

THE UNIVERSITY OF CALGARY

THE EFFECT OF ATTITUDE AND CONTEXT
UPON THE JUDGMENT OF MODERATE STATEMENTS

by

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A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
DEGREE OF MASTER OF SCIENCE

DEPARTMENT OF PSYCHOLOGY

CALGARY, ALBERTA

January, 1973

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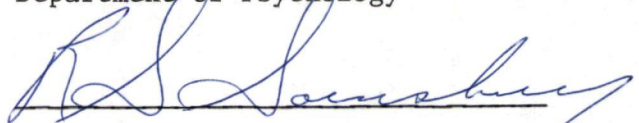
THE UNIVERSITY OF CALGARY

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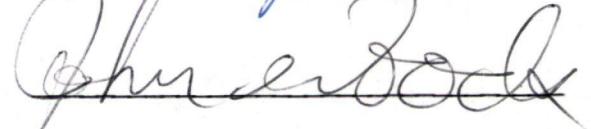
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ABSTRACT

There is some evidence to suggest that differences in attitude and trial context exert a differential effect upon the judgment of moderate statements. The present investigation was an attempt to clarify these effects.

Subjects who held either favourable or unfavourable attitudes regarding the topic of legalized abortion judged an initial triad of three statements consisting of either two pro or two con abortion statements plus a moderate abortion statement on a seven-point scale varying from very favourable to very unfavourable. The pro or con context of subsequent triads were alternated on each of the remaining nine trials, which were followed by a critical trial consisting of three moderate statements. Two control groups, one composed of subjects who held favourable attitudes and one composed of subjects who held unfavourable attitudes, judged the favourability of the moderate statement within a moderate context on all eleven trials. The judged favourability of the moderate statement functioned as the dependent variable in both the experimental and control conditions.

Results revealed a significant attitude main effect. Subjects with favourable attitudes judged the moderate statements favourably, whereas subjects with unfavourable attitudes evidenced an unfavourable evaluation of the moderate statements. Assimilation effects were not present in the analysis of the critical trial but contrast effects were found. The results also revealed a significant initial anchor by trial context interaction, as well as a significant subject attitude by initial anchor by trial context interaction. The significant inter-

action effects lent some support to the notion that the judgment of the moderate statements differed when subject attitude and trial context were congruent and when these two variables were incongruent.

The observed results seem to offer some support for Social Judgment Theory as well as Helson's concept of adaptation level. Conclusions and implications for future research were also discussed.

ACKNOWLEDGEMENTS

I wish to thank my advisor, Dr. V. K. Corfield, for her help and encouragement in the planning and execution of this experiment.

I wish to acknowledge the comments of my thesis committee, Dr. T. B. Rogers and Dr. R. S. Sainsbury throughout all phases of the research project.

A special acknowledgement is extended towards my wife, Sylvia, for her perseverance and thoughtfulness during the writing of this thesis. Without her encouragement and assistance this work would have never reached this point.

I wish to thank the faculty members of the Department of Psychology; Dr. H. S. Lytton, Department of Educational Psychology; and Dr. T. A. Clark, Department of Physics, for allowing me to enter their classrooms to obtain subjects.

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I. INTRODUCTION

The present experiment is concerned with the influence of subject attitude and contextual variables upon the judgment of social stimuli. Past research suggests that either contextual or subject variables influence a subject's judgment of social stimuli. Theories of social judgment, on the other hand, would suggest an interaction between contextual and subject variables. The present investigation is an attempt to contribute to a resolution of this inconsistency between theory and research. In order to trace the development of this inconsistency, a review of some of the studies concerned with the judgment of physical and nonphysical stimuli is necessary.

Fernberger (1931) had subjects judge the relative heaviness of a series of weights until a stable response pattern emerged at which point the experimenter introduced into the series a weight which lay within the stimulus range. Fernberger noted that the subjects shifted their judgments in the direction of the new weight. The weight functioned as an anchor; that is, it became the basis of comparison for judging other weights. A shift in judgment of a stimulus toward an anchor is called assimilation.

In a replication of the Fernberger study, Hunt and Volkman (1937) asked subjects to evaluate the aesthetic appeal of a series of colors. When responses to the stimuli had stabilized the researchers asked the subjects to reevaluate the stimuli in relation to the most beautiful color they could imagine. Results indicated that some subjects changed their evaluations in the direction of the external

anchor (assimilation), whereas other subjects perceived a difference between the stimulus range and the external anchor. The perception of a difference between an existing response scale and an anchor, which produces a shift in placement of the stimulus away from the anchor, is called contrast.

Sherif, Taub and Hovland (1958) introduced a weight that was either very similar to, or very dissimilar to, the heaviest weight in a series of weights to which subject responses had become stabilized. The researchers found that the response categories within the established weight series were not significantly altered when the new weight was similar to the heaviest weight, but the response categories were radically altered when the new weight was dissimilar to the heaviest weight. Sherif, et al., suggest that in the former case the subjects assimilated the new weight into the existing scale, while in the latter case the subjects perceived a difference between the external anchor and the established response scale resulting in a contrast effect.

The judgment of physical stimuli vary along other dimensions in addition to the distance between an external anchor and an established range of stimuli. For example, an experiment by Tresselt (1948) demonstrated the influence of past experience upon the judgment of physical stimuli. Tresselt had professional weight lifters and watch makers judge the heaviness of a series of weights. During the initial trials the two groups were widely disparate in their judgments, the weight lifters judged the series to be very light, and the watch makers judged the weights to be very heavy. At the end of the experiment,

however, the two groups were making very similar judgments of the weight series.

The experiments by Tresselt (1948), and Sherif, Taub and Hovland (1958) indicate two variables influencing the judgment of physical stimuli. Both experiments point to the influence of past experience in contributing a considerable amount of response variance on the initial trials. These investigations also point to the influence of repeated stimulus presentation as a means of acquiring knowledge of the stimulus range which, in turn, has the effect of reducing response variability by the end of the experimental session. Parducci (1954) showed that those subjects who had learned the stimulus range were significantly less variable in their final judgments than those subjects who did not learn the extent of the stimulus range. It would seem that in psychophysical studies the range of a stimulus series is a variable of no small importance in the judgment of physical stimuli.

In an attempt to demonstrate that some of the variables underlying the judgment of physical stimuli can be applied to the judgment of social stimuli, Thurstone and Chave (1929) produced an influential volume regarding the construction of attitude scales. The underlying assumption was that a subject was capable of judging the favorability of attitude items independent of his own opinion toward the attitude topic. This assumption runs counter to the psychophysical findings of Tresselt (1948) and Sherif, Taub and Hovland (1958). In an attempt to reduce the inconsistency between Thurstone's assumption and the psychophysical literature, Hovland and Sherif (1952) asked

students who differed in their attitude toward the segregation issue to judge statements pertaining to the social position of Negroes along a pro-con dimension of eleven response categories. Based on their contention that attitudes function as an anchor and are the result of past experience, Hovland and Sherif hypothesized that extreme-attitude subjects would (1) concentrate statements into a smaller number of response categories than moderate subjects, and (2) concentrate statements in a small number of extreme categories. The second hypothesis was based on the observation that while subjects with extreme attitudes may be quite discriminating in placing attitude items in a category corresponding to their own position, they tend to concentrate statements differing from their own stand at the opposite end of the attitude scale. Both hypotheses were confirmed. The tendency for extreme-attitude subjects to displace neutral statements away from their own attitude position led the researchers to hypothesize that extreme-attitude subjects, as compared to moderate subjects, exhibit a raised threshold of acceptance and a lowered threshold of rejection (Sherif and Hovland, 1953; Koulack, 1970).

Two important conclusions follow from Hovland and Sherif's research. First, that the judgment of both physical and social stimuli are a function of a subject's pre-experimental history gives credence to Hunt's (1941) conclusion that there is some communality underlying the judgment of physical and social stimuli. Second, that extreme subjects showed a raised threshold of acceptance and a lowered threshold of rejection suggested that around the attitude of extreme subjects there existed a narrow latitude of acceptance and a wide latitude of

rejection. Thus stimuli which the subject perceived as falling within his latitude of acceptance were judged as similar to his own position and were subsequently given a favourable rating, whereas stimuli which the subject perceived as falling within his latitude of rejection were displaced towards the opposite end of the attitude scale and were judged as unfavourable.

In an attempt to verify some of the hypotheses raised by the Hovland and Sherif research, Hovland, Harvey and Sherif (1957) asked subjects who held favourable, unfavourable or moderate attitudes toward the consumption of alcoholic beverages to judge a communication which advocated either a wet, dry or moderate position regarding the consumption of alcohol. Hovland et al., noted that extreme subjects perceived the communication which supported their position as fair and unbiased, whereas the attitude-discrepant communication was perceived as biased and unfair. This study demonstrated that advocates of extreme positions on the issue found significantly more statements unacceptable than subjects with intermediate positions. In other words, the extreme subjects contrasted attitude-discrepant communications away from their own position. Hovland et al., write:

"... when subjects have an established attitude and are involved in a controversial social issue, their "own stand" functions as the major anchorage affecting reaction to and evaluation of the communication. In this case, communications near the subjects stand would be assimilated to it, while communications at variance with the S's own stand would be displaced still further away ("contrast effect"). Whether assimilation or contrast effects appeared would be a function of the relative distance between the S's own stand and the position of the communication." (page 245)

Thus according to Hovland, Harvey and Sherif (1957) latitudes of acceptance and rejection play a crucial role in determining a subject's perception of a communication.

Attempting to define a subject's latitude of acceptance and rejection by noting the displacement of attitude-relevant statements is much too cumbersome to be useful as a mass testing device. To overcome this problem Hovland, Harvey and Sherif (1957), developed a new metric to assess latitudes of acceptance and rejection regarding the consumption of alcohol. The metric, The Method of Ordered Alternatives, consisted of nine rank ordered statements ranging from A, a very pro statement, through F a moderate statement, to I, a very con statement. Subjects indicated their latitudes of acceptance and rejection by marking those statements they found acceptable or objectionable. Hovland et al. noted that extreme subjects selected very few statements as acceptable (a raised threshold of acceptance), and indicated that many statements were unacceptable (a lowered threshold of rejection). Thus in assessing the latitudes of acceptance and rejection, the Method of Ordered Alternatives and the judgment of attitude statements gave comparable results. The authors suggested that extreme-attitude subjects find more attitude statements unacceptable as compared to moderate-attitude subjects who accept some favourable as well as some unfavourable attitude statements (Sherif, Sherif and Nebergall, 1965).

Hovland, Harvey and Sherif (1957) assumed that a change in the threshold of acceptance implied a concurrent change in the threshold of rejection. It should be pointed out that there are alternate explanations of the Hovland et al., data. It is possible that extreme-attitude

subjects may have evidenced a raised threshold of acceptance and no change in the latitude of rejection, or alternatively, the subjects may have evidenced a raised threshold of rejection and no change in the threshold of acceptance. Unfortunately, Hovland, et al., do not provide any means for differentiating between these alternate explanations.

The concepts of assimilation and contrast form the basis of Social Judgment Theory (Sherif and Hovland, 1961; Sherif, Sherif and Nebergall, 1965). The proponents of Social Judgment Theory demarcate three zones in the individual's organization and judgment of attitude-relevant stimuli; a latitude of acceptance, a latitude of rejection, and a latitude of noncommitment (Sherif, Sherif and Nebergall, 1965). The relationship between latitudes of acceptance and rejection and assimilation and contrast has been described. The latitude of noncommitment is defined as an area composed of those attitude items that the subject does not evaluate as either acceptable or objectionable.

Much of the research conducted under Social Judgment Theory is concerned with the relationship between subject attitude and attitude change (Manis, 1960; C. Sherif, 1963; Dillehay, 1965; LaFave and Sherif, 1968; Rambo and Main, 1969; Weiss, 1969; Eiser, 1971; Rhine and Severance, 1971). A growing body of experimental literature under Social Judgment Theory has been concerned with the discrepancy between subject attitude, and the scalar position of a communication (Freedman, 1964; Whittaker, 1965; Insko, Murashima, and Saiyadain, 1966; Peterson and Koulack, 1969). In the main, the studies mentioned tend to support the tenets of Social Judgment Theory, but the results are not unequivocal. One explanation which has been offered is that subjects were not suffi-

ciently homogeneous with regard to attitude extremity.

The effect of attitude homogeneity upon the judgment of attitude statements was demonstrated by Zavollini and Cook (1965). Subjects, who differed in opinion regarding the segregation issue, were asked to sort statements pertaining to the social position of Negroes. The results across attitude groups indicated strong support for Social Judgment Theory; that is, extreme subjects demonstrated a raised threshold of acceptance and a lowered threshold of rejection, but results within each attitude group revealed some marked inconsistencies. Some "extreme" subjects, contrary to Social Judgment Theory, displaced a majority of attitude statements toward their own position, whereas other "extreme" subjects displaced a majority of the statements toward the opposite end of the scale. Zavollini and Cook found that those subjects who accepted more statements than they rejected were less extreme in their beliefs than those subjects who showed the opposite displacement pattern.

Diab (1965) demonstrated that variability within the same attitude group can exercise a pronounced effect upon a dependent variable. By the Method of Ordered Alternatives, Diab selected subjects who held favourable, unfavourable, or moderate attitudes towards the concept of Arab-unity. The subjects were then asked to sort, into eleven response categories, statements pertaining to the topic of Arab-unity. Although the extreme subjects responded according to Social Judgment Theory, the moderate subjects were inconsistent in their responses. In an attempt to clarify this inconsistency, Diab administered thirteen scales of the semantic differential (Osgood, Suci and Tannenbaum, 1957) to the moderate subjects. Diab found that the Arab moderates, as

measured by the semantic differential, had negative attitudes toward the concept of Arab-unity even though they responded as moderates on the Method of Ordered Alternatives. Thus the Method of Ordered Alternatives seems imprecise in differentiating between individuals holding different viewpoints, but the discriminative power of the metric can be increased when used in conjunction with the semantic differential.

According to Kiesler, Collins and Miller (1969) Social Judgment Theory seems to be able to accommodate most of the experimental data with regard to the judgment of attitude statements. Conceptualizing a subject's attitude in terms of latitudes of acceptance, rejection and noncommitment (and the concomitant variables of assimilation and contrast) focuses attention upon judgment as a mediating factor in the perception of social stimuli. Furthermore, as Kiesler, et al., have pointed out, conceiving of attitudes in terms of latitudes of acceptance, rejection and noncommitment argues for the organization of attitudes not as a single point on an attitude continuum, but rather in terms of degrees of favourability or unfavourability.

The literature reviewed to date suggests that such factors as subject attitude, importance of the stimulus to the individual and other variables in the subject's pre-experimental history, exercise a pronounced effect upon the judgment of social stimuli. In addition to these intra-subject differences, inter-subject differences have been shown to exert a considerable influence on the judgment of social stimuli. An inter-subject variable of importance to the present investigation is the context in which social stimuli are judged. For example, Campbell, Hunt and Lewis (1957) had college students judge

the degree of disturbance in word definitions which had been given by a group of schizophrenics. Selected definitions were categorized as representing high, low or moderate degrees of disturbance. The definitions were presented in two counterbalanced orders of presentation consisting of two blocks of ten trials each. Each trial included either four definitions reflecting high disturbance or four reflecting low disturbance plus one indicative of a moderate degree of disturbance. In the low-to-high order of presentation subjects judged four low disturbance definitions and a moderate disturbance definition on each trial in the first block of ten trials, and four high disturbance definitions and a moderate disturbance definition on each trial in the second block. Subjects in the high-to-low order of presentation judged definitions in the opposite order to that experienced by subjects in the low-to-high order of presentation.

The researchers showed that the context with which the moderate statements were paired exerted a marked effect upon the judgment of the moderate statements. Subjects in both orders of presentation judged the moderate statements as indicative of less disturbance in the high severity context condition than in the low severity context condition. Campbell et al., point out that in each presentation order there were no significant differences between the judgments of the low severity context statements and those statements indicative of moderate severity. Significant differences were reported in each presentation order between the judgments of the high severity context statements and the moderate severity statements. It would seem that the significant results were due to the influence of the high severity context condition.

Campbell et al., in a post hoc explanation of their results state that subjects in the high severity context condition may have perceived a difference between definitions indicative of high severity, and definitions indicative of moderate severity, and thus may have contrasted the moderate definitions away from the surrounding context. In the low context condition the subjects may have been unable to perceive a difference between the low severity context and the moderate definitions, thus subjects may have assimilated the moderate definitions to the surrounding context.

The findings of the Campbell et al., study prompted Bieri, Orcutt, and Leaman (1963) to attempt to clarify those conditions which might give rise to assimilation and contrast effects. Bieri et al., presented descriptions of aggressive or dependency behaviour to a large number of students who were asked to judge the degree of pathology exhibited in each protocol. The protocols were presented over four trials with three protocols in each trial. Within each trial a moderate aggression or moderate dependency protocol was rated along with either two extreme aggression or two extreme dependency protocols respectively. Bieri et al., presented the protocols in a counter-balanced design which resulted in a total of eight orders of presentation. High and low anchor protocols were alternated over the four trials, half beginning with high and half with low. In addition, the first two trials were related to dependency and the last two to aggression for half the conditions, with the reverse order used for the other half. Moderate protocols were similarly alternated.

A result of the Bieri et al., investigation that is of special interest to the present investigation was the finding that on three out of four trials the rating of the moderate protocol was similar to the context with which it was associated. Thus the context in which the moderate protocol was placed determined the judgment ascribed to that protocol. The critical factor that emerged from the Bieri et al., study was the production and persistence of assimilation effects as a result of the alternation of the extreme protocols. In the light of the Bieri et al., study, the results of the Campbell et al., (1957) study become somewhat clearer. In reference to the latter study Bieri et al., state, "it is specifically the alternation of the anchors which contributes to the assimilation tendency"(page 623). Thus the alternation from a series of definitions indicative of high disturbance to a series of definitions indicative of low disturbance would seem to account for the assimilation effects noted in the Campbell et al., study. The rationale offered by Bieri et al., does not seem to account for the contrast effects found in the high severity statements which were preceded by statements indicative of low severity. In this condition statements indicative of moderate disturbance were judged opposite to the statements indicative of high disturbance. Thus the alternation of context anchors resulted in assimilation effects, as well as contrast effects, and it would seem that the assimilation effects noted in these two studies are more complex than is implied by the explanation put forward by Bieri et al.

The research by Bieri et al., poses an interesting problem. On the one hand, assimilation effects were shown to be a function of the surrounding context, whereas Social Judgment Theory would predict assimilation effects as a function of the width of the latitude of acceptance. Atkins (1966) tested the effect of both context and attitude upon the judgment of a moderate statement by requiring subjects who held favourable, unfavourable, or moderate attitudes toward college fraternities to judge the favourability of a moderate fraternity statement which was paired with either two favourable or two unfavourable fraternity statements. With two exceptions, the alternation of statement contexts on each of the four trials and the inclusion of the attitude variable, Atkins (1966) replicated the design of Bieri, et al., (1963).

Atkins advanced four hypotheses: first, that the favourable and unfavourable contexts would have a differential effect upon the judgment of the moderate fraternity statements; second, that the moderate statements would be displaced away from the context anchor on trial one, but assimilated to the context anchor on subsequent trials; third, from Adaptation-Level Theory (Helson, 1964) assimilation and contrast effects would be attenuated when subject attitude and trial context were incongruent, but assimilation and contrast effects would be strengthened when attitude and context were congruent; and fourth, that subjects who were unable to discriminate between the context anchors and the moderate statements would be more susceptible to context anchoring effects than those subjects who were able to discriminate between the attitude statements.

The results supported hypothesis one, but only partially confirmed hypothesis two. The favourable and unfavourable contexts produced a differential rating of the moderate statements; but the predicted contrast effect failed to emerge on the initial trial, although assimilation effects appeared on subsequent trials. The third hypothesis was not confirmed. There was little evidence to suggest that either the congruency or incongruency of subject attitude and trial context exerted any differential effect on the judgment of the moderate statements. The fourth hypothesis was only partially confirmed. There were no significant differences between the high and low discriminators on trials one through three. On trial four the low discriminating subjects, judged the moderate statements as significantly more favourable under the con context condition as compared to the pro context condition. No significant differences emerged between the pro and con context conditions for the high discriminating subjects. In a footnote Atkins stated that the relationship between subject attitude and discriminability was nonsignificant. Thus subject attitude does not seem to be a crucial variable in discriminating between the context anchors and the moderate statement.

It would seem that the critical variable in determining assimilation effects was the context in which the moderate statement was embedded. This conclusion has important consequences for Social Judgment Theory, which would predict assimilation effects as a function of subject attitude, but the attitude effect in the Atkins' (1966) study was negligible. There is a plausible explanation which could account for this contradictory finding. It is possible that the

attitude effect was not salient enough to overcome the pervasive context effects. Previous literature (Zavallini and Cook, 1965; Diab, 1965) suggests that within-group variance with respect to the extremity of beliefs can have a demonstrable effect upon a dependent variable. It is possible that the attitude groups in the Atkins' experiment were not internally homogeneous. Thus groups of subjects within each attitude group may have responded differentially to the same stimuli, and this response differentiation may have attenuated any attitude effect. On the basis of the foregoing assumptions one may hypothesize why the attitude-context hypothesis was not confirmed; if the attitude variable was not salient enough to match the alternating context in both content and strength, then it is not surprising that the congruency hypothesis was not confirmed. It is possible that the experiment by Atkins (1966) was not a fair test of Adaptation-Level Theory.

The literature cited to date has been interpreted largely in terms of Social Judgment Theory, although there has been some mention of Helson's (1964) Adaptation Level Theory. Like Social Judgment Theory, Adaptation Level Theory has its roots in psychophysical research, but unlike Social Judgment Theory, Adaptation Level Theory has received little attention in social psychological research. However, Adaptation Level Theory does provide some interesting hypotheses concerning the judgment of social stimuli.

Adaptation Level Theory states that individuals strive to maintain some form of balance with their environment by reducing the impact of new stimuli which might disrupt that balance. According to Helson, adaptation level refers to the null or zero point on an indi-

vidual's continuum of stimulation. Helson argues that with each new stimulus presentation the individuals' adaptation level changes in such a way as to minimize the effectiveness of the stimulus. Helson suggests that disruption of the adaptation level produces tension, and this tension forces the individual to reduce the impact of the new stimulus in order to maintain an environmental homeostasis.

Helson identifies three types of stimuli which are crucial to maintaining either the individual or group adaptation level; focal, background, and residual stimuli. Focal stimuli are those stimuli which are the focus of attention; that is, the stimuli to be judged. For example, in the Atkins (1966) study focal stimuli refer to the moderate statements on each trial. Background stimuli refer to those stimuli which form the frame of reference or context in which focal stimuli are judged. In the anchoring literature, background stimuli might refer to the contextual cues in which focal stimuli are judged as in the study by Campbell et al., (1957). Residual stimuli refer to stimulus variance which remains unaccounted for by background or focal stimuli. Residual stimuli seem to be a wastepaper basket category in which Helson places such variables as attitudes, fatigue and motivation. Focal, background, and residual stimuli pool in varying geometric proportion to form the individual or group adaptation level.

The concept of spatio-temporal pooling plays an integral part in Helson's concept of adaptation level. Complex objects, Helson states, are judged as if they were simple unitary wholes. In other words, as the subject judges the stimulus object, focal, background, and residual stimuli become less prominent as a single gestalt is

formed. In the alternation of anchors research, an attempt was made to provide some evidence for the pooling concept. As has been demonstrated, past research had been largely unsuccessful in this regard. There may be two reasons why social judgment research has been unable to provide evidence regarding the concept of spatio-temporal pooling. Not to be discounted is the possibility that the concept may be inappropriate for the judgment of social stimuli. Helson provides many examples concerning the relationship between spatio-temporal pooling and the judgment of physical stimuli, but evidence concerning the relationship between spatio-temporal pooling and the judgment of social stimuli are noticeably missing.

Second, the research cited to date may have been inappropriate to test the concept of spatio-temporal pooling. The stimuli in the Campbell, et al., (1957) study were rather vague and ambiguous, and the homogeneity of the attitude groups in Atkins (1966) study has already been called into question. Thus it is an open question, worthy of investigation, whether the concept of spatio-temporal pooling is an appropriate theoretical construct to use in the judgment of social stimuli.

II. PURPOSE AND HYPOTHESES

The present study is concerned with the judgment of attitude statements. Specifically, the purpose is to test the effects of subject attitude, trial context and the context of the initial trial upon the judgment of moderate statements. Social Judgment Theory (Sherif and Hovland, 1961) would predict that subject attitude would be influential in determining subject responses. On the other hand, the research by Campbell, Lewis and Hunt (1957), Bieri, Orcutt and Leaman (1963) and Atkins (1966) which was drawn primarily from Adaptation Level Theory (Helson, 1964), would suggest that trial context or an interaction between subject attitude and trial context would be influential in determining subject responses. In an attempt to clarify the inconsistencies between theory and research the following hypotheses are proposed:

- (1) From the finding of Bieri, Orcutt and Leaman (1963) and Atkins (1966) it is hypothesized that on the first trial subjects will evidence an initial contrast effect; that is, on the initial trial subjects will judge the moderate statement opposite to the context with which the moderate statement is paired.
- (2) Subjects holding favourable and unfavourable attitudes will differ in their judgments of the moderate statements (Sherif, Sherif and Nebergall, 1965). Thus subjects with favourable attitudes will displace the moderate statements toward the unfavourable end of the judgment scale, whereas subjects with unfavourable attitudes will display the opposite dis-

placement pattern.

(3) From the findings of Atkins (1966), Bieri, Orcutt and Leaman (1958) and Campbell, Lewis and Hunt (1957), it is hypothesized that subsequent to the initial trial, subjects will judge the moderate statements as being similar to the context on any given trial; that is, subjects will rate the moderate statements more favourably when the trial context is pro than when the trial context is con. On the other hand, when the trial context is con, the moderate statements will be rated more unfavourably than when the trial context is pro.

(4) On those trials where context and attitude are congruent subjects will evidence assimilation effects; that is, subjects with favourable attitudes will rate the moderate statements as more favourable when the trial context is pro than when the context is con (Helson, 1964; Atkins, 1966). Subjects with unfavourable attitudes should rate the moderate statements as more unfavourable when the trial context is con than when the trial context is pro (Atkins, 1966). When attitude and context are incongruent subjects will judge the moderate statements similar to the context with which the moderate statement is paired. Thus the subjects with favourable attitudes should judge the moderate statements less favourably when the trial context is con than when the trial context is pro (Atkins, 1966).

III. METHOD

Subjects

An altered form of the Legalized Abortion Scale (McCrosky, 1968) was administered to 900 students who were enrolled in the Faculties of Arts and Science, Education and Nursing. The scale, constructed according to the method described in Sherif, Sherif and Nebergall (1965), consisted of nine statements lettered A through I, where A and I represent the most extreme pro and con positions respectively.

To facilitate responding on a scale constructed by the Method of Ordered Alternatives a practice scale, the Canadian election, preceded the Legalized Abortion Scale. Format and instructions for both attitude scales were identical.

Subsequent to completing the attitude scales the subjects rated seven concepts on ten scales of the semantic differential (Osgood, Suci, and Tannenbaum, 1967; Snider and Osgood, 1969). Five evaluative scales; fair, good, valuable, sacred and clean; three potency scales; heavy, sharp and large; and two activity scales; fast and hard, were randomly ordered for each page of the pretest booklet. The pretest booklet is in Appendix E. Subjects having favourable or unfavourable attitudes were selected on the basis of their respective scores on the Legalized Abortion Scale and a summation of the evaluative scales on the concept of abortion. Subjects having favourable attitudes checked A or B as the most acceptable position, and also obtained a summated evaluative rating of ≥ 11 ; further, subjects having unfavourable attitudes checked G, H, or I as the most acceptable position and obtained a summated evaluative rating of ≤ 8 . This procedure made it possible

to obtain 30 subjects having favourable attitudes and 30 subjects having unfavourable attitudes. Subjects within each attitude group had the most extreme ratings on both attitude measures.

Apparatus and Material

From an original pool of 130 pro and con birth control statements (Thurstone, 1929; Granville, 1957; Guttmacher, 1967; Pick, 1968). Thirty-three statements were selected for their apparent relevance to the topic. The statements were judged by ninety-six male and female sophomore students who were registered in Social Psychology classes.

The students were asked to judge the degree of favourability which was expressed by each statement (see Appendix B). Pro, con and moderate statements, identified on the basis of means and standard deviations, are included in Appendix B. Ten pro ($\bar{X} = 6.08$, $s = 1.50$), ten con ($\bar{X} = 1.75$, $s = 1.54$), and thirteen moderate ($\bar{X} = 4.14$, $s = 1.81$) statements were selected for the experiment.

* All pro statements were randomly paired, and to each pair of pro statements a moderate abortion statement was randomly assigned. The same randomization procedure was carried out for the con statements. Thus there were five pro and five con triads consisting of either two pro or two con statements and a moderate abortion statement. The three unassigned moderate statements formed trial eleven.

Trials for the control groups were composed of 33 moderate statements concerning attitudes toward Sunday observances (Thurstone, 1929; Holtzman and Young, 1966), attitudes toward child rearing and punishing children (Koch, Dentler, Dysart, Streit, 1934; Ackerly, 1934) and moderate statements regarding abortion. Eleven triads were

randomly formed from these statements. Each triad consisted of one moderate statement concerning Sunday observances, one concerning child rearing practices, and one moderate abortion statement. Control statements are listed in Appendix B.

Slides showing the statements were prepared, and presented via a Kodak Carousel 700 projector onto a desk top viewer. Subjects recorded their judgments of each statement in an answer booklet (see Appendix F).

Design

Subjects having favourable or unfavourable attitudes were randomly assigned to an initial pro or con anchor condition. In the initial pro anchor condition subjects, on the first trial, were exposed to a triad consisting of two pro statements and a moderate statement regarding the abortion issue. On trial two, subjects were exposed to a triad consisting of two con statements plus a moderate abortion statement. This alternation of contexts continued over ten trials.

The same procedure was followed for the initial con anchor condition, except that subjects in the initial con anchor condition were exposed to the opposite context condition on each trial to that experienced by the initial pro anchor subjects.

After the completion of the tenth trial, a critical trial, which consisted of three moderate abortion statements, was presented to subjects in both initial anchor conditions. This trial provided a measure of the effect of an extended series of alternating contexts upon statements lacking a contrasting trial context.

In an attempt to reduce order effects, the triads were presented under two orders of presentation. One-half of the subjects in each initial anchor condition judged the triads under one of the orders of presentation. In both orders of presentation the triads were randomly assigned to judgment position, with the only restriction being that the pro-con or the con-pro order be maintained throughout the ten trials.

To assess the relative weight of subject attitude, two control groups consisting of ten subjects with favourable attitudes and ten subjects with unfavourable attitudes respectively, judged a set of three moderate statements dealing with Sunday observances, child rearing, and abortion. To reduce the possibility of response set, statements dealing with Sunday observances and child rearing were alternated on each trial, while the abortion statement always appeared in the third position. These statements were judged over eleven trials. The eleventh trial served as the critical trial for both groups.

Thus, subjects with favourable and unfavourable attitudes were exposed to an initial triad consisting of either two pro or two con statements and a moderate statement regarding the abortion issue. The pro and con contexts of subsequent triads were alternated on each of the remaining trials. Two control groups, consisting of subjects having favourable and unfavourable attitudes respectively, rated the favourability of moderate attitude statements.

Procedure

Subjects, upon entering the social psychology laboratory at the University of Calgary, read instructions which required them to rate the favourability of the three statements presented on each trial. Complete instructions are included in Appendix G.

After the experimenter answered any questions regarding the instructions, the projector was turned on and the subject began to judge the statements. The experimenter, who sat behind the subject, recorded the time in seconds that each subject took to complete each page of the answer booklet. The task was completely self-paced.

At the completion of the judgment task each subject was asked the following questions: (1) sometimes an experiment appears to be different from what the person is told an experiment is about. Can you tell me what this experiment is about? (2) Did you notice anything special about the slide presentation, any particular order or pattern? The first question sought to determine if demand characteristics were present in the experimental situation, while the second question attempted to detect the role of awareness in subject responses.

IV RESULTS

The following results are presented in three parts, the major analysis of variance based on the judgment of the moderate statements, analysis of the critical trial, and the supplementary results.

With regard to the post-experimental questions, none of the subjects was aware of the purpose of the experiment, and only three subjects noticed the context manipulation. Thus it appears that the subjects were responding to the experimental stimuli rather than to possible demand characteristics.

The Major Analysis of Variance

Two levels of attitude (favourable and unfavourable), two levels of initial trial anchor (pro or con), two levels of trial context (pro or con), and five trials were analyzed using a four-way analysis of variance with repeated measures on the trials factor. The results of the $2 \times 2 \times 2 \times 5$ analysis are shown in Table 1. The within subjects effect reveals some disparity between the subject within group mean squares. Bartlett's test for the homogeneity of error variance (Winer, 1962) indicated a significant degree of heterogeneity ($\chi^2 = 150$, $df = 2$, $p < .01$) between the subject within group mean squares. Winer (1962) suggests that a conservative F statistic be employed when variance heterogeneity is present. Thus for the judgment data, the degrees of freedom associated with the denominator of the F-ratio are similar to the degrees of freedom associated with the

Table 1

Analysis of Variance for the Judgment of the
Moderate Statement on the First Ten Trials

Source of Variation	SS	df	MS	F
A (Attitude)	140.42	1	140.42	36.66**
I (Initial Anchor)	5.06	1	5.06	1.32
A x I	5.06	1	5.06	1.32
Between Subjects	138.02	36	3.83	1.09
C (Context)	1.32	1	1.32	0.21
A x C	0.02	1	0.02	0.003
I x C	46.92	1	46.92	7.34*
A x I x C	45.56	1	45.56	7.13*
C x Subjects within groups	230.07	36	6.39	1.82
T (Trials)	8.66	4	2.16	0.57
A x T	47.51	4	11.88	3.15
I x T	11.23	4	2.81	0.75
A x I x T	25.97	4	6.49	1.72
T x Subjects within groups	542.81	144	3.77	1.07
C x T	25.71	4	6.43	1.83
A x C x T	27.71	4	6.87	1.96
I x C x T	23.61	4	5.91	1.68
A x I x C x T	20.62	4	5.16	1.47
CT x Subjects within groups	505.15	144	3.51	0.76
Total	1851.24	399		

** $p < .01$, * $p < .05$

between group error term, whereas the numerator of the F-ratio carries one degree of freedom (Winer, 1962, page 322).

As indicated in Table 1, subject attitude (A) produced a significant effect upon the judgment of the moderate statements ($F = 36.66$, $df = 1/36$, $p < .01$). The mean judgments for subjects having favourable and unfavourable attitudes were 5.13 and 3.95 respectively. Thus each attitude group tended to assimilate the moderate statements to its own position. No other main effect approached significance.

A significant interaction emerged between initial anchor and trial context ($F = 7.34$, $df = 1/36$, $p < .05$). The means of the interaction are shown in Table 2. Individual comparisons of the interaction means, which are included in Appendix H, revealed no significant differences. These nonsignificant results may be attributable to the denominator of the F-ratio for this interaction, the context by subjects within group mean square (6.39). This error term, which is approximately twice as large as the other subjects within groups mean squares, might tend to mask any potentially significant differences between the interaction means thus precluding any further parametric analysis. Thus the judgment of the moderate statements would seem to be a function of the joint influence of both the trial context and the initial anchor, but an inflated error term prevents any further a posteriori analysis.

As may be seen from Table 1 a triple interaction emerged between subject attitude, trial context and initial anchor ($F = 7.13$, $df = 1/36$, $p < .05$). The means of the interaction appear in Table 3.

Table 2

Mean Judgments on the Pro and Con
Anchor and the Pro or Con Context Trials

Trial Context	Initial Anchor	
	Pro	Con
Pro	4.83	4.03
Con	4.37	4.94

Table 3

Mean Judgments of the Moderate Statements by Favourable and Unfavourable Subjects who Experienced Either an Initial Pro or Con Anchor and Either Pro or Con Context Trials

Trial Context	Attitude			
	Favourable		Unfavourable	
	Initial Anchor			
	Pro	Con	Pro	Con
Pro	4.98	4.84	4.68	3.22
Con	5.42	5.30	3.32	4.58

Individual comparisons of the interaction means, which are included in Appendix H, indicated that subjects with favourable attitudes in both the pro anchor-con context condition and the con anchor-con context condition tended to judge the moderate statements more favourably than subjects with unfavourable attitudes in the pro anchor-con context condition and the con anchor-pro context condition. The results, which are in the predicted direction, failed to attain statistical significance despite the significant F value. The nonsignificant a posteriori results may be traced to the large error term for this interaction, as in the case of the initial anchor by trial context interaction already discussed. Thus the judgment of the moderate statements would seem to be a function of the joint influence of subject attitude, trial context and the initial anchor. No other interactions approached significance.

With regard to counterbalanced designs, Linquist (1953) notes that while such designs reduce experimental error in the main effects and interactions, counterbalancing fails to remove experimental error from the interaction error terms, thus such designs tend to be rather conservative. It is suggested that the significant findings found in the present experiment, which were a result of a counterbalanced design, as well as reduced number of degrees of freedom, represent experimental effects rather than statistical artifacts.

Analysis of the Critical Trial

A 2(favourable and unfavourable attitudes) by 2(pro or con context) analysis of variance was calculated on the third moderate statement of trial eleven. The results of the analysis are shown in Table 4.

Table 4

Analysis of Variance of the Judgment of the
Moderate Statement on the Critical Trial

Source of Variation	SS	df	MS	F
Attitude (A)	30.63	1	30.63	9.66**
Trial Context (C)	9.02	1	9.02	2.84
A x C	11.02	1	11.02	3.48
Error	114.00	36	3.16	
Total	164.67	39		

** $p < .01$

Subject attitude emerged as a significant main effect ($F = 9.66$, $df = 1/36$, $p < .01$). The mean judgments of subjects having favourable and unfavourable attitudes were 3.00 and 4.45 respectively. No other main effect or interaction approached significance. This finding indicates that, at the conclusion of the experiment, the subjects' attitude influenced their responses to the moderate statement. Thus, subjects with favourable attitudes contrasted the moderate statement away from their own position, whereas subjects with unfavourable attitudes displaced the moderate statement towards the favourable end of the attitude scale.

Supplementary Results

A 2(favourable and unfavourable attitudes) by 2 (pro or con anchor) analysis of variance was computed on the judgment of the moderate statement of the initial trial. The results of the analysis are shown in Table 5. No main effect or interaction approached significance. Analysis of the first trial was done to compare the present research with past investigations.

A t-test was used to compare the judgments of the experimental and control groups on the judgment of the third moderate statement on trial eleven. There were no significant differences between the judgments made by the experimental and control groups ($t = 0.44$). This finding supports the conclusion concerning the results of the critical trial; that is, at the end of the task the subjects' attitude influenced their responses to the moderate statement.

Table 5

Analysis of Variance for the Ratings of the
Moderate Statement on Trial One

Source of Variation	SS	df	MS	F
Attitude (A)	.899	1	.899	0.21
Initial Anchor (I)	1.599	1	1.599	0.38
A x I	.899	1	.899	0.21
Error	150.99	36	4.172	
Total	153.59	39		

V: DISCUSSION

The first hypothesis predicted that on the initial trial, subjects would contrast the moderate statement away from the trial context. It was expected that subjects with favourable or unfavourable attitudes who were exposed to a con context on the initial trial would displace the moderate statement toward the favourable end of the scale, whereas subjects with favourable or unfavourable attitudes who experienced a pro context on the initial trial were expected to contrast the moderate statement toward the unfavourable end of the judgment scale. This hypothesis was not confirmed.

Adaptation Level Theory and Social Judgment Theory would predict that on the initial trial both attitude groups should contrast the moderate statement away from the trial context. The results on the initial trial parallel the findings of Atkins (1966) who found that on the first trial subjects who held favourable and unfavourable attitudes toward fraternities were not significantly different in their judgments of a moderate fraternity statement which was paired with either two pro or two con fraternity statements. It would seem that on the initial trial neither attitude nor trial context were influential in determining subject responses.

The second hypothesis predicted a significant attitude main effect. This hypothesis was confirmed. The result, that subjects with favourable and unfavourable attitudes judged the moderate statements differently, runs counter to the finding of Atkins (1966). In the present experiment the criterion for subject selection was a favourable, or

unfavourable response on two attitude measures, thus only the most extreme respondents were chosen. In the Atkins' experiment a single attitude measure was employed. It is suggested that the subjects in the present investigation were more extreme in their beliefs as compared to subjects in past research, and this difference in attitude extremity may account for the disparity between past and present investigations. Selecting subjects from the opposite extremes of an attitude continuum tends to magnify differences between the two groups. Thus comparisons between the present investigation and past research must be made with some hesitancy, since extreme beliefs impose some restrictions upon the ability to generalize the present results to other investigations in which subjects may have held more moderate positions.

Social Judgment Theory (Sherif, Sherif and Nebergall, 1965) argues that subjects with favourable attitudes should contrast the moderate statements toward the unfavourable end of the judgment scale, whereas subjects with unfavourable attitudes should display the opposite displacement pattern. The results of the present investigation failed to confirm these theoretical notions. On those trials where a moderate statement was paired with either two pro or two con context statements, subjects with favourable or unfavourable attitudes assimilated the moderate statements to their own attitude position. In other words, subjects with favourable attitudes rated the moderate statements favourably, whereas subjects with unfavourable attitudes evidenced unfavourable judgments of the moderate statements. In the

light of the assimilation effects that were noted for each attitude group, Social Judgment Theory would state that at the completion of the context trials, subjects with favourable and unfavourable attitudes may have perceived the moderate statements as being within their respective latitudes of acceptance. Further, according to Social Judgment Theory, subjects who are extreme in their views should demonstrate a narrow latitude of acceptance and a wide latitude of rejection (Sherif and Hovland, 1961). Since subjects with favourable or unfavourable attitudes evidenced assimilation tendencies, it is suggested that the latitudes of acceptance for each attitude group may have increased in size as a result of the trial context.

Sears and Freedman (1965) demonstrated that subjects who were informed that they would be exposed to alternate points of view regarding a familiar topic, evidenced greater opinion change than subjects who were told that they would be exposed to arguments with which they were already familiar. Sears and Freedman state that the subject's anticipation of exposure to alternate points of view may have attenuated subject commitment to a particular position, thus facilitating attitude change. Similarly, in the present experiment, subjects may have anticipated exposure to alternate points of view after reading the experimental instructions, and the expectancy may have lessened the subject's commitment to a particular position. It is suggested that the possible decrement in subject commitment, and the subsequent exposure to attitude-discrepant points of view, may

have increased the subjects latitude of acceptance resulting in assimilation tendencies for each attitude group.

The results of trial eleven, the critical trial, emphasizes the transitory nature of the decrement in subject commitment. When the external frame of reference, trial context, was removed, subjects with favourable attitudes contrasted the moderate statement toward the unfavourable end of the judgment scale, whereas subjects with unfavourable attitudes displayed the opposite displacement pattern. These findings seem to offer some support for Social Judgment Theory. Sherif and Hovland (1961) argue that subject attitude, an internal frame of reference, may, in the absence of an external frame of reference, trial context, influence subject responses. The attitude main effect noted for the judgment of the moderate statements on the context trials, as well as on the critical trial, would seem to offer some support for Social Judgment Theory. Further, subjects when anticipating exposure to attitude-discrepant points of view, may temporarily redefine their attitudinal position with reference to the attitude object. On the critical trial, when the trial context was removed, subjects were not compelled to acknowledge alternate points of view, thus the internal frame of reference, subject attitude, was influential in determining subject responses.

The third hypothesis predicted that on trials subsequent to the initial trial the moderate statement would be rated similar to the trial context with which it was paired. This hypothesis was not confirmed. This finding runs counter to the results of Campbell, Lewis

and Hunt (1957); Bierl, Orcutt and Leaman (1958) and Atkins (1966). In the studies by Campbell et al., (1957) and Bierl et al., (1958) the moderate statements may have been vague and ambiguous, thus the trial context may have facilitated the production of assimilation to the context effects by providing a salient frame of reference from which to judge the moderate statements. The subjects in the study by Atkins (1966) may not have been extreme in their beliefs regarding the topic of fraternities, thus trial context rather than subject attitude may have been more influential in determining subject responses. The subject selection criterion employed in the present investigation would seem to argue against the notion that subjects in the present experiment were not extreme in their beliefs. Thus the significant context effects noted in past research may be attributed to either the nature of the stimulus material or the degree of extremity of subject attitude.

The fourth hypothesis predicted that the subjects with favourable attitudes would judge the moderate statements more favourably under the pro context condition than under the con context condition, whereas subjects with unfavourable attitudes were predicted to judge the moderate statements more unfavourably in the con context condition than in the pro context condition. This hypothesis was not confirmed. However, partial support for this hypothesis was provided by an unpredicted interaction between initial anchor, trial context and subject attitude. In this interaction, subjects with favourable attitudes in the con context, pro and con anchor conditions, tended to judge the

moderate statements more favourably than subjects with unfavourable attitudes in both the pro anchor-con context condition and in the con anchor-pro context condition. Adaptation Level Theory would predict that subjects in an attempt to maintain their adaptation level after exposure to a stimulus, would displace that stimulus away from the existing adaptation level (Helson, 1964). Thus subjects with favourable attitudes, in the pro anchor-con context condition who were exposed to a moderate statement and two con context statements should, according to Adaptation Level Theory, displace the three statements toward the unfavourable end of the judgment scale. Further, it is suggested, that subsequent to the displacement of the three statements, the subjects with favourable attitudes contrasted the moderate statement away from the con context toward the favourable end of the judgment scale. It is possible that the displacement of the moderate statements re-established the subjects' adaptation level.

A similar explanation may be offered to account for the judgments of subjects with unfavourable attitudes in the con anchor-pro context condition; that is, subjects with unfavourable attitudes may have displaced the moderate statements and the two pro statements toward the favourable end of the judgment scale, and then contrasted the moderate statement away from the trial context toward the unfavourable end of the judgment scale. It is suggested that the difference in judgment between subjects with favourable attitudes in the pro anchor-con context condition and subjects with unfavourable attitudes in the con anchor-pro condition, although only marginally significant,

may be traced to the opposite displacement tendencies between the respective adaptation levels and the attitude statements, as well as the contrast effect between the trial contexts and the moderate statements.

It would seem that the judgments of subjects with favourable or unfavourable attitudes under each condition of initial anchor and trial context may be explained according to Adaptation Level Theory. Thus subjects with favourable attitudes, in the con anchor-con context condition, may have displaced the moderate statements and the trial context toward the unfavourable end of the judgment scale, and then contrasted the moderate statement away from the trial context toward the favourable end of the scale. Subjects with unfavourable attitudes, in the con anchor-pro context condition, as noted previously, may have contrasted the moderate statement away from the pro context statements toward the unfavourable end of the judgment scale. Thus the marginally significant differences found between these two conditions may be attributed to the opposite displacement tendencies between the respective adaptation levels and the attitude statements, as well as the contrast effect between the trial contexts and the moderate statements.

Subjects with unfavourable attitudes in the pro anchor-con context condition seem to offer an exception to the above explanation. The moderate statement was rated similar to the trial context. Adaptation Level Theory would predict that the congruency of unfavourable attitudes and con contexts would result in a pooling of these two variables, and this pooling effect would tend to strengthen the existing

adaptation level resulting in a salient judgmental anchor (Schwartz, 1969). Further, Adaptation Level Theory would predict that the pro anchor would be displaced away from the existing adaptation level toward the favourable end of the scale, forming an additional judgmental anchor (Helson, 1964). Adaptation Level Theory posits that the moderate statement would be contrasted away from the initial anchor toward the more salient subject attitude, and this contrast effect should result in an unfavourable rating of the moderate statement (Schwartz, 1969). The observed results are in agreement with this theoretical notion.

Conclusions and Implications

The results of the present investigation suggest that subjects holding favourable or unfavourable attitudes assimilated the moderate statements to their respective attitude position. It was suggested that the attenuation of subject commitment to a particular position, and the subsequent exposure to alternate points of view, may have temporarily increased the subjects' latitude of acceptance, resulting in assimilation tendencies for both attitude groups. Assimilation of the moderate statements suggests that each attitude group evidenced attitude change in the direction of the moderate statements. Further, the assimilation effect suggests that extreme-attitude subjects who anticipate exposure to alternate points of view, and are subsequently presented with a series of persuasive communications, some of which are consistent while others are inconsistent with the subject's position, may evidence attitude change in the direction of the attitude-discrepant communication. Thus the results of the present investigation suggest a method for producing attitude change in subjects who are largely unresponsive to traditional attitude change paradigms.

The observed interaction between attitude, trial context and initial anchor would seem to give support to Adaptation Level Theory (Helson, 1959; 1964). The interaction strengthens Helson's contention that focal (the moderate statements), background (trial context and the initial anchor) and residual stimuli (subject attitude) pool to form a group adaptation level. Thus it would seem that the interaction provides some support for the notion of spatio-temporal pooling.

In other words, the observed results suggest that during the context trials, focal, background and residual stimuli become less prominent in judging the moderate statements, and the resultant judgments may represent a pooling of these stimulus attributes into a single gestalt.

With reference to the initial anchor, Adaptation Level Theory, (Helson, 1964; Schwartz, 1969) would suggest that the congruency of either subject attitude or trial context and the initial anchor would tend to increase the saliency of subject attitude or trial context respectively as anchors in the judgmental situation. Increasing the saliency of these two variables would tend to influence the displacement of the adaptation level. A lack of relevant literature presents some difficulties in assessing the role of the initial anchor in determining subject responses, thus an assessment of the initial anchor must wait for future research.

It is difficult in the present investigation to arrive at an overall assessment of the influence of trial context, subject attitude and initial anchor in determining subject responses. The difficulty of interpretation is reflected in the lack of significant differences between the means of anchor by context interaction, as well as the marginally significant differences between the means for the attitude, context and initial anchor interaction. Thus interpretation of the triple interaction in terms of Adaptation Level Theory must remain, at the present time, as suggestive.

In the present investigation only a small percentage of the students who were pretested were used as experimental subjects. Thus caution must be exercised in generalizing the results of the present

investigation to the non-laboratory population where more moderate attitudes might prevail. Further, it is not known whether subjects with favourable or unfavourable attitudes in the present investigation held other extreme attitudes, thus generalization of the present results to other extreme attitude groups must be made with some hesitancy.

The present investigation employed two attitude measures in an attempt to obtain homogeneous attitude groups. The significant subjects within groups error term, which was noted in the present experiment, implies a subjects by treatment interaction (Winer, 1962). The interaction suggests that the subjects within each attitude group responded differently to the experimental stimuli, and such differences in response may indicate that subjects were not homogeneous with regard to the attitude topic. There may be a number of reasons why a subject holds a favourable or unfavourable attitude, but conventional attitude measures are usually not sensitive to these individual differences. By the use of multivariate analysis future investigations may wish to focus upon the influence of individual differences upon the judgment of social stimuli. The effect of individual differences in the judgment of social stimuli has received little attention, and an adequate explanation of the judgmental processes should take these differences into account.

There are several aspects of the present experiment that need further investigation. For example, the relationship between initial anchor and subject attitude in influencing the judgment of a moderate statement requires clarification. Rather than alternate the trial context it may be desirable to manipulate the initial anchor and leave the

trial context either similar or dissimilar to the subjects' attitude. In this manner the effect of the interaction upon the judgment of the moderate statement could be ascertained.

The present experiment required the subject to judge eleven, consecutively presented triads. Future research might wish to investigate the effect of an interpolated task upon the judgment of a context embedded statement. It could be hypothesized that the statements would be rated differently when consecutively presented triads are compared with triads which were presented after an interpolated task.

Current research, as in past investigations, required the subject to judge the favourability of the moderate statement. How judgments would be effected when subjects were required to judge the expressed degree of conservativeness or liberality present in a given statement can only be ascertained by future investigations.

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APPENDICES

APPENDIX A

The Relationship Between Semantic Differential
and the Latitudes of Acceptance and RejectionPurpose

The purpose of the pilot test was two fold. First, to test the efficacy of the Legalized Abortion Scale (McCrosky, 1968). Second, to test Diab's (1965) hypothesis that a less heterogeneous subject sample could be obtained by the Method of Ordered Alternatives (Sherif, Sherif and Nebergall, 1965) and the semantic differential (Osgood, Suci and Tannenbaum, 1957).

Method

Subjects: Thirty-five male and female students who were registered in a summer session course in Social Psychology and thirty-six male and female graduate students served as subjects.

Procedure

Subjects were asked to indicate their most and least acceptable and objectionable positions regarding the topic of legalized abortion.

Prior to completing the abortion scale subjects completed a practice scale, the Canadian election. This scale was provided to familiarize the subjects with the format of the Legalized Abortion Scale. Both scales were completed under the instructions given by Sherif, et al., (1965).

Subsequent to completing the attitude scales the subjects rated three concepts dam, abortion, and adolescence on five scales, favourable,

good, sharp, fair and large, on the semantic differential. Subjects completed the semantic differential in the manner outlined by Osgood, et al., (1957).

Results

The latitude of acceptance, including the most acceptable position, and the latitude of rejection, including the most objectionable position, as well as the summated evaluative rating on the concept of abortion were calculated for each subject. The relationship between these three variables was assessed first with a Pearson correlation coefficient, and second, with a series of nonparametric tests, employing the Mann-Whitney U test.

There was a significant and positive correlation ($r = .53$, $p < .01$, 2 tail) between the most acceptable position and the evaluative dimension. A positive and significant correlation ($r = .59$, $p < .01$, 2 tail) emerged between the latitude of acceptance, including the most acceptable position, and the evaluative dimension.

There was a significant and negative correlation ($r = -.447$, $p < .01$, 2 tail) between the latitude of rejection and the evaluative dimension. A significant negative correlation ($r = -.52$, $p < .01$, 2 tail) appeared between the latitude of rejection, including the most objectionable position, and the evaluative dimension.

No significant difference was found between latitudes of acceptance, minus the most acceptable position, and the evaluative dimension.

A significant difference occurred on the evaluative dimension between those subjects who chose A as the most acceptable position and those subjects who chose position D ($U = 20$, $n_1 = 13$, $n_2 = 10$, $p < .02$, 2 tail). Subjects who selected most acceptable position A and C differed significantly on their evaluative ratings ($U = 2$, $n_1 = 5$, $n_2 = 8$, $p < .01$, 2 tail). Other comparisons between most acceptable position and evaluative dimension were nonsignificant.

A significant relationship ($U = 28$, $n_1 = 10$, $n_2 = 11$, $p < .05$, 2 tail) was found on the evaluative dimension between those subjects who indicated position G as their latitude of acceptance, and those subjects who listed positions F, H, and I as their latitude of acceptance. All other comparisons between the evaluative dimension and the latitude of rejection were nonsignificant. There were no significant sex differences on either the latitudes of acceptance, rejection or evaluative rating.

Discussion and Conclusions

The significant relationship between the most acceptable position and the evaluative ratings, suggests that the selection of extreme attitude subjects on the basis of an attitude scale and the semantic differential would be more fruitful if the experimenter focused on the most acceptable positions (especially positions A and B) rather than the latitude of acceptance.

The lack of significant differences between subjects of similar latitudes of rejection but different evaluative ratings suggests that the latitude of rejection may be insensitive to differences in subject attitude, and this insensitivity renders the latitude of rejection unsuitable as a tool in subject selection.

Subject selection is facilitated by the lack of any significant sex differences on the attitude indices; that is, both sexes can be used to test the effect of subject attitude regarding legalized abortion upon a dependent variable.

APPENDIX B

Purpose

The purpose of the second pilot test was to obtain pro, con, and moderate statements regarding the issue of legalized abortion.

Method

Sample one: sixty-eight male and female students were asked to rate on a seven point scale 33 statements regarding the topic of legalized abortion.

Results and Discussion

Means and standard deviations were calculated for all statements. Although a majority of the statements were judged in accordance with a priori notions regarding the composition of pro, con, and moderate statements, some statements were judged contrary to expectations.

Several hypothesized moderate statements suffered context effects. For example, "to decide whether abortion is the destruction of something sacred there must be an emphasis on a personal definition of life", was rated 1.93. The statements which preceded the above statement were rated 2.27 and 2.89 respectively.

In an attempt to reduce connotative ambiguity several pro, con, and moderate statements had to be reworded. For example, one pro statement "it is a disgrace that abortion laws are dictated by religious values rather than personal and social considerations", was rated 5.23, a value too low to warrant inclusion in the pro group. The statement was reworded to read, "that our abortion laws are dictated by religious values rather than social and personal considerations is ludicrous". One moderate statement, "in order to control family size abortion may

have to be accepted", was thought to give tacit support to the concept of legalized abortion. In an attempt to make the statement more moderate the word tolerated replaced the word accepted, and the sentence was restructured to read, "abortions may have to be tolerated when parents are unable to control family size".

Procedure

Sample two: statements thought to be influenced by context effects were reorded, and those with faulty construction were corrected. Another group of twenty-nine male and female students were asked to rate on a seven point scale a set of thirty-three statements. This new set included the corrected and reordered statements of sample one, as well as the original statements judged by the subjects in sample one.

Results and Discussion

The statement means and standard deviations for the two sample groups are shown in the table included in this appendix. It can be seen that the majority of the judgment differences between the two groups were nonsignificant thus providing some evidence of statement context reliability. Of ten significant differences six were in the predicted direction. All reordered statements were judged in accordance with a priori ideas regarding their respective content. Of the six restructured statements, two achieved significance, three were in the predicted direction, while only one statement went against prediction.

Means, Standard Deviations of the
Pro, Con and Moderate Abortion Statements

	STATEMENT	Sample 1		Sample 2		t
		\bar{X}	S	\bar{X}	S	
C	An embryonic child is a human being, and therefore has a right to life.	2.10	1.57	2.40	1.49	0.77
C	Abortion is an immoral act under any circumstances.	1.16	0.84	1.68	1.08	2.60 ^{xx}
M	Parental hostility toward an unwanted child is reason enough for granting an abortion.	5.41	1.92	4.83	1.41	1.53
P	Women must demand exclusive rights in respect to the functions of their own body.	5.61	1.75	5.53	1.76	0.12
M	An increase or decrease in moral values may be unrelated to abortion accessibility.	5.00	1.63	4.94	1.64	0.11
C	The unborn child has a right to life.	2.34	1.82	2.73	1.82	1.81
C	There is no social justification for the act of killing unborn children.	3.50	2.13	3.90	1.62	0.33
M	Abortions may be tolerated when parents are unable to control family size.	5.56	1.71	5.12	1.94	1.26
P	The reason for wanting an abortion varies tremendously, and some reasons may have merit.	6.03	1.30	5.64	1.42	1.40
P	No woman should bear a child that she does not want.	6.34	1.33	6.03	1.74	0.87
M	As long as doctors maintain ultimate control over a woman's body, illegal abortions will remain a problem.	4.54	1.94	4.84	1.90	0.68

STATEMENT	Sample 1		Sample 2		t
	\bar{X}	S	\bar{X}	S	
C It is almost inevitable that women who have abortions will suffer psychological damage.	2.62	1.29	2.15	1.42	1.47
C When humans command life and death they usurp devine prerogative.	1.67	1.14	2.31	1.46	2.27 ^{xx}
M While control over one's body may be a desirable goal, abortion, like suicide, may require social intervention.	3.50	1.97	3.51	1.81	0.02
P Abortion is not senseless destruction, as some religious pressure groups would have us believe.	6.32	1.33	6.03	1.73	0.87
P The fact that a rich woman can easily obtain an abortion, makes the present abortion laws biased and unfair.	5.92	1.79	5.89	1.21	0.08
C Some women who have undergone an abortion may suffer psychological disruption.	3.49	2.14	3.86	1.61	0.82
M Abortion is an attempt to overcome an issue for those most directly concerned.	4.54	2.00	5.62	1.75	2.43 ^{xx}
M Abortions are occasionally necessary, although they are highly undesirable.	5.44	1.67	3.22	2.02	5.61 ^{xx}
M Although there should be an emphasis on personal judgment the religious implications of the abortion decision should be considered.	3.56	1.93	2.82	1.88	1.77
C Liberal abortion laws reduce the unborn to expendable objects.	2.42	1.73	3.20	2.02	0.56
C + Abortion is race suicide.					

STATEMENT	Sample 1		Sample 2		t
	\bar{X}	S	\bar{X}	S	
M + People should be free to do whatever they wish about abortions.					
P That our abortion laws are dictated by religious values rather than by social and personal considerations is ludicrous.	5.21	2.04	5.50	1.80	.653
P The embryo may be a potential person, but sometimes there is no choice but to abort that potential for the sake of the living person.	6.40	1.04	6.13	0.97	1.53
M To decide whether abortion is the destruction of something sacred, there must be an emphasis on a personal definition of life.	1.93	1.35	4.94	1.94	8.69 ^{xxx}
C It is our duty to consider all human life as sacred.	2.87	2.14	3.11	2.03	0.36
C Abortion-on-demand will result in the disintegration of all moral discipline.	1.93	1.35	2.06	1.28	0.43
M Under economic deprivation, abortions may have to be tolerated.	5.10	1.76	5.61	1.75	1.26
P Abortion-on-demand is a woman's right.	5.17	1.87	5.47	1.68	0.77
P It is the responsibility and the right of the woman to decide if an abortion will take place.	5.44	1.75	5.32	1.74	0.30
M Unplanned and unwanted pregnancies may sometimes result in a satisfactory outcome.	5.61	1.75	5.13	1.76	1.26

STATEMENT	Sample 1		Sample 2		61
	\bar{X}	S	\bar{X}	S	t
P It is the right of parents to decide in favour of abortions should the traditional contraceptive devices fail	6.03	1.29	5.93	1.41	0.33

NOTE:

+ statements taken from Thurstone (1929).

** $p < .01$

*** $p < .001$

P, C, M, represent the pro, con and moderate statements respectively employed in the judgment task.

The Triads used in the
Experimental Group Condition

The unborn child has a right to life.
There is no social justification for the act of killing unborn children.
Abortions may have to be tolerated when parents are unable to control family size.

It is almost inevitable that women who have abortions will suffer psychological damage.
When humans command life and death they usurp divine prerogative.
While control over one's body may be a desirable goal, abortion, like suicide, may require social intervention.

It is our duty to consider all human life as sacred.
Abortion-on-demand will result in the disintegration of all moral discipline.
Under economic deprivation, abortions may have to be tolerated.

Liberal abortion laws reduce the unborn to expendable objects.
Abortion is race suicide.
People should be free to do what ever they wish about abortions.

An embryonic child is a human being, and therefore has a right to life.
Abortion is an immoral act under any circumstance.
Parental hostility toward an unwanted child is reason enough for granting an abortion.

Abortion-on-demand is a woman's right.
It is the responsibility and the right of the woman to decide if an abortion will take place.
Unplanned and unwanted pregnancies may sometimes result in a satisfactory outcome.

The reasons for wanting an abortion vary tremendously, and some of them may have merit.
No woman should bear a child that she does not want.
As long as doctors maintain ultimate control over a woman's body, illegal abortions will remain a problem.

Abortion is not senseless destruction as some religious pressure groups would have us believe.
The fact that a rich woman can easily obtain an abortion makes the present abortion laws biased and unfair.
Some women who have undergone an abortion may suffer some psychological disruption.

That our abortion laws are dictated by religious values rather than social and personal considerations is ludicrous.

The embryo may be a potential person, but sometimes there is no choice but to abort that potential for the sake of the living person.

To decide whether abortion is the destruction of something sacred, there must be an emphasis on a personal definition of life.

Women must demand exclusive rights in respect to the functioning of their own body.

It is the right of parents to decide in favour of an abortion, should traditional contraceptive devices fail.

An increase or decrease in moral values may be unrelated to abortion accessibility.

Moderate Statements
used in the
Control Subject Condition

Conduct on Sunday should be entirely up to the individual.
Matters of conduct should be decided upon by the parent and child together.
Abortion is an attempt to overcome an issue for those most directly concerned.

I believe that fear as a means of controlling children has an equal chance for aiding and for harming the child's normal development.
The question of Sunday observances is unimportant.
To decide whether abortion is the destruction of something sacred, there must be an emphasis on a personal definition of life.

People should observe Sunday or not, as they see fit.
The parent should choose the group with which the child is to associate, but the child should be allowed free choice with respect to companions within the group.
Under economic deprivation, abortions may have to be tolerated.

I believe that the fear of social consequences is desirable in controlling children, while fear of physical consequences is undesirable.
It makes little difference to me whether we observe the Sabbath.
Unplanned and unwanted pregnancies may sometimes result in a satisfactory outcome.

People who want to observe Sunday can do so without restricting other people.
When imposing restrictions upon a child, a parent should have well considered reasons and should be willing to give them.
Parental hostility toward an unwanted child is reason enough for granting an abortion.

I believe that fear should be used only after other methods of controlling the child have failed.
I do not care whether there are Sunday closed laws or not.
An increase to decrease in moral values may be unrelated to abortion accessibility.

Since Sunday observance is a religious practice, it should not be forced upon anyone.
I believe in placing upon young children but few restrictions and enforcing these strictly.
Abortions may have to be tolerated, when parents are unable to control family size.

Within certain selected situations a child should be allowed to assert his personal likes and dislikes.

Most people read the Bible because they have been taught to.

While control over one's body may be a desirable goal, abortion, like suicide, may require social intervention.

Many students attend church only because of family pressure.

It is necessary to teach the child that he cannot always have his own way.

Some women who have undergone an abortion may suffer some psychological disruption.

I believe that fear should be used only in extreme cases to control the behaviour of the child.

People attend church mostly to be with friends.

Although there should be an emphasis on personal judgment, the religious implications of the abortion decision should be considered.

I believe in observing the Sabbath but no one should be forced to.

A child who is entangled in a disciplinary problem should be allowed to explain his way out.

Abortions are occasionally necessary, although they are highly undesirable.

APPENDIX C

Rank Ordering of the Legalized Abortion Scale

Purpose

The third pilot test was initiated to verify the rank ordering of the Legalized Abortion Scale, (McCrosky, 1968).

Method

Twenty-three introductory psychology students were presented with a random order of the abortion scale. The students were asked to rank order the statements from 1, the most favourable statement, through 5, a statement which was neither favourable nor unfavourable, to 9 the most unfavourable statement regarding the abortion issue.

Results and Discussion

Rank order correlations (ρ) were calculated for each subject. Inspection of the data revealed that five subjects did not take the task seriously. Two subjects used the same number to rank different statements, one subject had a rank correlation of $-.03$, while two subjects reversed the scoring procedure.

The mean ρ for the remaining 18 subjects was $.923$, with a range of 1.00 to $.733$. The lower bound correlation is significant at the $.01$ level (2 tail).

Thus the order of the statements given by McCrosky (1968) seems to have been verified in this experiment. It can be concluded that statement A is seen as more favourable than statement B, and B is more favourable than C. The same relationship exists between statements G, H, and I.

Statement Rating Task

Below are some statements which have appeared in the popular press regarding the abortion issue in this country.

Now read carefully all the statements listed below.

You are asked to RANK ORDER these statements from VERY FAVORABLE to VERY UNFAVOURABLE. Where (1) represents the MOST FAVOURABLE statement regarding the position of legalized abortion; (2) represents the next most favourable, and so on. The MOST UNFAVOURABLE statement regarding the position of legalized abortion should be rated (9). A statement which is NEITHER favourable NOR unfavourable should be labelled (5).

Remember: You are asked to RANK ORDER the statements being as objective as possible. Do not let your own opinion influence your ratings.

Place the rank of each statement on the blank that precedes the statement.

- _____ It seems that society's interests would be better served in most cases if our laws against abortion were retained.
- _____ It is absolutely essential to the interests of society that abortions be made legal.
- _____ Although it is hard to decide, it is probable that society would benefit if present abortion laws were left unchanged.
- _____ It is absolutely essential to the interest of society that our laws against abortion be retained.
- _____ On the whole, the interests of society will best be served by legalizing abortions.
- _____ It seems that society's interests would be better served in most cases if abortions were legalized.
- _____ It is hard to decide whether society would be helped or harmed by relaxing our laws against abortions.
- _____ Although it is hard to decide, it is probable that society would benefit if present abortion laws were changed to allow abortions.
- _____ On the whole, the interests of society will be best served by retaining our laws against abortion.

The Reliability of the Legalized Abortion Scale

Purpose

The purpose of the fourth pilot test was to determine the test-retest reliability of the Legalized Abortion Scale (McCrosky, 1968).

Method

Thirty-four male and female introductory psychology students were presented with the abortion scale and asked to indicate their most and least acceptable positions, as well as their latitudes of acceptance and rejection. Six weeks after the initial presentation, subjects were asked to indicate their latitudes of acceptance and rejection and their most and least acceptable position.

Results and Discussion

The six week test-retest reliability (Pearson r) was .65. Thus the Legalized Abortion Scale seems to demonstrate an acceptable degree of stability.

APPENDIX E

SOCIAL OPINION QUESTIONNAIRE

NAME.....

SEX.....

AGE.....

MARTIAL STATUS.....

TELEPHONE.....

70

In consideration of the Canadian election due in 1972, below

are some statements regarding that issue.

Please read all of the statements listed below carefully before making any marks on this page.

Now that you have read all the statements, underline the one statement that comes closest to your own point of view on the topic.

- A. The election of a Liberal government in the next election is absolutely essential to the country's interest.
- B. On the whole the interests of this country will be served best by the election of a strong Liberal majority.
- C. It seems that the country's interests would be better served if a Liberal government is elected in the next election.
- D. Although it is hard to decide, it is probable that the country's interests may be better served if a Liberal Prime Minister is elected.
- E. From the point of view of the country's interests, it is hard to decide whether it is preferable to vote for candidates of the Liberal or Conservative Party.
- F. Although it is hard to decide, it is probable that the country's interests may be better served if a Conservative Prime Minister is elected.
- G. It seems that the country's interest would be better served if a Conservative government is elected in the next election.
- H. On the whole the interests of this country will be served best by the election of a strong Conservative majority.
- I. The election of a Conservative government in the next election is absolutely essential to the country's interest.

Please read, once again, all of the statements, listed above.

There may be other statements listed above which you do not find objectionable from your point of view. If there are such statements, put a circle around the letter in front of each statement which is not objectionable to you.

Now kindly reread the statements which are listed below.

Cross out only one statement, the one which is most objectionable from your point of view.

- A. The election of a Liberal government in the next election is absolutely essential to the country's interests.
- B. On the whole the interests of this country will be served best by the election of a strong Liberal majority.
- C. It seems that the country's interests would be better served if a Liberal government is elected in the next election.
- D. Although it is hard to decide, it is probable that the country's interests may be better served if a Liberal Prime Minister is elected.
- E. From the point of view of the country's interests, it is hard to decide whether it is preferable to vote for candidates of the Liberal or Conservative Party.
- F. Although it is hard to decide, it is probable that the country's interests may be better served if a Conservative Prime Minister is elected.
- G. It seems that the country's interests would be better served if a Conservative government is elected in the next election.
- H. On the whole the interests of this country will be served best by the election of a strong Conservative majority.
- I. The election of a Conservative government in the next election is absolutely essential to the country's interests.

In the statements listed above, there may be other statements which you may find objectionable from your point of view. If there are such statements, cross out the letter in front of each statement which is objectionable from your point of view.

There may be other statements listed below, that you find neither acceptable nor objectionable. Indicate these statements, by placing a check mark (✓) in front of these sentences.

- A. The election of a Liberal government in the next election is absolutely essential to the country's interests.
- B. On the whole the interests of this country will be served best by the election of a strong Liberal majority.
- C. It seems that the country's interests would be better served if a Liberal government is elected in the next election.
- D. Although it is hard to decide, it is probable that the country's interests may be better served if a Liberal Prime Minister is elected.
- E. From the point of view of the country's interests, it is hard to decide whether it is preferable to vote for candidates of the Liberal or Conservative Party.
- F. Although it is hard to decide, it is probable that the country's interests may be better served if a Conservative Prime Minister is elected.
- G. It seems that the country's interests would be better served if a Conservative government is elected in the next election.
- H. On the whole the interests of this country will be served best by the election of a strong Conservative majority.
- I. The election of a Conservative government in the next election is absolutely essential to the country's interests.

Please indicate how important this issue is to you by placing an "X" on one of the lines on the rating scale below.

Very important : ____ : ____ : ____ : ____ : ____ : ____ : ____ : Not very
important

Below are some statements recently made concerning the abortion issue in this country.

Please read all the statements listed below carefully before making any marks on this page.

Now that you have read all the statements, underline the one statement that comes closest to your own point of view on the topic.

- A. It is absolutely essential to the interests of society that abortions on demand be made legal.
- B. On the whole, the interests of society will best be served by legalizing abortions on demand.
- C. It seems that society's interests would be better served in most cases if abortions on demand are legalized.
- D. Although it is hard to decide, it is probable that society would benefit if present abortion laws were changed to permit abortions on demand.
- E. It is hard to decide whether society would be helped or harmed by relaxing our laws against abortions.
- F. Although it is hard to decide, it is probable that society would benefit if present abortion laws were left unchanged.
- G. It seems that society's interests would be better served in most cases if our laws against abortion on demand are retained.
- H. On the whole, the interests of society will be best served by retaining our laws against abortion on demand.
- I. It is absolutely essential to the interests of society that our laws against abortion on demand be retained.

Please read, once again, all of the statements listed above.

There may be other statements listed above which you do not find objectionable from your point of view. If there are such statements, put a circle around the letter in front of each statement which is not objectionable to you.

Now kindly reread the statements which are listed below.

Cross out only one statement, the one which is most objectionable from your point of view.

- A. It is absolutely essential to the interests of society that abortions on demand be made legal.
- B. On the whole, the interests of society will best be served by legalizing abortions on demand.
- C. It seems that society's interests would be better served in most cases if abortions on demand were legalized.
- D. Although it is hard to decide, it is probable that society would benefit if present abortion laws were changed to permit abortions on demand.
- E. It is hard to decide whether society would be helped or harmed by relaxing our laws against abortions.
- F. Although it is hard to decide, it is probable that society would benefit if present abortion laws were left unchanged.
- G. It seems that society's interests would be better served in most cases if our laws against abortion on demand were retained.
- H. On the whole, the interests of society will be best served by retaining our laws against abortion on demand.
- I. It is absolutely essential to the interest of society that our laws against abortion on demand be retained.

In the statements listed above, there may be other statements which you may find objectionable from your point of view. If there are such statements, cross out the letter in front of each statement which is objectionable from your point of view.

There may be other statements listed below, that you find neither acceptable or objectionable. Indicate these statements, by placing a check (✓) in front of these sentences.

- A. It is absolutely essential to the interests of society that abortions on demand be made legal.
- B. On the whole, the interests of society will best be served by legalizing abortions on demand.
- C. It seems that society's interests would be better served in most cases if abortions on demand were legalized.
- D. Although it is hard to decide, it is probable that society would benefit if present abortion laws were changed to permit abortions on demand.
- E. It is hard to decide whether society would be helped or harmed by relaxing our laws against abortions.
- F. Although it is hard to decide, it is probable that society would benefit if present abortion laws were left unchanged.
- G. It seems that society's interests would be better served in most cases if our laws against abortion on demand were retained.
- H. On the whole, the interests of society will be best served by retaining our laws against abortion on demand.
- I. It is absolutely essential to the interest of society that our laws against abortion on demand be retained.

Please indicate how important this issue is to you by placing an "X" on one of the lines on the rating scale below.

Very important : ____ : ____ : ____ : ____ : ____ : ____ : ____ : Not very important

We would like to measure what different things mean to various people by having them judge some concepts against a series of descriptive scales. In taking this test, please make your judgements on the basis of what these things mean to you. On each page of the booklet you will find a different concept to be judged and beneath it a set of scales. You are to rate the concept on each of these scales in order.

Here is how you are to use these scales:

If you feel that the concept is quite closely related to one or the other end of the scale, you should place your check-mark as follows:

colorful : X : ____ : ____ : ____ : ____ : ____ : colorless

or

colorful : ____ : ____ : ____ : ____ : ____ : X : colorless

If you feel that the concept is quite closely related to one or the other end of the scale (but not extremely), you should place your check-mark as follows:

strong : ____ : X : ____ : ____ : ____ : ____ : weak

or

strong : ____ : ____ : ____ : ____ : ____ : X : weak

If the concept seems only slightly related to one side as opposed to the other side (but is not really neutral), then you should check as follows:

active : ____ : ____ : X : ____ : ____ : ____ : passive

or

active : ____ : ____ : ____ : ____ : X : ____ : passive

The direction toward which you check, of course, depends upon which of the two ends of the scale seem most characteristic of the thing you're judging. If you consider the concept to be neutral on the scale (both sides of the scale equally associated with the concept) or if the scale is completely irrelevant (unrelated to the concept) then you should place your check-mark in the middle space:

safe : ____ : ____ : ____ : X : ____ : ____ : dangerous

IMPORTANT: (1) Place your check-marks in the middle of spaces, not on boundaries:

			THIS		NOT THIS
:	:	:	X	:	X

(2) Be sure you check every scale for every concept - do not omit any.

(3) Never put more than one check-mark on a single scale.

Sometimes you may feel as though you've had the same item before on the test. This will not be the case, so do not look back and forth through the items. Do not try to remember how you checked similar items earlier in the test. Make each item a separate and independent judgment. Work at fairly high speed through this test. Do not worry or puzzle over individual items. It is your first impressions, the immediate "feelings" about the items, that we want. On the other hand, please do not be careless, because we want your true impressions.

CIVILIZATION

fast	:	_____	:	slow
clean	:	_____	:	dirty
sacred	:	_____	:	profane
sharp	:	_____	:	blunt
hard	:	_____	:	soft
fair	:	_____	:	unfair
heavy	:	_____	:	light
good	:	_____	:	bad
valuable	:	_____	:	worthless
large	:	_____	:	small

ABORTION

[illegible]

AUTHORITY

sharp	: _ : _ : _ : _ : _ : _ : _ :	blunt
good	: _ : _ : _ : _ : _ : _ : _ :	bad
clean	: _ : _ : _ : _ : _ : _ : _ :	dirty
sacred	: _ : _ : _ : _ : _ : _ : _ :	profane
large	: _ : _ : _ : _ : _ : _ : _ :	small
hard	: _ : _ : _ : _ : _ : _ : _ :	soft
valuable	: _ : _ : _ : _ : _ : _ : _ :	worthless
fair	: _ : _ : _ : _ : _ : _ : _ :	unfair
fast	: _ : _ : _ : _ : _ : _ : _ :	slow
heavy	: _ : _ : _ : _ : _ : _ : _ :	light

AUTOMATION

large	: _ : _ : _ : _ : _ : _ : _ :	small
sharp	: _ : _ : _ : _ : _ : _ : _ :	blunt
fast	: _ : _ : _ : _ : _ : _ : _ :	slow
heavy	: _ : _ : _ : _ : _ : _ : _ :	light
good	: _ : _ : _ : _ : _ : _ : _ :	bad
valuable	: _ : _ : _ : _ : _ : _ : _ :	worthless
clean	: _ : _ : _ : _ : _ : _ : _ :	dirty
fair	: _ : _ : _ : _ : _ : _ : _ :	unfair
hard	: _ : _ : _ : _ : _ : _ : _ :	soft
sacred	: _ : _ : _ : _ : _ : _ : _ :	profane

SHAME

fair	:	:	:	:	:	:	:	unfair
fast	:	:	:	:	:	:	:	slow
sacred	:	:	:	:	:	:	:	profane
large	:	:	:	:	:	:	:	small
clean	:	:	:	:	:	:	:	dirty
good	:	:	:	:	:	:	:	bad
heavy	:	:	:	:	:	:	:	light
hard	:	:	:	:	:	:	:	soft
valuable	:	:	:	:	:	:	:	worthless
sharp	:	:	:	:	:	:	:	blunt

CONFLICT

hard	: _ : _ : _ : _ : _ : _ : _ :	soft
valuable	: _ : _ : _ : _ : _ : _ : _ :	worthless
fast	: _ : _ : _ : _ : _ : _ : _ :	slow
clean	: _ : _ : _ : _ : _ : _ : _ :	dirty
fair	: _ : _ : _ : _ : _ : _ : _ :	unfair
large	: _ : _ : _ : _ : _ : _ : _ :	small
sacred	: _ : _ : _ : _ : _ : _ : _ :	profane
sharp	: _ : _ : _ : _ : _ : _ : _ :	blunt
good	: _ : _ : _ : _ : _ : _ : _ :	bad
heavy	: _ : _ : _ : _ : _ : _ : _ :	light

ADOLESCENCE

hard	: _ : _ : _ : _ : _ : _ : _ :	soft
fair	: _ : _ : _ : _ : _ : _ : _ :	unfair
large	: _ : _ : _ : _ : _ : _ : _ :	small
clean	: _ : _ : _ : _ : _ : _ : _ :	dirty
sharp	: _ : _ : _ : _ : _ : _ : _ :	blunt
sacred	: _ : _ : _ : _ : _ : _ : _ :	profane
good	: _ : _ : _ : _ : _ : _ : _ :	bad
heavy	: _ : _ : _ : _ : _ : _ : _ :	light
valuable	: _ : _ : _ : _ : _ : _ : _ :	worthless
fast	: _ : _ : _ : _ : _ : _ : _ :	slow

APPENDIX F

ANSWER BOOKLET

NAME: _____
(Please print)

Statement 1

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 2

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 3

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 1

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 2

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 3

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 1

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 2

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 3

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 1

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 2

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 3

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 1

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 2

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 3

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 1

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 2

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 3

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 1

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 2

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 3

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 1

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 2

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 3

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 1

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 2

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 3

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 1

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 2

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 3

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 1

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 2

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 3

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 1

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 2

Very unfavourable ____:____:____:____:____:____:____: Very favourable

Statement 3

Very unfavourable ____:____:____:____:____:____:____: Very favourable

APPENDIX G

Experimental Subject Instructions

The purpose of this task is to see how individuals judge the favourability of statements concerning a contemporary topic, legalized abortion.

In a few moments you will be shown a series of slides. Each slide will contain three statements concerning the topic of legalized abortion. You are asked to read the first sentence, and judge the degree of favourability which is expressed by that statement by placing an "X" on the appropriate rating scale. Having read and rated the first sentence, then read and rate statement two, then read statement three. The reading and rating of statements 1-2-3 in that order is to be observed for each slide.

You will notice that each page of the Answer Booklet contains 3 widely spaced, seven point scales. The blank at the far left represents the most unfavourable position, the blank at the far right represents the most favourable. While the blank in the middle represents a position which is neither favourable nor unfavourable. On the first rating scale on page one you are asked to rate the first sentence of the first slide. On the second scale you are to evaluate the second sentence of slide one; the third scale is for rating the third sentence of slide one. Then turn the page and proceed in the same manner for slide two when it is presented.

Thus you are to make 3 judgments for each slide on one page of the Answer Booklet.

Please refrain from looking back and forth through the booklet.

Please remember: (1) place your "X" in the middle of the blank not on the boundaries.

	This		Not This	
very	: X :	:	:	X :
unfavourable				

very favourable

- (2) when judging the slides work as quickly as possible, since your time per slide is being taken.
- (3) in judging the sentences try to be as objective as possible, and not let your own opinion influence your ratings.

APPENDIX G (Continued)

Control Subject Instructions

The purpose of this task is to see how individuals judge the favourability of statements concerning some contemporary topics.

In a few moments you will be shown a series of slides. Each slide will contain three statements. Statement one will express an opinion regarding one of the topics, statement two will express an opinion regarding a second topic, and so on. You are asked to read the first sentence, and judge the degree of favourability regarding that topic which is expressed by that statement by placing an "X" on the appropriate rating scale. Having read and rated the first statement, then read and rate statement two, then read and rate statement three. The reading and rating of statements 1-2-3 in that order is to be observed for each slide.

You will notice that each page of the Answer Booklet contains three widely spaced, seven point scales. The blank at the far left represents the most unfavourable position, the blank at the far right represents the most favourable. While the blank in the middle represents a position which is neither favourable nor unfavourable. On the first rating scale on page one you are asked to rate the first sentence of the first slide. On the second scale you are to evaluate the second statement of slide one; the third scale is for rating the third sentence of slide one. Then turn the page and proceed in the same manner for slide two when it is presented.

Thus you are to make three judgments for each slide on one page of the Answer Booklet.

Please refrain from looking back and forth through the booklet.

Please remember: (1) place your "X" in the middle of the blank not on the boundaries.

			This			Not This		
very	:	:	X	:	:	X	:	:
unfavourable								very
								favourable

- (2) when judging the slides work as quickly as possible, since your time per slide is being taken.
- (3) in judging the sentences try to be as objective as possible, and not let your opinion influence your ratings.

APPENDIX H

Table H-1

Multiple t-test Comparisons of the Mean
Judgment of the Moderate Statement on the
Pro or Con Anchor and the Pro or Con Context

	4.03	4.37	4.83	4.94
4.03	-	0.005	0.10	0.78
4.37			0.04	0.06
4.83				.001
4.94				

Note: Critical t ratio = 2.02 (df = 36, $p < .05$, 2 tail).

APPENDIX H (Continued)

Table H-2

Multiple t-test Comparisons of the Mean
Judgments of Favourable and Unfavourable
Subjects who Experienced either a Pro or
Con Anchor and Pro or Con Context Trials

	3.22	3.32	4.58	4.68	4.84	4.98	5.30	5.42
3.22		0.09	1.20	1.29	1.43	1.56	1.84	1.95
3.32			1.11	1.20	1.34	1.47	1.79	1.86
4.58				0.09	0.23	0.35	0.64	0.74
4.68					0.14	0.27	0.55	0.65
4.84						0.12	0.41	0.51
4.98							0.19	0.39
5.30								0.11
5.42								

Table H-2 (Continued)

	3.22	3.32	4.58	4.68	4.84	4.98	5.30	5.42
3.22							*	*
3.32							*	*
4.58								
4.68								
4.84								
4.98								
5.30								
5.42								

Note: Critical t ratio = 1.64 (df = 36, $p < .1$, 2 tail).

APPENDIX H (Continued)

Table H-3

Bartlett's Test for the Homogeneity of Variance
for the Judgment of the Moderate Statements

Source of Variation	SS	df	MS	logMS	1/df
C x Subjects within groups	230.07	36	6.39	0.799	.028
T x Subjects within groups	542.81	144	3.77	0.569	.007
CT x Subjects within groups	<u>505.15</u>	<u>144</u>	3.51	0.544	.007
Total	1278.03	324			

$$MS \text{ pooled} = \Sigma(SS) / \Sigma df = 1278.03 / 324 = 3.94$$

$$A = \Sigma \{ (df_i) (MS_i) \} = (36 \times .799) + (144 \times .564) + (144 \times .544) = 188.64$$

$$B = (\Sigma df) (\log MS \text{ pooled}) = 324 (0.245) = 79.38$$

$$C = 1 + \frac{1}{3(K-1)} \left\{ \Sigma \left(\frac{1}{df} \right) - \frac{1}{(\Sigma df)} \right\} = 1 + \frac{1}{3(2)} \{ .0420 - .0031 \}$$

$$= 1.0065$$

$$X^2 = 2.303 (B - A) / C = 2.303 (79.38 - 188.64) / 1.0065 = 250.001$$

$$(df = 2, p < .001)$$