15.63	<.001
Interaction (I x D)	34	1	34	1.11	NS
Error (w)	2879	94	31		

^aFar communicator compared to near communicator.

TABLE 11
 BS Analysis of Variance, Evaluation
 of Far Communicator

Source	df	MS	F	P
Involvement	1	181.94	7.999	<.01
Order ^a	1	193.81	8.521	<.005
Interaction	1	6.79	.299	NS
Within cells	92	22.75		

^aFar communicator 1 compared to far communicator 2.

The experimenter also hypothesized greater differences in the evaluation of the first and second communicators when the far communication was in the second position. The dependent measure was the difference in each subject's evaluation ratings of the two communicators. The results were in the predicted direction ($p < .025$, Table 12), i.e., the subjects who received the far communication in the second position (near-far) had greater evaluative differences than subjects receiving the far communication first (far-near). It was predicted that there would be an order-discrepancy by involvement effect, but this was not confirmed, i.e., the difference between evaluation of the first and second communicators in the two orders of presentation did not differ according to how involved the subject was.

TABLE 12

BS Analysis of Variance, Difference between Evaluation of Communicator 1 and Communicator 2

Source	df	MS	F	P
Involvement	1	1.15	.045	NS
Order-discrepancy ^a	1	156.46	6.102	<.025
Interaction	1	24.37	.950	NS
Within cells	92	25.64		

^aFar-near compared to near-far.

Judgment of Potency

Potency was measured by a high score on the potency semantic differential scales. It was predicted that uninvolved subjects would judge the first communicator more powerful than the second communicator. However, no difference was found in the potency judgments made to the first and second communicators (Table 13). It was also predicted that while the uninvolved subjects would have this simple order effect, the involved subjects would not. Since there was no order effect even among uninvolved subjects, there was also no significant interaction effect.

TABLE 13

RM Analysis of Variance, Judgment of Potency:
Order and Involvement

Source	SS	df	MS	F	P
Total	2743	191			
Between subjects	1031	95			
Involvement (I)	41	1	41	3.92	<.06
Error (b)	990	94	11		
Within subjects	1712	96			
Order (O) ^a	1	1	1	.06	NS
Interaction (I x O)	4	1	4	.194	NS
Error (w)	1707	94	18		

^aCommunicator 1 compared to communicator 2.

It was predicted that the near communicator would be judged more potent than the far communicator and that this would be increased for involved subjects. The effect of the distance of the communication from the position of the subject was in the predicted direction, but was not significant (Table 14). No significant interaction effect was obtained. There was a tendency ($p < .10$) for the uninvolved subjects to show the differential effects of order-discrepancy and for the involved subject not to show this effect.

TABLE 14
RM Analysis of Variance, Judgment of Potency:
Distance and Involvement

Source	SS	df	MS	F	P
Total	2743	191			
Between subjects	1031	95			
Involvement (I)	41	1	41	3.92	<.06
Error (b)	990	94	11		
Within subjects	1712	96			
Distance (D) ^a	47	1	47	2.74	NS
Interaction (I x D)	53	1	53	3.10	<.10
Error (w)	1611	94	17		

^aFar communicator compared to near communicator.

The experimenter made no prediction of whether involved or uninvolved subjects would judge both communications more potent. There was a nonsignificant tendency for involved subjects to rate both communications as more potent ($p < .06$, Tables 13 and 14), and a significant finding that involved subjects rated the far communication more potent than the subjects that were not involved ($p < .025$, Table 15).

TABLE 15

BS Analysis of Variance, Potency Judgments
of Far Communicator

Source	df	MS	F	P
Involvement	1	85.11	5.546	<.025
Order ^a	1	.07	.005	NS
Interaction	1	54.62	3.559	<.10
Within cells	92	15.35		

^aFar communicator 1 compared to far communicator 2.

It was predicted that subjects would have greater differences in the potency judgment of the two communications in the near-far order of presentation. No involvement effect was predicted, but an involvement by order-discrepancy effect was predicted. No significant order-discrepancy or involvement effect was found (Table 16). However, the order-discrepancy by involvement interaction was found significant ($p < .05$). Involved subjects who received the near-far

order of presentation had greater differences than involved subjects receiving the far-near order. In contrast, uninvolved subjects receiving the near-far order of presentation had fewer differences of potency associations between the two communicators than uninvolved subjects receiving the far-near order.

TABLE 16

BS Analysis of Variance, Difference between Potency Judgment of Communicator 1 and Communicator 2

Source	df	MS	F	P
Involvement	1	.39	.028	NS
Order-discrepancy ^a	1	3.66	.259	NS
Interaction	1	72.13	5.098	<.05
Within cells	92	14.15		

^aFar-near compared to near-far.

We have already seen that no order effects were found when the potency rating of first and second communicators were compared (Table 13). There was no significant group difference of any kind when the potency ratings of the near communication in the first position was compared to the near communication in the second position (Table 17). When the far communication in the first position was compared to the far communication in the second position, no order effect

TABLE 17
 BS Analysis of Variance, Potency Judgments
 of Near Communicator

Source	df	MS	F	P
Involvement	1	.14	.012	NS
Order ^a	1	.27	.023	NS
Interaction	1	12.58	1.067	NS
Within cells	92	11.79		

^aNear communicator 1 compared to near communicator 2.

was found (Table 15). However, with the far communication data significant involvement effect was found (we discussed above that involved subjects judged the far communication more potent than uninvolved subjects, $p < .025$, see Table 15). Involved subjects seem to have greater positive associations and greater respect for the potency of far communications than uninvolved subjects. The predicted involvement by order effect for the far communications was significant only at the .10 level, i.e., involved subjects showed lowered judgments of potency for the far communication in the second position, whereas the uninvolved subjects showed the reverse.

Judgment of Activity

The experimenter's predictions concerning the activity judgment subjects would make of the communicators were not confirmed, i.e., no significant differences were found.

Summary

Strong involvement effects were obtained. Involved subjects made more extreme (intense) judgments ($p < .005$), judged both communicators more positively ($p < .001$) and also made more positive judgments of the far communicator considered separately ($p < .01$). Involved subjects also saw the far communicator as more potent than uninvolved subjects ($p < .025$). There was a tendency for involved subjects to see both communicators as more potent ($p < .06$), and to see less difference in potency between the far and near communicators ($p < .10$). In short, involved subjects reacted strongly and positively to both communicators and seem to respect the far communicator in terms of evaluation and potency.

Distance effects were also obtained. Subjects judged the far communication more extreme ($p < .001$) and the far communicator more negatively ($p < .001$). Thus it has been shown that in the area of written communications discussing personal and poorly crystallized attitude issues, a distant communication is displaced away from the subject (contrast effect) and negatively evaluated.

The far communication was rated more negatively in the second position than in the first ($p < .005$). This is hypothesized to be the result of the near communication reinforcing the subjects' internal anchor and the contrast

effect of a subsequent discrepant communication. On the same basis a greater difference in the negativity of judgments of the two communications was found with the far communication in the second position ($p < .025$).

Other order effects were less reliable and those that were significant were significant at a lower probability level. However, the results that were obtained support the notion that ego involvement is a significant contributor to the variance in research into order of presentation. In fact, one of the reasons that the order results in this experiment were not clearer is that the effects of involvement were qualitatively greater than predicted. Involved and uninvolved subjects had opposite effects on many measures that cancelled out any general order effects.

The involved subjects reacted with greater intensity to the first communication than to the second, whereas the uninvolved subjects reacted with greater intensity to the second communication ($p < .05$). The involved subjects reacted with more intensity to the far communication in the first position, while the uninvolved subjects reacted to the far communication with greater intensity in the second position ($p < .025$). In both of these measures, the involved subjects had a primacy effect and the uninvolved subjects had a recency effect and there was no over-all order effect.

The same effect was found in weaker form with the potency measure. Involved subjects saw the far communication

as more potent when it was in the first position, while the uninvolved subjects saw the far communication as more potent when it was in the second position ($p < .10$). It was predicted that due to the differential judgment of the far communication, the differences in potency judgments of the two communications would be increased with the far communication in the second position (primacy). While the involved subjects had that tendency, uninvolved subject had greater differences with the far communication in the first position--a recency effect ($p < .05$).

Several areas did not yield significant results. No attitude change differences were found between groups of involved and uninvolved subjects or between groups receiving different orders of presentation. Although there were application effects as a function of distance, there were no order or involvement effects. Apparently involvement and order did not create a single displacement trend. On the intensity of judgment measure that strong involvement effects were found, no pure order or distance effects were found. In the field of judgment of potency no pure order or distance effects were found. Activity, a weak factor in semantic differential research, was not found to yield fruitful results in the present experiment. By contrast, evaluation (negativity-positivity) produced involvement, order and distance effects.

DISCUSSION

This study was initiated as an inquiry into the distortion in judgment of normal subjects confronted with communications discussing social behavior. Experimental evidence had indicated that a subject hearing an oral communication in his range of rejection would classify it as more extreme than a communication in his range of acceptance. In this study the inference a subject made after reading both a communication in his range of acceptance and one in his range of rejection was investigated. Subjects judged the discrepant communication to imply more extreme behavior in specific situations than the communication near his own position ($p < .001$). In addition, subjects had more negative associations to the far communicator ($p < .001$).

The cognitive process of interpreting two communications was found not to be a function of stimulus qualities alone, but was significantly distorted by the distance of the communication from the position of the subject. The positive-negative associations of the subject to a communicator with no other cue except a 300-word written answer to a single question was also very significantly affected by the distance. The position that distortion in the judgment of external stimuli is a sign of mental illness

should be re-formulated in the light of the finding that normal subjects also have distorted cognition. Experimentation using mentally ill subjects is needed to ascertain the degree to which their cognitive distortion can also be accounted for by measurable variables such as distance between their beliefs and those of the value system of society.

These results confirm the social judgment-involvement position that a discrepant communication is displaced away from the subject's position and the communicator negatively evaluated. Although the distance of the communication from the subject affected the evaluation of the communicator and application of the communication, it did not affect the intensity of feelings toward the communicators nor how potent subjects judged the communicators to be. This is contrary to expectations derived from experiments by Pepitone (1950) and Manis (1961).

A second independent variable postulated to affect the cognitive measures in the study was ego-involvement. As with the distance variable, ego-involvement affected the evaluation of the communicators. The involved subjects had more positive associations to the communicators ($p < .001$) than less involved subjects; even the far communicator was judged more positively by involved subjects than uninvolved subjects ($p < .01$). Unlike the distance variable, however, involvement did not have the predicted effect on the

application of the communication to the hypothetical situations, i.e., caused no displacement. The involved subjects did have more intense associations to both communicators ($p < .005$), and judged the far communicator more potent ($p < .025$) than less involved subjects.

The finding that involved subjects had more intense associations and judged the communicators more potent is consonant with expectations derived from the literature. There had been evidence, however, that involved subjects would rate a discrepant communicator more negatively than uninvolved subjects (Eagly and Mannis, 1966). In the Eagly and Manis study the results were confounded by sex differences and differences between the messages. When these were eliminated by an analysis of covariance, the level of significance of the involvement factor was reduced to $p < .10$. In the present study, by contrast, in which only one sex was used and in which the messages were equivalent in all respects except position, the results were very significant ($p < .01$). There were a number of differences in experimental design between the two studies that might account for the difference. For example, in the present study the communicators were "experts in human relations," and in the Eagly and Manis study the communicators were other high school students. It appears that a discrepant high prestige communicator is more positively valued by involved

subjects than low involved subjects and that a discrepant low prestige communicator more negatively valued by involved subjects than low involved subjects.

It would be fruitful to explore the process by which a discrepant communicator is judged more positively by involved subjects than uninvolved subjects. The evidence indicates that subjects were very highly involved on this topic. The subjects were selected for extreme views and even the low involved group displaced the far communication and showed little attitude change. We have evidence that there is a very significant difference in involvement between the two groups in this experiment, but we do not know for sure whether the low involved group is uninvolved or moderately involved. It is unlikely, however, that the low involved group was completely uninvolved. A moderately involved group would be expected to evaluate the communicator negatively. The involved subjects by endorsing answers stating that the situations might occur and that they were concerned with how they would react, indicated they were not only interested in their own position, but also indicated that they had not dismissed the discrepant communication and thus rated the far communicator more potent than uninvolved subjects ($p < .025$). There seems to be an association between very high involvement in the issue and the belief that both sides had some validity. Moreover, in spite of the interest

in the topic, it is not discussed very frequently. The writer speculates that the positive attitude of highly involved subjects reflects a receptivity to a communicator that at least discusses this neglected topic in which they are interested. This is supported by the very significant finding of more positive associations to both communicators by the involved subjects ($p < .001$).

The evaluation of a communicator was thus found to vary with the involvement of the subject and the distance between the communication and the subject. The application of the communication varied with the distance from the subject, but was not affected by involvement. It can be speculated that displacement in application by some involved subjects can be attributed to their involvement but that this was more than offset by the interest and care in judging shown by most of the involved subjects.

Of the other four dependent variables attitude change and activity judgments were not demonstrably affected by the independent variables. Intensity of associations to the communicators and the judgment of potency were affected in the same way by the independent variables. Both were affected by involvement (as discussed earlier in this section), neither was affected by the distance between communication and subject, and both were affected in the same way by the other dimension.

Order produced fewer significant results than the other independent measures. When the effects of the judgments of the first communication or communicator regardless of distance or involvement were compared to that of the second, a pure order effect, there were no significant results on any dependent measure. This may be partially accounted for by the finding (Lana, 1962) that high interest topics produce no order effect. It is also possible that the pure order effect may have been cancelled out by the contradictory effects of several other variables. For example, the literature indicates that a highly controversial topic should produce a primacy effect and intervening tasks should lead to a recency effect. These were both present in the current experiment and may have cancelled each other out. The data indicate that there was an involvement by order interaction that minimized any over-all order effect. This will be discussed later in this section.

The experimenter hypothesized that there would be pure order effects for uninvolved subjects and not involved subjects. It seems likely that the low involvement group was, in fact, a moderately involved group and, therefore, was comprised of subjects with internal anchors sufficiently strong to outweigh any effects of order of presentation. In future research the experimenter plans to include subjects with moderate views and among them select a group of truly

uninvolved subjects. The order effects that were found were not a result of pure order, but order in conjunction with other variables. Two groups of such effects were found.

Order in conjunction with distance produced a primacy effect for the far communication. The far communication in the second position was evaluated more negatively ($p < .005$) and there was a greater difference in evaluation of the two communications when the far communication was in the second position ($p < .025$). The order of presentation of the far communication did not affect application of the communication, intensity of associations toward the far communicator, or judgments of potency. In other words, subjects made judgments concerning how extreme the far communicator in second position was without distortion but were more likely to debunk the far communicator when he came second in order of presentation. This primacy effect in evaluation of the far communication was predicted from the judgment-involvement approach.

The second of the two groups of significant order effects was produced by the interaction of order and involvement, i.e., involved and uninvolved subjects had opposite order effects on the intensity and potency measures. As reported in the Results section, the order and involvement interaction resulted in a primacy effect for involved subjects and a recency effect for uninvolved subjects. This

tended to cancel out or at least minimize any possible pure order effect. The order and involvement interaction had no effect on the evaluation of the communicator or application of the communication.

These results are most economically explained by a modified U-curve hypothesis (Rosnow and Goldstein, 1967), i.e., with ego-involvement substituted for familiarity. Thus high involvement, as high familiarity, produces a primacy effect and the low involvement group would have to be considered moderately involved. In judgmental terms, high familiarity and high involvement both indicate strong internal anchors and produce a primacy effect; minimal familiarity and uninvolvement indicate no internal anchors and the first communication becomes an anchor, or creates a set. In the middle range, subjects moderately familiar with the subject and moderately involved have some weak internal anchors. Such subjects show a recency effect. Curvilinear results such as these are not easily handled by the cognitive dissonance approach.

The potential involvement in order research that has been demonstrated in this experiment has been modest, but promising. Additional experimentation will be required before any clarity will be produced in order effects research. Two lines of pertinent research are especially needed: there is a need for development of a method of

measuring involvement and familiarity that cuts across experiments so that apriori rather than post hoc decision can be made concerning level of involvement. There is also a need for clarification of the relationship between familiarity, salience and ego involvement.

The importance of investigating personal and less crystallized attitudes such as acceptability of personal assertiveness appears to be supported by the high degree of ego-involvement of the subjects. The results indicate that such attitudes do vary as a function of the same variables that influence political attitudes. The use of ego-involvement and distance in conjunction with other variables, such as order of presentation, is sufficiently promising to warrant further study, but they do not appear to have sufficient explanatory power to operate without being used in conjunction with additional concepts such as familiarity and/or salience. The dependent measures of displacement of a communication, evaluation of a communicator, intensity of associations toward a communicator, and judgments of potency yielded significant results while activity judgments did not and it seems to hold little promise. Attitude change in this experiment with highly involved subjects and with two contradictory and extreme communications was not a fruitful dependent variable.

SUMMARY

The Sherifian approach to attitude investigation was extended by using written communications dealing with the personal and poorly crystallized issue of acceptability of personal assertiveness. The effects of ego-involvement, distance between communication and subject, and order of presentation on the subjects' application of the communications, attitude change and associations to the communicator (intensity of associations, evaluative judgments of communicator, judgments of potency and judgments of activity) were measured. Two-part questionnaires were administered to 1,150 students in lower division psychology, sociology and political science classes with 363 male subjects correctly completing both sessions. The 96 most extreme male subjects were used to test the hypotheses. The data were analyzed with two-way analyses of variance with two levels of involvement and two levels of distance and/or order of presentation.

High involved subjects compared to low involved subjects made more intense judgments of the communicators ($p < .005$), judged both communicators more positively ($p < .001$), made more positive judgments of the far communicator ($p < .01$) and judged the far communicator as more

potent ($p < .025$). Subjects judged the far communication compared to the near communication as more extreme ($p < .001$), and evaluated the far communicator compared to the near communicator more negatively ($p < .001$). The far communication was rated more negatively in the second position than in the first ($p < .005$) and there were fewer differences in evaluation between the two communicators when the far communication was in the second position ($p < .025$). Highly involved subjects reacted with greater intensity when the far communication was in second position, while low involved subjects did the reverse ($p < .05$). The same interaction was found with the far communication considered alone ($p < .025$). It was also found that there were fewer differences of potency judgments between the two communicators when the far communication was in the first position ($p < .05$).

The displacement of the far communication and negative associations to the far communicator confirm predictions derived from the social judgment-involvement approach. The involved subjects having more intense associations to both communicators is not difficult to explain. However, the finding of a more positive attitude by involved subjects toward the far communicator contradicts prior research. Possible reasons were discussed. The primacy effect for the far communication was predicted. The other order results support the U-curve hypothesis.

New research to develop an independent measure of involvement and familiarity and to spell out the relation between familiarity and ego-involvement is indicated.

APPENDIX A

HYPOTHETICAL SITUATIONS

Please imagine you have been having a running feud with an acquaintance. You believe he/she is impulsive, unreasonable and irrational. One morning you are sitting at your desk reading a valuable, rare and prized book which you borrowed from a friend. The acquaintance approaches with an angry look in his/her eye and he/she is holding a pair of scissors. The acquaintance shouts at you: "You stole that book from my desk. I'll make you give it back."

Please imagine that you are alone at night in a park waiting for a friend to pick you up. Two large and tough looking men appear suddenly. One says: "You sure made a mistake being out alone at night in this park."

Please imagine you are speaking at a student gathering. Suddenly a wild-looking man violently grabs the microphone from you and shouts: "Guys like you shouldn't be allowed to waste our time. Go sit down."

Please imagine that you were planning to go out of town to visit relatives. At the last minute you decide you would rather spend the time with your steady girl friend/boy friend. You decide to surprise her/him and take her/him to a music festival you know she/he has wanted to go to but couldn't afford. You buy tickets and drop by her/his apartment without calling first. When you arrive you find her/him making love with a man/woman (that you don't know). Your girl friend/boy friend says heatedly: "I'm going to give it to you for spying on me."

Please imagine you are driving on a street near campus at a reasonable speed when the car in front of you suddenly stops. You ram into the rear of that car. The other driver, who is the same sex as you, steps out. You see that the driver is a very large person and appears to be furious. You see that he/she is rapidly approaching you with a furious look and clenched fists. He/she says: "You smashed my car and now you'll get what's coming to you."

APPENDIX B

RESPONSES TO SITUATIONS AND EGO-INVOLVEMENT SCALE

- 1. Attack using the strongest weapon you can find.
- 2. Attack physically or verbally but without using any weapons.
- 3. Be verbally provocative but without actually attacking unless attacked first.
- 4. Walk away pointing out that the other person is acting strangely and inappropriately.
- 5. Walk away saying you don't want to quarrel.
- 6. Patiently justify yourself.
- 7. Apologize and admit you are at fault.

A. How likely is this situation ever to happen in your life?

- 1. Almost impossible
- 2. Unlikely
- 3. Possible
- 4. Very possible
- 5. Probable

B. If this situation happened to you would it:

- 1. Be of no concern
- 2. Be of little concern
- 3. Be of some concern
- 4. Be of great concern
- 5. Be of the greatest concern

C. How important would it be to you that you do the right thing in such a situation?

- 1. No importance at all
- 2. Slight importance
- 3. Some importance
- 4. Pretty important
- 5. Very important

APPENDIX C

AGGRESSIVE COMMUNICATION

The following question and answer is a part of an interview with an expert on human relations. This question was asked of several experts during separate interviews. Please read it carefully.

QUESTION: Doctor, what advice do you have on how people can function better in interpersonal situations?

ANSWER: In the first place, don't be afraid to stick up for your rights. Americans were once noted for dogged independence, and we have prospered because of it. We have always believed that an individual can be the master of his fate. People are not pawns in a large cosmic chessboard. If your rights or well-being are threatened you must protect yourself. You can't wait for someone else to protect you. Oriental civilizations often teach people to defer to others. But by imposing yourself on situations and problems you make your world a better and safer place. Be realistic: there is conflict in the world and I really believe people must exert their strength to function effectively in daily life. We need not defer and "be nice" in all situations. Your aggression is necessary to better functioning.

Now here's another point: Don't be afraid to lead the way. Your point of view or way of doing things may well be better than the next guy's. So, speak up--assert yourself. In short, be a leader. Don't be afraid to take action. "He who hesitates is lost." Spontaneity is an important contributor to good functioning. Some people tell you to go slowly, be patient. But my advice is in disagreement with that.

A third and final point is this: Problems and adversaries should be faced. Don't avoid an encounter. Handle each situation as it arises. Don't be afraid of a contest or disagreement. You can't escape strife by pretending everything is peaceful. But if you handle strife and enmity promptly and aggressively, you can establish honest relations with people. Honest assertiveness is constructive and functional. Restraint from acting on one's feelings leads to more animosity at a later time.

APPENDIX D

SUBMISSIVE COMMUNICATION

The following question and answer is a part of an interview with an expert on human relations. This question was asked of several experts during separate interviews. Please read it carefully.

QUESTION: Doctor, what advice do you have on how people can function better in interpersonal situations?

ANSWER: First, try to "cool it." Don't go around with a chip on your shoulder. If you have a competitive and aggressive attitude, people will be antagonistic toward you. In other words, people generally won't push you around if you don't push first. If course, people will be disagreeable. But Americans are often overly concerned with being on guard and protecting themselves. My first advice is to let disagreeable behavior pass. If you don't let things get to you, you can avoid turmoil and conflict. Be mature enough to be kind and understanding when you are in the right and to admit when you are wrong. In the long run, winning is not always important. Sometimes it is more humane to defer and let the other fellow have his way. Better functioning can be measured by how the people around you feel when they are in contact with you.

Second, before you try to be a leader, first be a follower. Be willing to defer and do it someone else's way. Listen to others, they may have a better idea, and you won't know if they do unless you listen to them. It is not important whether you have things your way or not. Many people are raised to believe that they should lead the way, to act quickly and decisively. But I say, try to be patient and act slowly. Try going along with others.

Third, remember the saying: "Blessed are the peacemakers: for they are the children of God." Strife and conflict in everyday life can be avoided by those seeking peace. Self-restraint is the first step. Choose to restrain yourself rather than act or speak in anger and you will have peace instead of strife. Good social relations are based on trying to get along with your neighbors, even in trying circumstances. If you act peacefully, nature will take its course. If you act in anger, you only cause more animosity.

APPENDIX E

SEMANTIC DIFFERENTIAL SCALES

Please evaluate the expert whose statement you have just read. Place a mark along the scale between each pair of adjectives. The middle position on each scale is neutral with regard to the adjectives, the other positions represent the extent to which you judge an adjective to be descriptive of the expert whose advice you just read. Please answer according to the associations you have acquired to this expert. We are interested in your first impressions, your immediate "feelings." However, please do be sure to give your true impressions, or associations. Please place your mark in the middle spaces (:__:_x:__). Place one mark on each of these scales.

good	:__:_:__:_:__:_:__:_:__:_:	bad
light	:__:_:__:_:__:_:__:_:__:_:	heavy
active	:__:_:__:_:__:_:__:_:__:_:	passive
dirty	:__:_:__:_:__:_:__:_:__:_:	clean
strong	:__:_:__:_:__:_:__:_:__:_:	weak
dull	:__:_:__:_:__:_:__:_:__:_:	sharp
valuable	:__:_:__:_:__:_:__:_:__:_:	worthless
small	:__:_:__:_:__:_:__:_:__:_:	large
fast	:__:_:__:_:__:_:__:_:__:_:	slow
unfair	:__:_:__:_:__:_:__:_:__:_:	fair
intelligent	:__:_:__:_:__:_:__:_:__:_:	stupid

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