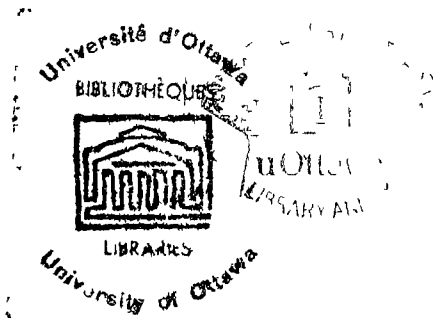


INTENSITY OF ASSERTION AND THE CONGRUITY PRINCIPLE

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CURRICULUM STUDIORUM

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INTRODUCTION

That prestige suggestion is a subtle yet powerful tool in the formation and change of attitude has been well known to the communication and advertising media for decades. Only recently, however, have the linguistics of the communications content come under close scrutiny with an eye to their effectiveness as attention was formerly centered on the overall magnitude of an effected change.

Through the efforts of several cognitive theorists, who have attempted to provide models which postulate dynamics and predict the magnitudes of attitude change it is now possible to study even more closely the effects of linguistic variation in a communications message. Though possible, this has rarely been attempted and so this thesis represents an attempt to shed some light in this area.

The study to be reported is designed to investigate the possible relationship between change of attitude and a linguistic characteristic of the communications content called the intensity of assertion.

In the first chapter the notion of attitude is clarified and the evolution of the problem from the existing research in the area to the null hypothesis is traced. In chapter two the experimental design used to test the null hypothesis is presented. The results of the experiment and

a discussion thereof follows in the final chapter which terminates with a summary and implications for future research.

CHAPTER I

REVIEW OF THE LITERATURE

This chapter, which presents the theoretical background of the project, begins with a statement on the notion of attitude as employed in this study followed by a review of the studies relating to Osgood's congruity principle. The definition of the problem in the context to be investigated is then discussed and the chapter is concluded with the presentation of the hypothesis in the null form.

1. Meaning of the Term Attitude.

Since the concept of attitude has at times been used as a sort of psychological catchall, it is felt a brief statement of its intended meaning in the context of the present study will not be superfluous. As a consequence of their work in experimental semantics, Osgood, Suci and Tannenbaum¹ have noted, "It has been feasible to identify 'attitude' as one of the major dimensions of meaning-in-general [...]," after which they readily point out the opportunity for their semantic differential measurement process. (Hereafter referred to as the S.D.) Despite the apparent haste to connect the

¹ Charles E. Osgood, George J. Suci, and Percy H. Tannenbaum, The Measurement of Meaning, Urbana, University of Illinois Press, 1957, p. 189.

concept with its measurement, the concept of attitude as signifying the evaluative component of meaning would appear to correspond to the notion of valence of attitude components of Kretch, Crutchfield and Ballachey.² Thus cast within their larger context of attitude as an enduring system of cognitive, feeling and response tendency components centering about a single object, the notion of attitude in this study refers to the degree of indicated favorableness or unfavorableness of a person's judgment with respect to a particular item.

2. Review of the Studies.

That a change of attitude can be effected through exposure to communications content has been demonstrated time and again from the pioneer work of Thurstone³ to the present day. For too long a time, however, interest has been confined to the overall amount of attitude change as a function of the communication content, rather than with the inherent variables operating. Until fairly recently, as Hovland⁴ has noted,

² David Kretch, Richard Crutchfield and Egerton Ballachey, Individual in Society: A Textbook in Social Psychology, Toronto, McGraw-Hill Book Co., 1962, p. 146.

³ L.L. Thurstone, "The Influence of Motion Pictures on Children's Attitudes", Journal of Social Psychology, Vol. 2, No. 3, 1931, p. 291-305.

⁴ Carl Hovland, "Changes in Attitude Through Communications", Journal of Abnormal and Social Psychology, Vol. 46, No. 3, 1951, p. 424.

there has been "practically nothing bearing on the factors responsible for (attitude) change."

However, commencing with Heider's⁵ model of balanced states and continuing with Newcomb's⁶ strain toward symmetry, Osgood and Tannenbaum's⁷ congruity principle, and Festinger's⁸ theory of cognitive dissonance, researchers have been intent on the establishment of conceptual frameworks of cognitive dynamics which attempt to isolate and identify the factors involved in attitude change. Of these, the congruity principle of Osgood and Tannenbaum is unique, being accompanied as it is by a novel measurement process, the S.D. As Zajonc in an article reviewing the concepts of balance, congruity and dissonance has mentioned, "Osgood and Tannenbaum have formulated the principle of congruity in quantitative terms allowing for precise predictions regarding the extent and direction of attitude change [...]" . Zajonc continues:

5 F. Heider, "Attitudes and Cognitive Organization", Journal of Psychology, Vol. 21, January 1946, p. 107-112.

6 T. Newcomb, "An Approach to the Study of Communicative Acts", Psychological Review, Vol. 60, No. 6, 1953, p. 393-404.

7 C.E. Osgood and Percy H. Tannenbaum, "The Principle of Congruity in the Prediction of Attitude Change", Psychological Review, Vol. 62, No. 1, 1955, p. 42-55.

8 L. Festinger, A Theory of Cognitive Dissonance, Evanston, Illinois, Row, Peterson Inc., 1957.

The paradigm of congruity is that of an individual who is confronted with an assertion regarding a particular matter about which he believes and feels in a certain way, made by a person toward whom he also has some attitude.⁹

Thus the stage is set for the operation of the congruity principle when a 'source' makes some evaluative statement, frequently termed an assertion, about some referent object or 'concept' in a message that is received by the individual.

Given that a sign, that is a word or photograph, elicits its characteristic mediation process made up of numerous bipolar reaction components, Osgood's congruity principle posits that through the process of cognitive interaction the mediating reactions of each of two signs can be modified by the presence of the other when the two signs are related or linked through an assertion. The congruity principle can now be stated in the following form:

Whenever two signs are related by an assertion, the mediating reaction characteristic of each shifts towards congruence with that of the other, the magnitude of the shift being inversely proportional to the intensities of the interacting reactions.¹⁰

Since Osgood assumes that judgmental frames of reference tend toward maximal simplicity, the principle holds that when change in evaluation occurs, it occurs in the direction of

⁹ R.B. Zajonc, "The Concepts of Balance, Congruity and Dissonance", Public Opinion Quarterly, Vol. 24, No. 2, 1960, p. 289.

¹⁰ Osgood, et al., Op. Cit., p. 207.

increased congruity with the existing frame of reference. Congruence, in the context of the principle, refers to the state wherein the mediating reactions of two signs linked by an assertion are equally intense.¹¹ Thus two signs linked by an associative assertion would be held evaluatively congruent provided they were judged equally favorable by the individual who decodes the assertive statement.

In an experiment designed to test this hypothesis empirically, Tannenbaum¹² exposed 405 college students of mean age twenty-one years, to six experimental and four "filler" sources followed by the same number of concepts on an evaluative form of the S.D. Five weeks later, the same subjects were given realistic newspaper clippings containing positive or negative assertions involving the source-concept pairs. Immediately after this second exposure, the subjects were again asked to judge the sources and concepts on the same evaluative form of the S.D. The direction of attitude change was as predicted in every case while the predicted and actual magnitude of the shift correlated at $r = 0.91$.

11 Osgood, et al., Op. Cit., p. 203.

12 Percy H. Tannenbaum, Attitudes Towards Source and Concept as Factors in Attitude Change Through Communications, unpublished Doctor's thesis presented to the Graduate College of the University of Illinois, Illinois, 1953, 1v-102 p.

In another study, Kerrick¹³ had one hundred college undergraduate women judge photographs and captions in isolation and then, later, combined as composites, on the same form of the S.D. Her findings indicate that congruity principle predictions and obtained judgments had a correlation of 0.95, a finding reported significant at the 0.001 level. Nevertheless, it is also reported that when both picture and caption were judged as favorable in isolation, the effects in combination served to summate rather than balance according to congruity theory.

Rose¹⁴ combined the media of motion picture and sound track, in a study similar to Kerrick's, using 165 junior college students and found the congruity principle to closely predict the point of resolution of most combined stimuli. Yet here again summation was seen to occur in instances similar to those in the study by Kerrick. It would seem that the congruity principle yields less adequate results when multiple channel communication is involved.

13 Jean S. Kerrick, "News-Pictures, Captions and the Point of Resolution", Journalism Quarterly, Vol. 36, No. 2, p. 183-188.

14 E.D. Rose, Attitude as a Function of Discrepancy Resolution in Multiple Channel Communication, unpublished Doctor's thesis presented to the Faculty of the Graduate School of Stanford University, Stanford, California, 1964, 121 p.

Osgood and Tannenbaum, in a subsequent discussion of the study by Tannenbaum, note the most significant variables relevant to the direction and intensity of attitude shift to be:

- 1) the existing attitude towards the source,
- 2) the existing attitude towards the concept,
- 3) the nature of the evaluating assertion which related the source and concept in the message.¹⁵

As a consequence of experimentation with the congruity principle a number of factors which affect its operation have come to demand attention. These Osgood, Suci and Tannenbaum¹⁶ list as:

a) The Contiguity of Signs in Assertion.- The authors mention no specific research on this topic directly yet expect that as a modifier such as 'lacy' is displaced away from its nominal object 'athlete' in various syntactical constructions, the effect on the meaning of 'athlete' will decrease.

b) The Intensity of Assertion.- Although no empirical data are furnished the authors anticipate that as the copula joining two concepts links them in a more tightly binding manner, the congruity effect should be greater.

c) The Credulity of Assertions.- The congruity hypothesis assumes that subjects believe the assertions

¹⁵ Osgood and Tannenbaum, Op. Cit., p. 43.

¹⁶ Osgood, et al., Op. Cit., p. 212-216.

presented them. The authors again make no mention of specific research in this area and suggest a rough correction for assertions they intuitively feel to be quite tenuous, such as the assertion, 'Eisenhower sponsors communism'.

Fortunately, an empirical illustration of the effect of credulity is afforded by a study of Hovland and Weiss¹⁷ who, working outside the congruity framework, investigated the influence of source credulity on communication effectiveness. In their study the authors presented 223 undergraduate students a self-made questionnaire on which they were asked to rate the general trustworthiness of a list of sources on a five-point scale, ranging from 'very trustworthy' to 'very untrustworthy'. Five days later the subjects were divided into two groups at random, one group receiving a series of four communications espoused by 'very trustworthy' sources, the other receiving the identical communications with the exception that they were advocated by 'very untrustworthy' sources. Immediately following the communications the subjects completed a questionnaire in which they indicated the degree to which their opinion had been altered in the direction advocated by the prior communication. Hovland and Weiss found the differences in extent to which an opinion on

17 Carl I. Hovland and Walter Weiss, "The Influence of Source Credibility on Communication Effectiveness", Public Opinion Quarterly, Vol. 15, No. 4, Fall 1951, p. 635-650.

an issue was changed by the attribution of the material to different sources to be significant at the 0.01 level.

The authors conclude changes of opinion are significantly related to the perceived trustworthiness of the source used in the communication. Although the weight of Hovland and Weiss's contribution is reduced due to the absence of a widely used measuring instrument and to the extremely high drop-out rate which reduced the number of subjects to sixty-one, the influence of credibility remains a subtle factor in attitude change experimentation.

d) The Relevance of the Source to the Concept in the Assertion.- Osgood et al. note the relevance of the signs that are connected by the assertion would appear to influence the magnitude of the congruity effect. Support for this contention is furnished in a study by Kerrick¹⁸ who used eighty university undergraduates in journalism as subjects. They were pre-tested with the S.D. to determine attitudes toward both sources and concepts. Two weeks later they were given experimental material to read and then tested again for attitude with the S.D. Kerrick reports relevant situations tend to produce greater average attitude change than non-relevant situations and that the congruity principle usually predicts attitude change more effectively when the source is

¹⁸ Jean S. Kerrick, "The Effect of Relevant and Non-Relevant Sources on Attitude Change", Journal of Social Psychology, Vol. 47, First Half, February 1958, p. 15-20.

relevant to the concept. The author interprets her data as supporting a source's effectiveness when communicating in an area of competence or familiarity.

e) The Meaning of the Copula.- Osgood et al. mention that in many cases the assertive link itself has meaning apart from its linking function. As an example, they cite the example of the copula 'lied about' and note that beyond the dissociative relation between the two signs in the assertion, there is the implied declaration the source is a liar. No research directly bearing on this factor is presented by the authors.

In summarizing the literature on Osgood's congruency model of attitude change then, it can be said to be a fairly accurate one in some instances while in others such as multiple channel communication, it is generally not as satisfactory. Furthermore, the effectiveness of quantitative prediction using the congruency principle has been shown in some cases and suggested in others to be contingent upon the operation of limiting parameters such as contiguity, intensity, credulity, and so on. A review of the literature in this area exposed a serious lack of experimentation to determine the effects of these limiting parameters on the congruity principle.

3. Definition of the Problem.

This study represents an effort to fill in part of the area neglected by earlier research on the congruity principle, as the parameter of intensity of assertion and its relationship to attitude shift is to be investigated. The study has grown out of the doctoral project of Percy H. Tannenbaum¹⁹ which was described earlier in this work.

Where, in that study, concern was with existing attitudes towards source and concept, in the present endeavor it is also devoted to an aspect of the communications content. That is to say, in Tannenbaum's experiment, the primary emphasis was upon the study of the role of the existing attitude towards source and concept in the process of attitude change due exposure to newspaper articles relating the two. No attempt was made, however, to measure the relative strengths of the communications content per se as the stories were classified solely as either associative (wherein the source manifested a favorable view towards the particular concept), or dissociative (wherein the source communicated itself to be opposed to the particular concept). Thus any shift of attitude due to the intensity of the relating communications content itself could not be investigated in its own right.

¹⁹ Tannenbaum, Op. Cit., 1v-102 p.

It would be interesting to investigate experimentally the effect, if any, of the intensity of an associative link upon the magnitude of the concept-shift of attitude toward congruence. Granting that the existing attitude toward both source and concept is of fundamental importance in predicting attitude shift, this study aims at observing the effects of one aspect of the assertive link--the degree to which it links or binds the source to the concept, that is to say its intensity of assertion.

In the context of this discussion it would appear that two signs eliciting different attitudinal responses, say sign A extremely favorable and sign B relatively neutral con, when linked together by an assertion, occasion a stress to be produced which can render sign A slightly less favorable yet sign B quite a bit more favorable.²⁰ In a case such as this taking a highly favorable source and a relative neutral concept, it seems intuitively reasonable that the greater the intensity with which the source is related to the concept, the greater the pressure toward congruity and consequently the greater the attitude shift of that concept.

Since Osgood²¹ has mentioned predicted magnitudes of attitude shift are large in "the cases where either source

20 C.E. Osgood, "Cognitive Dynamics in the Conduct of Human Affairs", Public Opinion Quarterly, Vol. 62, No. 1, 1960, p. 359.

21 -----, personal communication, 1965.

or concept is relatively neutral and the other is intensely polarized", this study restricts itself to the instance where the source is perceived as highly favorable while the concept is relatively neutral.

This qualification is reinforced by the findings of Carlson²² who studied the effect of modification of the value system on attitude change. In his project, 103 undergraduate psychology students of the University of Michigan indicated their attitude towards Negro housing segregation by ranking six alternatives (from 'completely in favor' to 'completely opposed') in terms of the degree to which they represented the person's own opinions. Their attitudes were again indicated in the same manner following the change procedure. This consisted of an assignment introduced as a test of objectivity wherein each subject was required to support the proposition that 'allowing Negroes into white neighborhoods' enhanced the attainment of previously indicated highly valued goals. Following the collection of the assignments a group discussion was held which was designed to further augment the effectiveness of the self-composed communications content.

In discussing his results, Carlson found significant attitude change for subjects whose initial attitudes were

22 E.R. Carlson, "Attitude Change Through Modification of Attitude Structure", Journal of Abnormal and Social Psychology, Vol. 52, No. 2, 1956, p. 256-261.

moderate whereas those of extremely prejudiced or non-prejudiced persons did not change systematically.

Defining the problem then in interrogative terms it becomes possible to ask: does greater concept-shift of attitude accompany assertive copula of greater intensity?

To further investigate this problem experimentally the following hypothesis is put forth in the null form: there is no significant difference between mean concept-shift of attitude due to source-concept assertions of a given intensity and mean concept-shift of attitude due source-concept assertions of other intensities, when sources are highly positive and concepts are relatively neutral.

To test the above hypothesis in a systematic fashion the experimental design to be described in the following chapter is put forth.

CHAPTER II

EXPERIMENTAL DESIGN

The design of this project is presented in this chapter in five sections. In the first the variables under investigation are defined relative to their measurement process and an example of a typical assertion is cited. Following this the tools used in the study are discussed and the criteria for their selection are given along with some tangible support for the validity and reliability of the S.D. The subjects who participated in the study are described in section three and, in section four, the experimental procedures are outlined. This chapter is then concluded with a brief description of the statistical procedures used in the analysis of results.

1. Operational Definitions.

In this section both attitude and intensity of assertion shall be defined in terms of scores gained through the measurement processes used in their quantification.

Accordingly, a source is said to be the object of a highly favorable attitude if its S.D. score lies between 12 and 18. A score in this range is equivalent to the use of at least four out of six extreme positive scale positions

which the rater is instructed to use if he feels the item to be 'extremely' related to that end of the scale.

On the other hand, a concept is said to be the object of a relatively neutral attitude if its S.D. score lies between plus 6 and minus six. A score at the extremes of this range is equivalent to the use of the scale positions adjacent to neutral for all ratings. These scale positions are to be used if the rater feels the item to be 'slightly' related to either end of the scale. In this connection it was observed by the writer that raters were quite consistent in their use of the scales to the extent that no score was found in this range which was due to the algebraic sum of fairly intense ratings of different polarity.

Intensity of assertion is operationally defined as the scale value of an assertive copula on a ten-point C scale determined through the normalized rank order procedure.

A source is defined as the subject of the assertive sentence in which it characteristically takes an evaluative position about a particular item which is called a concept. Thus in the assertion 'John F. Kennedy favors investigations by congressional committees', John F. Kennedy is the source, favors is the assertive copula and investigations by congressional committees is the concept. The devices used in the quantification of the variables shall be discussed in the following section.

2. The Tools.

Attention will be directed to the tools used in the study of the relationship between intensity of assertion and concept-shift of attitude. To this end a normalized ranking procedure, a self-constructed selection questionnaire, and an evaluative form of the S.D. were used.

a) The Normalized Ranking Procedure.- Since to this writer's knowledge there exists no standardized tool for the measurement of intensity of assertion, scale values were derived from rank order judgments in this study. This was carried out using the normalized rank method of J.P. Guilford.¹ This procedure was chosen because through its use a quantification of intensity of assertion could be achieved which was valid for the particular group of subjects available. It was chosen in preference to the more laborious pair-comparison procedure on the word of Guilford² who notes the shorter method to give results very close to the other, thereby enabling it to be used as an easily justified substitute.

The subjects were asked to rank eleven assertive links from one to eleven in terms of the degree to which they deemed them to bind or link the source to the concept. To eliminate

¹ J.P. Guilford, Psychometric Methods, New York, McGraw-Hill, 1954, p. 181.

² Ibid., p. 193.

the interaction effects of a particular source-concept combination, the capital letters A and B were used; A as a source representative and B as a concept representative so that each assertive link joined A and B in an assertion.

The eleven assertive links are presented in Table I on page 34 of this report and were chosen from a larger pool of one hundred which had been set up by the experimenter in an attempt to sample variation of intensity of assertion. They were presented in the order depicted in Table I which was kept uniform for all subjects.

b) The Selection Questionnaire.- Since this study concerns itself with the relationship of intensity of assertion to concept-shift of attitude when sources are highly positive and concepts relatively neutral, it was necessary to obtain and employ sources and concepts which met these conditions relative to the subjects involved. This aim was achieved through the construction of a selection questionnaire whose purpose was to obtain an overall approximation of the attitude a subject held with respect to a large number of potential sources and concepts.

To this end the graphic type of rating scale was constructed in accordance with the practice recommended by Guilford.³ A single continuous bi-polar horizontal scale was

³ Guilford, Op. Cit., p. 267.

designed with the five cues: Favor, Slightly Favor, Neutral, Slightly Disapprove, and Disapprove, placed beneath. The subjects were asked in the instructions to indicate their responses by placing a check mark on that part of the scale which corresponded with the way they felt generally with respect to the presented item.

The bi-polar scale was scored using nine categories which were not of equal width. In this manner finer discrimination in the favorable region of the scale was afforded. Starting at the right hand extremity of the six inch line, eight equal divisions of $11/16$ th inches were marked off with the remaining half inch constituting the ninth category. The numerical value assigned to each category increased by one going from right to left so that the extreme right hand category had a scale value of minus four and the extreme left hand category had a scale value of plus four.

The following considerations were taken into account in the choice of sources and concepts from the field of political personages and daily events. It was necessary for the subjects employed to have fairly definite attitudes towards the sources for them to be effective when combined with relatively neutral concepts. Furthermore the very same sources and concepts had to be such that they could be combined in three different fashions with each other and yet remain credible assertions in each case. Thus it was

felt that because of the significance and also the contingency of daily events, sources and concepts drawn from them would be effective and relevant to the fairly well educated and mature sample employed.

Accordingly the following method was used to choose sources and concepts which would be included in the selection questionnaire. First of all a list of thirty-six potential sources and thirty-six potential concepts was compiled which were taken from the events of the years 1963 and 1964, as reported by the Britannica Book of the Year 1964⁴ and the Britannica Book of the Year 1965.⁵ This list was then edited to twenty-three potential sources and twenty-nine potential concepts by the experimenter when the criterion of judged credible combination with at least two other items was applied. Amongst the edited list were three filler sources and three filler concepts. These are termed filler as they were not included in the calculations and differed from the experimental potential sources and concepts in that they were deemed to constitute quite unfavorable items for most subjects. Filler source-concept combinations were included in this study so as to allow subjects the possibility of using

⁴ Britannica Book of the Year 1964, Chicago, Encyclopedia Britannica Inc., 1964, 1-895 p.

⁵ Britannica Book of the Year 1965, Chicago, Encyclopedia Britannica Inc., 1965, 1-896 p.

all regions of the rating scales in the selection questionnaire and the S.D. In this way it was hoped to counteract any potential response tendencies to judge every item as favorable without adequately reflecting on it.

The order of presentation of the potential sources and concepts is illustrated in the sample booklet in Appendix 2 and was constant for all booklets. To gauge an index of the consistency with which subjects approached the selection questionnaire, three items randomly chosen were repeated in each booklet. The repeated items were the same in every booklet.

c) The S.D.- This instrument constituted the means for the measurement of concept-shift of attitude in this study. Therefore, because of its importance to the project, consideration will now be given to the reason for its use, to some indications of validity and reliability, and to the reasons governing the choice of the bi-polar adjectival scales.

As the tool developed specifically for the measurement of meaning and with attitude operationally defined as the projection of the meaning of an item onto the evaluative dimension of semantic space, the S.D. would appear a highly relevant and useful tool. Furthermore since the congruity model itself was borne out of experimental work on the S.D., it was felt this study, using the same model, should utilize the same instrument. In this way the project could maintain

a certain consistency with other research on both the measurement process and the congruity theory itself. To be effective an instrument is required to be more than relevant, however; validity and reliability are essential for the interpretation of results and so starting with validity, these two properties of the S.D. shall now be examined and some tangible evidence presented.

Osgood et. al.⁶ report a product-moment correlation significant at the 0.01 level between the S.D. and a series of Thurstone scales. In the study, twenty-three undergraduate students took the S.D. first and the Thurstone scales an hour later while twenty-seven completed the tests in the reverse order. The subjects judged three concepts over five highly loaded evaluative scales on the S.D. and over the standard Thurstone scale for the Church, form B of the Negro scale, and form A of the Capital Punishment scale. The authors further report another product-moment inter-correlation computed on the same subjects after an interval of two weeks that also is significant at the 0.01 level. The authors interpret their results as indicating that an evaluative form of the S.D. and the employed Thurstone scales measure an entity that is common to both to a significant extent. Evidence of

6 Osgood, et al., Op. Cit., p. 193.

the discriminability of the S.D. is afforded from a study by Kelly and Levy.⁷

Kelly and Levy took sixty verbal concepts at random from an atlas of meaning profiles and divided these into three groups of twenty each. Each concept in each group was paired with another concept which differed from it by a given D score. The concepts were paired such that the D's in one group were small, in another the D's were medium, and in the third the D scores were large. A mean profile of one member of each pair was depicted on each page of a sixty-page mimeographed booklet while the pair of concepts was placed at the bottom of each page. Seventy-five undergraduate students were told how the profiles were obtained and what the ratings on the various scales represented. The subjects were asked to indicate the member of the pair that the profile represented. The authors quantified discriminability in terms of the number of correct choices subjects made in identifying the concept represented by the profile. A predicted decline in number of correct choices as mean D scores decreased was confirmed as the number of correct choices for group I was 19.19; group II, 16.07; group III, 11.27. As the results were in the predicted direction and were significant at the

7 Jane A. Kelly and Leon H. Levy, "The Discriminability of Concepts Differentiated by Means of the Semantic Differential", Educational and Psychological Measurement, Vol. 21, No. 1, Spring 1961, p. 53-58.

0.01 level, Kelly and Levy interpret their results as supporting the validity of the S.D. as a measuring instrument.

Grigg⁸ also has focussed on an aspect of the validity of the S.D. In his study, forty-two normal undergraduate students who had completed the section on neurosis in their abnormal psychology course were asked to rate their 'self', 'ideal self', and 'neurotic' on a S.D. Two days later they read a selection about 'Miss X' that was highly favorable to her following which they judged Miss X on the S.D. Immediately afterwards an experimental group of thirty chosen from the sample read a selection that pointed out Miss X not to be as healthy as first appeared, stressing the notion of neurosis. Then the experimental group and twelve control subjects who had not read the negative communication were asked to rate their impression of 'Miss X "now"'. The author reports subjects indicated significantly greater distance between 'ideal self' and 'neurotic' than between 'self' and 'neurotic' at the 0.001 level using a one-tailed "t" test. However, no significant difference between the experimental and control group was found to accompany the negative communication about Miss X although a shift did occur in the predicted direction. It may be that the sample size and the

⁸ Austin E. Grigg, "A Validity Study of the Semantic Differential Technique", Journal of Clinical Psychology, Vol. 15, No. 2, April 1950, p. 179-181.

parameter of credulity with respect to the communications content constituted variables which made it difficult for resulting differences to be significant. In any event, Grigg considers his significant findings as favorable to the validity of the S.D.

Moss⁹ in his review of studies bearing on S.D. research notes the trend of consistency with which it quantifies meaning in a very useful manner. However, the matter of quantification introduces a necessary characteristic of an instrument such as the S.D.; namely, the validity of its scaling assumptions, and so attention will now be directed toward these.

To investigate the scaling assumptions that 1) there are equal intervals within each bi-polar scale and that 2) there are equal intervals between the scales, Messick¹⁰ had one hundred college undergraduates judge twenty concepts over nine most frequently used S.D. scales. Employing the method of successive intervals the author notes that although there is an apparent inequality of units within any one of the scales the interval sizes tend to be consistent between

⁹ D. Scott Moss, "Current and Projected Status of Semantic Differential Research", The Psychological Record, Vol. 10, No. 1, January 1960, p. 47-54.

¹⁰ Samuel J. Messick, "Metric Properties of the Semantic Differential", Journal of Educational and Psychological Measurement, Vol. 17, No. 2, 1957, p. 200-206.

scales. That is to say the same categories tend to be either too large or too small in similar amounts over all scales. Also it was noted that the origin falls in approximately the same place on all scales. Messick concludes that little distortion would be introduced by using successive integers as category mid-points for these scales and notes "it seems reasonable to conclude that the scaling properties implied by the Semantic Differential have some basis other than mere assumption."¹¹

These findings find further support from the study by Cliff¹² who had 213 university undergraduates rate all combinations of nine adverbs and fifteen adjectives along a self-constructed scale running from most unfavorable to most favorable. The experimenter reports that adverbs such as 'slightly', 'quite' and 'extremely' combine multiplicatively with adjectives such as 'good', 'pleasant' and 'ordinary' in determining scaling locations for judgments along the eleven-step scale. Scale values of the combinations were found using the method of successive intervals. In his conclusions Cliff points out, "in a very real sense 'extremely good' may be said to be about one-and-a-half times as good as 'good'."¹³ The author interprets his results as supporting

¹² Norman Cliff, "Adverbs as Multipliers", Psychological Review, Vol. 66, No. 1, January 1959, p. 27-43.

¹³ Ibid., p. 42.

the hypothesis that the common adverbs of degree (as used on the S.D.) multiply the intensity of the adjectives they modify. In addition to showing evidence of its validity it is further necessary for an effective measuring instrument to manifest stability over time and so the reliability of the S.D. shall be next considered.

In discussing some of the older test-retest research Osgood et al.¹⁴ report a study in which 135 college undergraduates judged six concepts over six evaluative scales on two occasions separated by five weeks. Test-retest coefficients ranged from 0.57 to 0.93.

However, because the correlation coefficient does not take into account the absolute differences between the means of the two tests the authors¹⁵ point to its inadequacy as an index of stability over time for the type of data given by the S.D. Accordingly, the authors estimate reliability by determining the absolute scale deviations between test and retest. These deviations are ranked in absolute size from smallest to largest and the frequency of each deviation of a given size is recorded in terms of the percentage of the total sample it represents. The proportion of the time a deviation greater than or equal to each size deviation can be

14 Osgood, et al., Op. Cit., p. 192.

15 Ibid., p. 127.

expected is computed and functions in the role as a confidence level.

In reviewing the considerable reliability data on the S.D., Osgood et al.¹⁶ notes that absolute scale deviations between test and retest of more than 1.50 and 2.00 scale units are significant at the 0.05 level while for groups a shift of one-half a scale unit is significant at the same level.

Further tangible support for the reliability of the S.D. is afforded by the study by Norman¹⁷ who specifically set out to investigate its stability over groups and time. Defining a unit discrepancy as a change in a given rating of one scale unit he mentioned one can compute the maximum number possible in a second administration. The number of unit discrepancies actually appearing in a second administration may then be expressed as a percentage of the maximum (hereafter referred to as the %MUD).

Using fifteen males and fifteen females chosen at random from 540 and twenty concepts chosen at random from 360 in an atlas set, he employed twenty scales giving a total N of 12,000. The author reports the %MUD to be 23 for the two administrations which were separated by four weeks. In this case approximately 40% of the ratings remained the same, 35%

16 Ibid., p. 328.

17 Warren T. Norman, "Stability Characteristics of the Semantic Differential", American Journal of Psychology, Vol. 72, No. 4, 1959, p. 581-584.

changed by one scale unit, while 25% changed by two or more scale units. The average shift was 1.07 scale positions.

In conclusion Norman adds:

It would appear that a rather high degree of time and sampling stability exists for the Semantic Differential for groups of subjects chosen from an undergraduate population.¹⁸

That the S.D. would seem to provide a valid and reliable index to the location of the attitude object along a general evaluative continuum is offered support by the studies mentioned. It would appear to correlate fairly well with the standard tools of this field and be relatively stable over time. The work on the validity of the scaling assumptions would indicate that although exact equality of intervals within a scale would not seem achieved, the observed deviations tend to be consistent over scales and thus there is some support for summation over scales. For these reasons the S.D. was deemed to have sufficient precision as a measuring instrument of this study. The basis on which the scales were chosen shall now be considered.

As attitude has been operationally defined as the projection of the meaning of a concept onto the evaluative dimension of semantic space, high loading on the evaluative factor with minimal loading on the remaining factors was the primary criterion. Also to be considered, however, was the

¹⁸ Norman, Op. Cit., p. 584.

judged relevance of the scales to the set of sources and concepts employed. The scales best meeting these criteria are presented in Appendix 1, which shows the loadings on the other main factors as well. It may be noted that four filler scales were employed in addition to the six experimental scales. Two of these fillers are highly loaded on the activity factor while the two others are highly loaded on the potency factor. These filler scales were added to the others to avoid an excess of repetition in the judgments placed by the subjects and were not used in the calculations.

All scales took the familiar form of being defined by one of a pair of bi-polar terms at each end of a seven-step continuum. The order of the scales was the same for all items to be judged, such that the six evaluative scales were separated by the filler scales, except for the last two scales which were both evaluative. In order to avoid the establishment of a set to check continually at one end of the scales, the direction of the polar terms was reversed for consecutive evaluative scales.

These scales were presented in printed form. That is to say, the basic format was photo-copied and reproduced by offset lithography while the sources and concepts in isolation and in combination were added later by letterpress. The particular item to be rated was presented in 14-point Eusebius upper case typeface at the top of each page, and the scales

were presented beneath it. There was a page for each item or combination and the form for all items and combinations was the same. Copies of the various booklets made up of these forms are presented in Appendices 3 and 4. The subjects who completed the measuring instruments described shall now be discussed in the section to follow.

3. The Sample.

A total of 166 subjects participated in the project, all of whom were following summer courses in Education or Psychology at the University of Ottawa in 1965. Ninety-five per cent were noted to be either practicing teachers or educational administrative personnel. Of the total group, 21 were later excluded; 16 for whom no difference scores could be computed as they were not present for both administrations of the S.D.; and 5 whose results could not be utilized due to incorrect use of the S.D. scales.

The remaining 145 subjects comprised 90 males and 55 females whose mean age was 34.7 years with a standard deviation of 10.3 years. Fair homogeneity of educational level was noted as they showed a mean of sixteen years of formal schooling with a range from 11 to 19 years.

The subjects partook in the study on a volunteer basis and met the criterion that their comprehension of the English language was sufficient to allow the meaningful

completion of the procedures involved. That is to say, subjects were instructed in French not to volunteer for the project if they found difficulty in understanding the instructions which were later read aloud in English.

Thus the typical subject was a thirty-five year old educator of either sex who possessed a college degree and whose comprehension of English was sufficient to allow participation in the project. The procedure in which this sample participated in the project shall be discussed next.

4. Experimental Procedures.

This study was carried out in three stages. In the first stage, ninety-eight subjects comprising 4 groups chosen at random out of the total of 7 groups, completed both the normalized ranking procedure and the selection questionnaire. In the second stage, all 145 subjects judged selected sources and concepts in isolation on the S.D. eight days later. Copula of three intensities of assertion were chosen from the results of the ranking procedure and source-concept combinations employing copula of each intensity were formed. Three versions of the last test booklet were prepared, each of which presented assertions of a different intensity of assertion while the same level of intensity was used within each version. In the third stage of the project three groups, chosen at random by the order of presentation of the booklets,

filled out the three versions of the S.D. Each of these stages shall next be discussed in greater detail.

Scale values which ranged from 2.5 to 7.7 on a 10-point C scale were computed for the eleven assertive links. They are presented in Table I. Three assertive links, namely, 'is indifferent to', 'favors', and 'offers 100% support to' having C scale values of 3.0, 4.9, and 7.2 respectively, were chosen from the eleven for further use in the experiment. These were chosen because of the nearly equal increments in intensity between each, in addition to which a considerable variation of intensity would appear to be sampled by them. Furthermore, the judged credibility of assertions employing these links was greater than that of others using the remaining assertive links. Of the ninety-eight subjects who completed the ranking procedure, seven had to be excluded from the computations as their efforts did not comply with instructions which had been read aloud.

The experimental and filler sources and concepts chosen for inclusion in the second and third stages of the project are presented in Table II along with their aggregate selection questionnaire scores for the ninety-eight subjects. The experimental source-concept pairs presented constitute the best approximation to the selection criterion that sources be judged as highly favorable while concepts be judged as relatively neutral. On the other hand, the filler source-concept

Table I.-

C Scale Values for Assertive Links as Determined
Through the Normalized Rank-Order Procedure.

Assertive Link	C Scale Value
A is very much in favor of B	6.2
A is indifferent to B	3.0
A favors B	4.9
A is partial to B	4.3
A offers 100% support to B	7.2
A prefers B	4.9
A supports B	5.6
A absolutely and totally supports B	7.7
A is oblivious to B	2.5
A is very partial to B	5.3
A slightly supports B	3.6

Table II.-

Aggregate Selection Questionnaire Scores for the Source-Concept Pairs Chosen from the Selection Questionnaire for Inclusion on the S.D. (N=98)

Sources	Concepts	Aggregate Scores
Experimental:		
John F. Kennedy	investigations by Congressional Committees	336 126
Sir Winston Churchill	the British Cabinet System	204 111
Jacqueline Kennedy	cultural relations with Kuwait	276 46
Governor General Vanier	recent financial developments	267 79
U Thant	the International Monetary Fund	230 112
Martin Luther King	committees on urban affairs	216 185
Queen Elizabeth	cultural exchange with Luxembourg	214 185
Filler:		
Senator Barry Goldwater	the International Civil Service	-249 104
Premier Castro	the conflict in the Dominican Republic	-245 -155
Premier Krushchev	the Canadian sale of Wheat to Cuba	- 30 50

pairs presented constitute the best approximation to the criterion that the sources be perceived as highly unfavorable. There was no criterion for the filler concepts other than a judged credible combination with the particular source involved and these fillers did not enter further into the calculations.

A copy of the first test booklet which included both the normalized ranking procedure and the selection questionnaire is presented in Appendix 2. To mask the notion of selection this latter part of the booklet was termed a Public Opinion Questionnaire in the study proper.

In the next phase, the entire sample judged the chosen sources and concepts in isolation on the first form of the S.D. A copy of this second test booklet complete with the instructions that were read aloud is presented in Appendix 3. At this point it may be added that in order to cloak the dynamics of the study as being related to attitude change, the instructions for both administrations of the S.D. were designed to convey the purpose of the study to be that of gauging public opinion and trying out a novel means to that end.

In the third phase of the project, subjects were divided into three groups by the order of presentation of three versions of the final test booklet. One version contained assertions employing the copula 'is indifferent to'; the second version used the copula 'favors', and the third

version made use of the copula 'offers 100% support to'. In all versions the sources and concepts were identical so that the major difference between one version and another was the copula employed whereby variations of intensity of assertion were represented. The subjects were asked to rate the concept in light of the assertion in each case using the same bi-polar scales that had been included in the first S.D. booklet. A sample copy of the third test booklet made up of pages from each of the three versions is presented in Appendix 4.

5. Analysis of Data.

In the case of the selection questionnaire the categories in the nine-step scale were assigned scale values starting from minus four on the right to plus four on the left, such that the neutral position earned a score of zero. These values were summed over the ninety-eight subjects to find an aggregate score for each potential source and concept.

The neutral position on the S.D. scales was assigned a scale value of zero while values of plus one, plus two and plus three were given to successive intervals on the positive side of neutral and minus one, minus two and minus three were assigned to successive intervals on the negative side. Each page of six evaluative scales yielded a summed score for the particular item judged which could range from plus 18 to minus 18.

As the S.D. scores in this study constitute variance on the evaluative dimension predominantly, D scores were obtained by subtracting the score of the item in isolation from the score it obtained when it was judged in the light of an assertion of a given intensity. The resulting D scores representing concept shift of attitude were then analyzed using a one-way analysis of variance modeled after Winer's¹⁹ design for unequal sample sizes. It will be recalled that for a concept shift score to be included in the analysis the criterion that the source be judged as highly favorable and the concept as relatively neutral had to be fulfilled.

To test for significance of differences between mean concept shift of attitude accompanying the copula 'is indifferent to' (hereafter termed Treatment I), and that accompanying 'favors' (hereafter termed Treatment II), and that accompanying 'offers 100% support to' (hereafter termed Treatment III), the Tukey (a) test was used. Here the critical value for a difference significant at the 0.01 level was given by:

¹⁹ B.J. Winer, Statistical Principles in Experimental Design, Toronto, McGraw-Hill Co., 1962, p. 96-104.

$\sqrt{S^2_x/\bar{n} \times q_{0.99}(K,df)}$

where S^2_x = the estimate of within variance;

\bar{n} - the harmonic mean of the unequal sample sizes;

$q_{0.99}(K,df)$ = the critical studentized range statistic taken from Winer wherein K is the number of treatments and df is the degrees of freedom of $S^2_{A,20}$

To be significant at the 0.01 level the difference between means was required to be greater than the critical value given by the Tukey (a) test. Homogeneity of variance for each analysis was checked using the F ratio and it was found that this assumption was not violated by the data.

The results analyzed through the use of these statistics and their interpretation in terms of the null hypothesis are to be discussed next in the following chapter.

CHAPTER III

PRESENTATION AND DISCUSSION OF RESULTS

In the first section of this chapter the reliability estimate data for both the selection questionnaire and the two administrations of the S.D. are presented. Following this the results of the project are reported and they are then discussed in light of the null hypothesis. The type of relationship which may exist between intensity of assertion and concept-shift of attitude is suggested and some implications and suggestions for further research are mentioned. Interspersed in the discussion of the results are comments regarding some limitations of the experiment. The summary and conclusions of the project are presented in the final section.

1. Reliability Data.

Reliability estimates for this study shall be presented in terms of the Σ MUD technique developed by Norman¹ which was discussed in Chapter II on page 28 of this work. Two test-retest estimates were computed in an attempt to gauge the consistency with which the tools were employed

¹ W.T. Norman, "Stability Characteristics of the Semantic Differential", American Journal of Psychology, Vol. 72, No. 4, 1959, p. 581-584.

by the subjects of this experiment. The first estimate (hereafter referred to as retest I) was obtained when subjects judged the same items twice during one testing session. The second estimate (hereafter referred to as retest II) was obtained, on the other hand, when subjects judged the same items on two different occasions. Due to the limits imposed by the random distribution of the test booklets employing the three different assertive links, it was not possible to administer a retest II of this form of the S.D. without arousing the suspicion of the subjects. In this case only a retest I estimate was computed as an index of stability. All reliability estimates are presented in Table III.

The reliability of the selection questionnaire was indexed by having eight randomly chosen subjects from the ninety-eight complete this questionnaire twice separated by a three-day interval. From the N of 112 readings (8 subjects x 14 items) it can be seen that the probability a rating will shift by more than two scale units on the nine-step scales is at the four per cent level while the average deviation per scale reading was 0.60 scale units.

In addition, the consistency with which the selection questionnaire was employed was sampled by having all ninety-eight subjects rate three items in the questionnaire twice. The retest items were the same for all subjects and were included towards the end of the series of items in the

Table III.-

Test-Retest Estimates of Reliability for the Selection
Questionnaire and the Two Administrations of the S.D.

	Selection Questionnaire		S.D. Single Items		S.D. Paired Items
	Retest I	Retest II	Retest I	Retest II	Retest I
	N	294	112	870	1,260
% MUD	9.5	10.1	13.3	11.6	12.8
% shift x 0 scale units	66	62	59	65	64
% shift x 1 scale unit	23	24	28	23	25
% shift x 2 scale units	6	10	8	6	7
% shift x more than 2 scale units	5	4	5	3	4
Average deviation per scale reading	0.50	0.60	0.62	0.53	0.54

questionnaire. In this case \bar{MUD} of the 294 ratings (28 subjects x 3 items) was 9.5 and the probability that a given rating might fluctuate by more than two scale positions was at the five per cent level.

To gauge an index of the retest II type for the S.D. when sources and concepts were judged in isolation, fifteen subjects randomly chosen from the total group of 145 completed this booklet twice over a one-day interval. Here the \bar{MUD} was 11.6 for the N of 1,260 ratings (15 subjects x 14 items x 6 scales) while the probability that a given rating would vary by more than two scale units was at the three per cent level. The average deviation per scale reading was slightly more than one half a scale unit giving the ratings considerable stability over the admittedly brief time interval.

An estimate of the retest I type was obtained by including one of the experimental items twice in every booklet. The repeated item was varied for each booklet so that approximately ten consistency formats of six scales each were fashioned for every experimental item judged. As is shown in Table III the \bar{MUD} was 13.8 for the N of 870 ratings (145 subjects x 1 item x 6 scales) while the probability that a given rating changed by more than two scale positions was at the five per cent level.

For the second administration of the S.D. in which concepts were judged in the light of assertions of varying intensity, an estimate of the retest I type was found by having subjects rate one of the experimental concepts in view of the appropriate assertion twice. Here again, the repeated item was varied over the 145 booklets so that there were approximately twenty-one consistency formats of six scales each for every item. For the N of 870 ratings (145 subjects x 1 item x 6 scales) the σ_{MDD} was 12.0 while the probability that a given rating would shift by more than two scale units was at the four per cent level.

In view of the fact that the average deviation per scale reading was found to fluctuate between approximately five and six tenths of one scale unit, it may be appropriate to add that the stability with which the subjects employed the measuring instruments of this study would appear rather high. It must also be noted, however, that the time interval separating the two series of ratings was fairly brief varying from twenty minutes to three days, approximately.

2. Presentation of Results.

The results of the seven analyses of variance and the consequent tests of significance of the differences between the concept-shift means accompanying the various levels of intensity of assertion are presented in Tables IV to XVII.

As was mentioned earlier, the assertive link 'is indifferent to' is termed Treatment I; 'favors' is termed Treatment II, and 'offers 100% support to' is termed Treatment III.

Furthermore, the groups whose results appear in the following tables judged the sources as highly favorable and the concepts as relatively neutral in accordance with the operational definitions outlined in Chapter II of this report. The exception to this occurs in the case where the source 'Queen Elizabeth' is considered as highly favorable when its S.D. scores fall in the range from 15 to 18 instead of 12 to 10. This raising of the cut-off score for this source, making it the object of more highly favorable judgments, had the effect of raising the significance of the F ratio of the relevant analysis of variance from the five per cent to the one per cent level. Each of the F ratios for the seven analyses of variance was found to be significant at the 0.01 level.

Of the twenty-one tests of significance of differences between mean concept-shift of attitude in the tables, fourteen are significant at the 0.01 level. It can be noted that in every case the difference between the mean concept-shift accompanying Treatment I and Treatment II and the difference between that accompanying Treatment I and Treatment III is significant at the 0.01 level. In these instances then it seems necessary to reject the null

Table IV.-

Analysis of Variance for Concept-Shift when Source was John F. Kennedy and Concept was Investigations by Congressional Committees.

Source of Variation	SS	df	Estimate of Variance	F
Between	1,254	2	627	21.01 (p<.01)
Within	2,513	70	32.12	
Total	3,767	72		

Table V.-

Tests of Significance of Differences Between Concept-Shift Means when Source was John F. Kennedy and Concept was Investigations by Congressional Committees.

Treatments	N	Means	I	III	II
			-3.50	4.25	5.84
I	26	-3.50	--	7.70 (p<.01)	9.34 (p<.01)
III	31			--	1.59
II	24	5.84			--

Table VI.-

Analysis of Variance for Concept-Shift when Source was Sir Winston Churchill and Concept was The British Cabinet System.

Source of Variation	SS	df	Estimate of Variance	F
Between	1,248	2	624	13.12 (p < .01)
Within	1,427	30	47.57	
Total	2,675	32		

Table VII

Tests of Significance of Differences Between Concept-Shift Means when Source was Sir Winston Churchill and Concept was The British Cabinet System.

Treatments	N	Means	I -5.75	III 3.00	II 9.20
I	12	-5.75	--	8.75 (p < .01)	14.75 (p < .01)
III	10	3.00		--	6.00
II	11	9.20			--

Table VIII-

Analysis of Variance for Concept-Shift when Source was
Jacqueline Kennedy and Concept was Cultural
Relations with Kuwait.

Source of Variation	SS	df	Estimate of Variance	F
Between	1,032	2	516	12.65 (p < .01)
Within	3,101	76	40.8	
Total	4,133	78		

Table IX.-

Tests of Significance of Differences Between Concept-Shift
Means when Source was Jacqueline Kennedy and Concept was
Cultural Relations with Kuwait.

Treatments	N	Means	I -1.45	III 5.60	II 6.18
I	31	-1.45	--	6.05 (p < .01)	7.63 (p < .01)
III	28	5.60		--	0.48
II	20	6.18			--

Table X.-

Analysis of Variance for Concept-Shift when Source was Governor General Vanier and Concept was Recent Financial Developments.

Source of Variation	SS	df	Estimate of Variance	F
Between	1,288	2	644	13.67 (p<.01)
Within	2,686	57	47.12	
Total	3.974	59		

Table XI.-

Tests of Significance of Differences Between Concept-Shift Means when Source was Governor General Vanier and Concept was Recent Financial Developments.

Treatments	N	Means	I	II	III
			-3.73	5.57	6.24
I	22	-3.73	--	9.30 (p<.01)	9.97 (p<.01)
II	21	5.57		--	0.67
III	17	6.24			--

Table XII.-

Analysis of Variance for Concept-Shift when Source was U Thant and Concept was The International Monetary Fund.

Source of Variation	SS	df	Estimate of Variance	F
Between	1,386	2	643	21.43 (p < .01)
Within	840	28	30.0	
Total	2,226	30		

Table XIII.-

Tests of Significance of Differences Between Concept-Shift Means when Source was U Thant and Concept was The International Monetary Fund.

Treatments	N	Means	I	III	II
			-6.50	5.89	8.20
I	12	-6.50	--	12.39(p < .01)	14.70(p < .01)
III	10	5.89		--	2.60
II	9	8.20			--

Table XIV.-

Analysis of Variance for Concept-Shift when Source was
Rev. Martin Luther King and Concept was Committees
on Urban Affairs.

Source of Variation	SS	df	Estimate of Variance	F
Between	967	2	483.5	16.76 (p<.01)
Within	1,125	39	28.85	
Total	2,092	41		

Table XV

Tests of Significance of Differences Between Concept-Shift
Means when Source was Rev. Martin Luther King and
Concept was Committees on Urban Affairs.

Treatments	N	Means	I	II	III
			-6.29	3.79	4.00
I	14	-6.29	--	10.03(p<.01)	10.29(p<.01)
II	14	3.79		--	0.21
III	14	4.00			--

Table XVI.-

Analysis of Variance for Concept-Shift when Source was Queen Elizabeth and Concept was Cultural Exchange with Luxembourg.

Source of Variation	SS	df	Estimate of Variance	F
Between	498	2	249	6.69 (p<.01)
Within	1,004	27	37.19	
Total	1,502	29		

Table XVII.-

Tests of Significance of Differences Between Concept-Shift Means when Source was Queen Elizabeth and Concept was Cultural Exchange with Luxembourg.

Treatments	N	Means	I	II	III
			-4.14	4.56	11.54
I	7		--	8.70(p<.01)	11.54(p<.01)
II	18			--	2.84
III	5				--

hypothesis of no significant difference between mean concept-shift of attitude due assertions of a given intensity and mean concept-shift of attitude due assertions of other intensities, when sources are judged as highly favorable and sources are judged as relatively neutral. On the other hand, the difference between mean concept-shift accompanying Treatment II and that accompanying Treatment III does not warrant the rejection of the null hypothesis.

A discussion of these results follows in the next section in which reference is made to the type of relationship which may exist between intensity of assertion and concept-shift of attitude.

3. Discussion of Results.

While many of the findings presented in the last section are significant and in the expected direction, it would appear that there are several others which do not echo these trends. From inspection of the tables of tests of significance between means it can be noted that the mean concept-shift of attitude accompanying Treatment I differs significantly from that accompanying Treatments II and III in every case. However, in no instance is the difference between the mean shift accompanying Treatment II and that accompanying Treatment III significant at even the five per cent level. In fact, from Tables V, VII, IX, and XIII it

can be seen that a greater shift of attitude accompanies an assertion of a lesser intensity. In some cases, then, it would appear that approximately equal increments in intensity of assertion are not accompanied by similar increments of concept-shift of attitude.

A possible explanation for these conflicting findings concerns the type of relationship which may exist between intensity of assertion as it has been operationally defined and concept-shift of attitude.

Figure 1 shows mean concept-shift scores plotted against the C scale values for the assertive links. From the graph one may notice the relationship to be a non-linear one. A mean negative shift of approximately four points is seen to accompany Treatment I while a mean positive shift of approximately six points is observed to accompany Treatment II. However, the mean shift accompanying Treatment III is only slightly larger than five scale points.

These findings may be comprehended in the light of a curvilinear relationship between intensity of assertion and concept-shift of attitude wherein a point is reached after which greater intensities of assertion result in diminished attitude change. This reduced effect has been observed by Whittaker² in slightly different context.

² J.O. Whittaker, "Attitude Change and Communication-Attitude Discrepancy", Journal of Social Psychology, Vol. 65, No. 1, January 1965, p. 141-147.

Mean Concept-Shift
of Attitude

S.D. Mean Difference
Scores

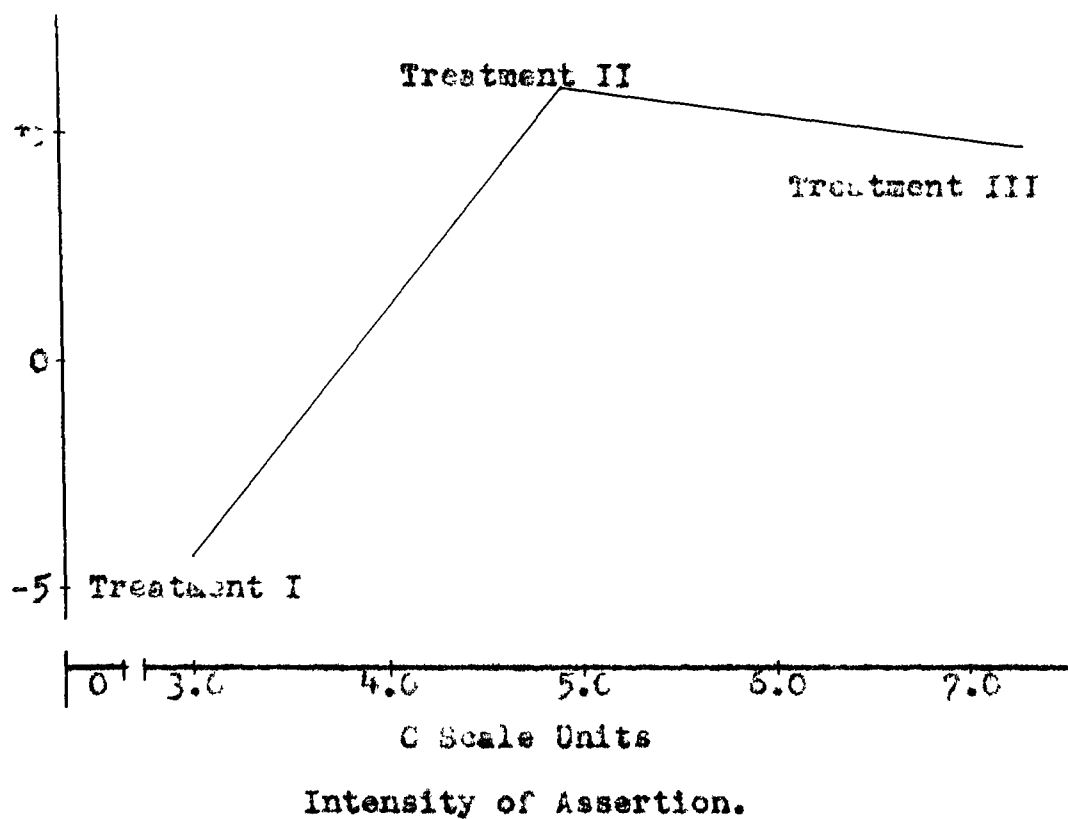


Figure 1.- Mean Concept-Shift of Attitude as Given by S.D. Mean Difference Scores vs. Intensity of Assertion as Given by C Scale Values for Assertive Links.

In his study, attitude change was related to the difference between an individual's position on an issue and that advocated by a communications message. In the experiment, fifty-five male and fifty-four female college undergraduate students were presented messages which advocated changes of varying degree relative to their own convictions on various topics. Using a self-made nine-step opinion questionnaire, the author reports that communications presenting stands relatively close to that of the subject resulted in less attitude change than those further removed. Nevertheless, the author notes that a point is reached beyond which greater discrepancies result in diminished change of attitude.

In the context of this study it might then be possible to say that when the source is regarded as highly favorable and the concept as relatively neutral, greater intensities with which the two are linked result in greater concept-shift of attitude toward congruence. However, it would appear there exists an intensity of assertion in excess of which greater intensities result in a reduced concept-shift of attitude.

Essential to the congruity principle is the proposition that the greater the cognitive stress produced, for example, by an assertion, the greater will be the resulting shift of attitude toward a balanced state. It would appear,

however, that with the limiting parameter of intensity of assertion, the situation is more complex.

A possible explanation for this observed reduced effect concerns the operation of another of the limiting parameters of congruity; that is, the contiguity of the signs in the assertions. Osgood et al.³ suggest that with increased contiguity of incongruously valued signs goes greater stress toward congruence. This variable may be in operation in the present study as it may be noted that the contiguity of the signs where 'favors' is the assertive link is greater than when 'offers 100% support to' is the assertive link. However, a finding which does not appear to support this interpretation lies in the fact that the shift accompanying 'is indifferent to' differs significantly from that accompanying 'offers 100% support to' while the contiguity of the signs in each is approximately equal.

The reduced effect may also be due to the operation of another of the parameters of the congruity principle. The credulity of an assertion using 'offers 100% support to' as an assertive link may be judged as less than that of an assertion employing the link 'favors'. In such a case the cognitive stress occasioned by the greater intensity of assertion would be lessened by the weakened belief that the

3 Osgood, et al., Op. Cit., p. 213.

statement itself is valid, and consequently the shift toward congruence would be reduced in magnitude. Implications implicit in the foregoing discussion shall now be examined.

It would be necessary, in future research in this area to control for the operation of these other limiting parameters of the congruity principle. To do this and to clarify further the type of relationship between intensity of assertion and attitude shift a larger sample of at least four hundred subjects is deemed necessary. In this case, five intensities of assertion could be used and the accompanying shift in attitude found. Credulity of assertions could be assessed by means of sub-groups chosen at random while the assertions could be constructed such that the contiguity of signs in each is nearly equal.

Should a similar curvilinear relationship again be supported by such a study some interesting consequences would appear possible. It might be feasible to determine a critical level of intensity of assertion in order to elicit maximum attitude change with respect to a particular item for a given population. In addition, the effects of repeated exposure to intensities of assertion beyond the critical level could be observed and possible techniques designed to raise the critical level could be developed. It would appear then that a fertile area for applied research in the fields of advertising and public opinion sampling lies undeveloped in Osgood's congruity

model as the effects of intensity of assertion have yet to be collaborated and utilized.

SUMMARY AND CONCLUSIONS

This study was concerned with the effects on attitude change of one of the limiting parameters of the congruity principle formulated by Osgood et al. In this investigation it was anticipated that variations in the intensity with which two signs are joined or connected through an assertion would be accompanied by variations in the concept-shift of attitude held by subjects. To find tangible support for such an expectation scale values were found for various assertive links through the method of normalized ranking and six sources and six concepts previously rated on an evaluative form of the S.D. were combined in assertions of three intensities and rated on the same form of the S.D. over an interval of two weeks.

By means of this design it was found that the limiting parameter of intensity of assertion would appear to influence the operation of the congruity principle. Given that the existing attitude toward both source and concept is of primary importance in the prediction of attitude shift it was observed that the magnitude of the resultant shift is affected by the intensity with which the two signs are joined. In general, support was given to the congruity model of Osgood et al. up to a point, in that greater cognitive stress, occasioned for example by assertions of greater intensity, resulted in significantly greater concept-

shift of attitude. In these instances the null hypothesis was rejected. However, a level was reached beyond which greater intensities of assertion were not accompanied by further increments in mean concept-shift and in these cases the null hypothesis could not be rejected.

In conclusion then, the results of this study support the existence of a curvilinear relationship between intensity of assertion and mean concept-shift of attitude when sources are judged as highly favorable and concepts are judged as relatively neutral. Possible explanations for the reduced attitude shift accompanying assertions of the greatest intensity were suggested in terms of an incredulity or contiguity effect.

It would appear that the verification of the findings of this study as well as the clarification of the roles of the remaining other limiting parameters of the congruity principle constitute a fruitful area for future research.

BIBLIOGRAPHY

Kerrick, Jean S., "The Effects of Relevant and Non-Relevant Sources on Attitude Change", Journal of Social Psychology, Vol. 47, First Half, February 1958, p. 15-20.

This article is important as it represents the first reported attempt which provides empirical evidence for the effect and importance of a limiting parameter on the operation of the congruity principle. However, the significance of the findings is weakened by the lack of precision regarding the exact nature of a relevant source and by the absence of control for other limiting parameters, especially that of credulity of assertion.

Osgood, Charles E., George J. Suci, and Percy H. Tannenbaum, The Measurement of Meaning, Urbana, Illinois, The University of Illinois Press, 1957, 342 p.

To do research involving the S.D. without an intimate acquaintance with this book is inconceivable. It is of keynote relevance to this project in that it presents a full development of the congruity principle and its limiting parameters as well as the theoretical constructs underlying the S.D. measurement process. A great deal of data on validity and reliability is contained in the book but the lack of a subject index renders its consultation more difficult.

Tannenbaum, Percy H., Attitudes Toward Source and Concept as Factors in Attitude Change Through Communication, unpublished doctoral thesis presented to the Graduate College of the University of Illinois, Urbana, Illinois, 1953, iv-102 p.

Tannenbaum was the first to provide tangible support for the predictive power of the congruity model. His experiment considered those variables believed to be most significant with respect to the magnitude and direction of attitude change in a specific situation and served as the point of inspiration for this project. It is an example of an efficient design as both source and concept-shift were studied in both associative and dissociative communications.

Whittaker, James O., "Attitude Change and Communication-Attitude Discrepancy", Journal of Social Psychology, Vol. 65, No. 1, 1965, p. 141-147.

This article provides a good example of a study designed to focus attention on apparently conflicting results of previous research on the relationship between the amount of attitude change advocated and the consequent magnitude of actual attitude shift. Although not carried out within

the congruency framework, the curvilinear relationship found between the two variables considered in the study may be similar to that existing between intensity of assertion and concept-shift of attitude toward congruity. It is unfortunate, however, that the variable of credulity of communications content was not investigated, so that as it stands, the author's interpretation of his results is somewhat inconclusive.

Eajonc, R.O., "The Concepts of Balance, Congruity and Dissonance", Public Opinion Quarterly, Vol. 24, No. 2, 1960, p. 280-296.

This article contains a review of the models of Heider, Newcomb, Osgood and Tannenbaum, and Festinger. It is significant because of the author's critical approach to published research on these models of cognitive dynamics as well as his ability to point out equivalent points of reference and assumptions in the various theoretical views considered.

APPENDIX 1

ROTATED FACTOR LOADINGS OF EXPERIMENTAL AND FILLER SCALES

APPENDIX 1

Rotated Factor Loadings of Experimental and Filler Scales.

Scales	Evaluative	Potency	Activity
Experimental:			
good-bad	0.86	0.05	0.07
fair-unfair	0.63	0.06	-0.07
clean-dirty	0.62	-0.05	0.03
pleasant-unpleasant	0.62	0.05	-0.28
valuable-worthless	0.79	0.04	0.13
tasty-distasteful	0.77	0.05	-0.11
Filler:			
large-small	0.06	0.62	0.34
strong-weak	0.19	0.62	0.20
fast-slow	0.01	0.00	0.70
active-passive	0.14	0.04	0.59

Charles E. Osgood, George J. Suci, and Percy H. Tannenbaum, The Measurement of Meaning, Urbana, Illinois, University of Illinois Press, 1957, p. 37.

APPENDIX 2

RANK ORDER AND SELECTION QUESTIONNAIRE

APPENDIX 2

NAME: _____ CLASS, BIRTH: _____
First Name Middle Name Last Name Year Month Day

DATE OF BIRTH: _____ AGE: _____
Day Month YEAR Years Months

BIRTHPLACE: _____
Place Province or State Country

LANGUAGE: _____
Native Others you fluently use.

EDUCATION: _____
Grade or Degree Institution Date Completed

VOCATION: _____
Nature Where Employed?

APPENDIX 2

JUDGING INTENSITY OF ASSERTION

The purpose of this study is to measure the intensity of various phrases by having different people place them in a ranked order from highest to lowest. By intensity of assertion we mean the degree to which the phrase or statement joins or pulls together its component parts - A and B. For example;

In ranking the following assertions,

A favors B
A is aware of B
A completely supports B

if one felt the phrase 'completely supports' links A and B more closely than either 'is aware of' or 'favors', he should give it a rank of 1st by placing the numeral 1 beside that statement. Also if he felt 'favors' links A and B more closely than 'is aware of' does, then he should rank 'A favors B' second by placing a 2 beside it and rank 'A is aware of B' third putting a 3 beside it.

Be sure to look at all the phrases before you begin to rank them in a trial run. When you are sure of the ranks of all the sentences mark your numerals clearly just to the left of the sentence. Remember, rank the statements according to the degree with which you feel the verb joins or links A and B together.

APPENDIX 2

MEASURING INTENSITY OF ASSERTION

As a social man, rank the following statements in terms of intensity of assertion:

- A endorses B
- A prefers B
- A completely supports B
- A notices B

In the following, be sure you rank every assertion - do not omit any. If you are not sure just how to base your judgement, feel free to re-read the instructions.

Rank the following assertions in terms of intensity;

- A is very much in favor of B
- A is indifferent to B
- A favors B
- A is partial to B
- A offers 100% support to B
- A prefers B
- A supports B
- A absolutely and totally supports B
- A is oblivious to B
- A is very partial to B
- A slightly supports B

APPENDIX 2

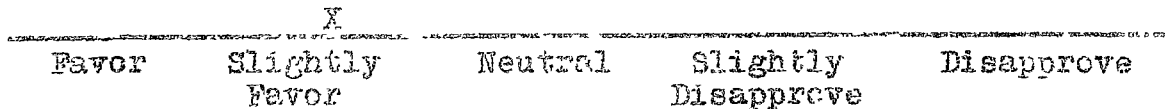
PUBLIC OPINION QUESTIONNAIRE

The purpose of this questionnaire is to find out how a large number of persons, like yourselves, feel about some public personages and topics of the day. The questionnaire asks you to rate the way you feel about these personages and topics by placing an X at that point on the scale (the line) which best shows the way you feel about the particular item. You can answer in the following manner:

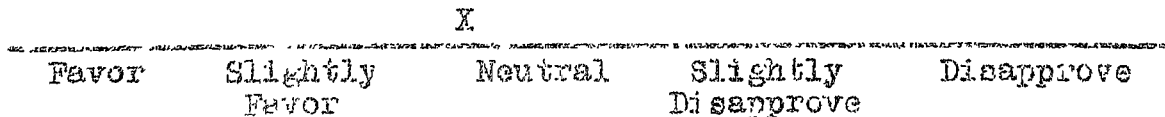
If your first impressions are that the item (the personage or topic) is quite good or desirable in most respects, as far as you are concerned, mark an X on the scale in the vicinity of Favor. Precisely where you place your X depends on how favorable the item is to you - the more favorable your impressions are, the more you might place your X to the left;



If you feel the item is only slightly good or a little bit desirable in your eyes, (but not neutral) you should place your X in the vicinity of Slightly Favor;



If you feel indifferent or really couldn't care less one way or the other about the person or topic, you should place your X at Neutral in the middle of the scale. If you feel the item to be the tiniest bit good or bad you should mark a bit to the right or left of the middle;



APPENDIX 2

If you feel the item is a little bit unfavorable or slightly undesirable on the overall as far as you are concerned, mark in the vicinity of Slightly Disapprove;

X

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
-------	----------------	---------	---------------------	------------

On the other hand, if you feel the person or topic quite wrong or rather undesirable on the overall, mark an X in the vicinity of Disapprove - the more you disapprove, the further you might mark to the right on the scale;

X

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
-------	----------------	---------	---------------------	------------

In using the opinion scale, find first the general region on the line which shows how you feel about the item and secondly decide what spot in that region shows more accurately how you feel.

NOTE: About some of the items you may know very little - nevertheless please try to decide whether your general feeling tends to be a tiny bit favorable or unfavorable.

Some other points to remember;

- (1) Never put more than one check-mark on a scale.
- (2) Answer each of the questions - do not omit any.

Sometimes you may feel as though you've had the same item before on the questionnaire. In any event, do not look back and forth through the items. Do not try to remember how you checked similar items earlier in the questionnaire. Make each item a separate and independent judgement. Please try to convey your own opinions - what these items mean to you. 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.

If you have any questions, please ask them now.

APPENDIX 2

1.- How would you rate your overall feeling towards PREMIER CASTRO?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
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2.- How would you rate your overall feeling towards
THE CANADIAN LEGION?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
-------	-------------------	---------	------------------------	------------

3.- How would you rate your overall feeling towards
CULTURAL RELATIONS WITH KUWAIT?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
-------	-------------------	---------	------------------------	------------

4.- How would you rate your overall feeling towards
DAVIE FULTON?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
-------	-------------------	---------	------------------------	------------

5.- How would you rate your overall feeling towards
CULTURAL EXCHANGE WITH LUXENBOURG?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
-------	-------------------	---------	------------------------	------------

APPENDIX 2

6.- How would you rate your overall feeling towards
MADAME VANIER?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
-------	-------------------	---------	------------------------	------------

7.- How would you rate your overall feeling towards
PREMIER LESAGE?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
-------	-------------------	---------	------------------------	------------

8.- How would you rate your overall feeling towards
PRESIDENT JOHNSON?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
-------	-------------------	---------	------------------------	------------

9.- How would you rate your overall feeling towards
THE COMMISSION FOR CONVENTIONAL ARMAMENTS?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
-------	-------------------	---------	------------------------	------------

10.- How would you rate your overall feeling towards
THE HIRING PRACTICE OF THE UNITED BROTHERHOOD OF CARPENTERS?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
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11.- How would you rate your overall feeling towards
PREMIER JOHN ROBERTS?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
-------	-------------------	---------	------------------------	------------

APPENDIX 2

12 - How would you rate your overall feeling towards
INTERNATIONAL WARM RESEARCH?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
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13.- How would you rate your overall feeling towards
THE FORD FOUNDATION?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
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14 - How would you rate your overall feeling towards
PRIME MINISTER WILSON?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
-------	-------------------	---------	------------------------	------------

15 - How would you rate your overall feeling towards
THE ANTARCTIC TREATY?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
-------	-------------------	---------	------------------------	------------

16.- How would you rate your overall feeling towards
THE CURRENT RETAIL SALES EXPANSION?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
-------	-------------------	---------	------------------------	------------

APPENDIX 2

17 - How would you rate your overall feeling towards
COMMITTEES ON URBAN AFFAIRS?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
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18 - How would you rate your overall feeling towards
UTAH?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
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19 - How would you rate your overall feeling towards
THE INTERNATIONAL DEVELOPMENT COMMISSION?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
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20 - How would you rate your overall feeling towards
SPEECHES OF STATESMEN ON COLLEGE CAMPUSES?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
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21 - How would you rate your overall feeling towards
MARITIME TRUSTEESHIP?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
-------	----------------	---------	---------------------	------------

APPENDIX 2

22.- How would you rate your overall feeling towards
REV MARTIN LUTHER KING?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
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23.- How would you rate your overall feeling towards
QUEEN ELIZABETH?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
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24.- How would you rate your overall feeling towards
IDEOLOGICAL DISCUSSIONS?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
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25.- How would you rate your overall feeling towards
PAUL MARTIN ?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
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26.- How would you rate your overall feeling towards
INVESTIGATIONS BY CONGRESSIONAL COMMITTEES?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
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APPENDIX 2

25 - How would you rate your overall feeling towards
JOHN F. KENNEDY?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
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26 - How would you rate your overall feeling towards
INTERNATIONAL LAW MEETINGS?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
-------	-------------------	---------	------------------------	------------

29.- How would you rate your overall feeling towards
INTERNATIONAL WAGE RESEARCH?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
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30 - How would you rate your overall feeling towards
HENRY CABOT LODGE?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
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31.- How would you rate your overall feeling towards
RELATIONS WITH YEMEN?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
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APPENDIX 2

32.- How would you rate your overall feeling towards
SIR WINSTON CHURCHILL?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
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33.- How would you rate your overall feeling towards
CANADIAN RELATIONS WITH ANDORRA?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
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34.- How would you rate your overall feeling towards
ADLAI STEVENSON?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
-------	-------------------	---------	------------------------	------------

35.- How would you rate your overall feeling towards
DR. WILDER PENFIELD?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
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36.- How would you rate your overall feeling towards
THE DEPT. OF PUBLIC ARCHIVES?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
-------	-------------------	---------	------------------------	------------

APPENDIX 2

37.- How would you rate your overall feeling towards
THE BRITISH CABINET SYSTEM?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
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38.- How would you rate your overall feeling towards
JACQUELINE KENNEDY?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
-------	-------------------	---------	------------------------	------------

39.- How would you rate your overall feeling towards
PREMIER KRUSCHEV?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
-------	-------------------	---------	------------------------	------------

40.- How would you rate your overall feeling towards
SUBSURFACE OIL EXPLOITATION?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
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41.- How would you rate your overall feeling towards
THE CONFLICT IN THE DOMINICAN REPUBLIC?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
-------	-------------------	---------	------------------------	------------

APPENDIX 2

42 - How would you rate your overall feeling towards
GOVERNMENT POLICY IN THIS AREA?

Favor Slightly Favor Neutral Slightly Disapprove Disapprove

43 - How would you rate your overall feeling towards
GOVERNMENT POLICY IN THIS AREA?

Favor Slightly Favor Neutral Slightly Disapprove Disapprove

44 - How would you rate your overall feeling towards
SENATOR LARRY GOLDWATER?

Favor Slightly Favor Neutral Slightly Disapprove Disapprove

45 - How would you rate your overall feeling towards
THE CANADIAN SALES OF WHEAT TO CUBA?

Favor Slightly Favor Neutral Slightly Disapprove Disapprove

46 - How would you rate your overall feeling towards
THE STATE OF TEXAS?

Favor Slightly Favor Neutral Slightly Disapprove Disapprove

APPENDIX 2

47.- How would you rate your overall feeling towards
FUNCTIONAL REPRESENTATION?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
-------	-------------------	---------	------------------------	------------

48.- How would you rate your overall feeling towards
ROBERT DOUGLAS?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
-------	-------------------	---------	------------------------	------------

49.- How would you rate your overall feeling towards
SIMON FRASER UNIVERSITY?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
-------	-------------------	---------	------------------------	------------

50.- How would you rate your overall feeling towards
THE INTERNATIONAL CIVIL SERVICE?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
-------	-------------------	---------	------------------------	------------

51.- How would you rate your overall feeling towards
INTERNATIONAL LAW MEETINGS?

Favor	Slightly Favor	Neutral	Slightly Disapprove	Disapprove
-------	-------------------	---------	------------------------	------------

APPENDIX 3

SEMANTIC DIFFERENTIAL: FIRST FORM

APPENDIX 3

NAME _____ CIRCLE M or F
Surname Christian Names M or S

DATE OF BIRTH: _____ AGE: _____
Day Month Year Years Months

BIRTHPLACE: _____
Place Province or State Country

LANGUAGE: _____
Native Others you fluently use.

EDUCATION: _____
Grade or Degree Institution Date
Completed

VOCATION: _____
Nature Where Employed?

APPENDIX 3

The purpose of this study is two-fold -- to try to find out how students such as yourselves feel about certain issues and personalities in the news today, and, secondly, to try out a novel instrument which we think can get at these feelings.

What you are asked to do is to judge a number of concepts (issues and personalities, etc.,) against a series of descriptive scales. There will be 20 such concepts to judge, and each will be judged against 10 scales. Thus, you will find at the top of each of the following pages the concept that is to be rated, and below it will be a series of 10 scales, each defined by a pair of adjectives. You will also note that each scale has seven steps.

In order to illustrate how to use the scales and what each of the seven steps means, consider the following example:

Suppose you were asked to rate the concept of THE STRIFE IN LAOS and suppose further that one of the scales was

gentle ___:___:___:___:___:___:___ violent

Now, if you felt that the concept was very closely related to one end of the scale, you would check like this:

gentle ___:___:___:___:___:___: X violent

OR

gentle X:___:___:___:___:___:___ violent

If you felt it was quite, but not very closely related, you would check like this:

gentle ___: X:___:___:___:___:___ violent

OR

gentle ___:___:___:___:___: X:___ violent

If you felt it was only slightly related to one side, you would check like this:

gentle ___:___:___:___: X:___:___ violent

OR

gentle ___:___: X:___:___:___ violent

APPENDIX 3

PREMIER CASTRO

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

THE BRITISH CABINET SYSTEM

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 3

INVESTIGATIONS BY CONGRESSIONAL COMMITTEES

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 3

PREMIER KRUSCHEV

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 3

CULTURAL EXCHANGE WITH LUXEMBOURG

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 3

SENATOR BARRY GOLDWATER

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 3

THE INTERNATIONAL MONETARY FUND

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 3

JOHN F. KENNEDY

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 3

RECENT FINANCIAL DEVELOPMENTS

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

QUEEN ELIZABETH

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 3

CULTURAL RELATIONS WITH KUWAIT

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 3

U THANT

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

THE BRITISH CABINET SYSTEM

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 3

GOVERNOR GENERAL VANIER

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 3

COMMITTEES ON URBAN AFFAIRS

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 3

JACQUELINE KENNEDY

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 3

THE CONFLICT IN THE DOMINICAN REPUBLIC

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 3

SIR WINSTON CHURCHILL

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 3

THE SALE OF CANADIAN WHEAT TO CUBA

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 3

REV. MARTIN LUTHER KING

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 3

THE INTERNATIONAL CIVIL SERVICE

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 4

SEMANTIC DIFFERENTIAL: SECOND FORM

APPENDIX 4

SEMANTIC DIFFERENTIAL: SECOND FORM

Three different versions of the second form of the S.D. were employed in this project. This appendix contains one complete format illustrating the use of Treatment II; following this are two pages depicting the use of Treatment I, and immediately after these are two additional pages showing the use of Treatment III. Specimen pages belonging to a particular version are separated from those belonging to another by a blank page.

APPENDIX 4

NAME _____ CIRCLE M or F
Surname Christian Names M or S

DATE OF BIRTH: _____ AGE: _____
Day Month Year Years Months

BIRTHPLACE: _____
Place Province or State Country

LANGUAGE: _____
Native Others you fluently use.

EDUCATION: _____
Grade or Degree Institution Date
Completed

VOCATION: _____
Nature Where Employed?

APPENDIX 4

Some weeks ago, you were kind enough to help out in trying out a novel instrument to get at people's feelings about certain issues and personalities in the news. At the same time we were interested in finding out if the instrument works -- and happily enough, it turned out to be a useful tool.

We are now interested in finding out how well it works, which is what we will try to do today with your co-operation.

From newspaper clippings and magazine articles over the past few years we have taken sentences which contain two of the items you have already judged on the former test a month or so ago. This is no accident, as now we want to try out this testing instrument in a situation where people are asked to rate one item in view of the whole news release. An example will clarify this.

At the top of each of the following pages you will see an arrangement similar to ~~either of~~ the following;

Rate; GENERAL DE GAULLE

in the light of the fact that,

GENERAL DE GAULLE OFFERS 100% SUPPORT TO RISING FRENCH EXPORTS.

Now, if you felt the concept (General de Gaulle in the first example - ~~rising French exports in the second~~) was very closely related to one end of the scale in the light of the news release (the complete sentence) you should check like this:

pleasing X : ___ : ___ : ___ : ___ : ___ : ___ annoying

OR

pleasing ___ : ___ : ___ : ___ : ___ : ___ : X annoying

APPENDIX 4

Rate; THE CONFLICT IN THE DOMINICAN REPUBLIC

in light of the fact that

PREMIER CASTRO FAVORS

THE CONFLICT IN THE DOMINICAN REPUBLIC

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

Rate; CULTURAL RELATIONS WITH KUWAIT

in light of the fact that

JACQUELINE KENNEDY FAVORS
CULTURAL RELATIONS WITH KUWAIT

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

Rate; INVESTIGATIONS BY CONGRESSIONAL COMMITTEES

in light of the fact that

JOHN F. KENNEDY FAVORED INVESTIGATIONS BY
CONGRESSIONAL COMMITTEES.

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

Rate; THE BRITISH CABINET SYSTEM

in light of the fact that

SIR WINSTON CHURCHILL FAVORED

THE BRITISH CABINET SYSTEM

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 4

Rate; THE INTERNATIONAL MONETARY FUND

in light of the fact that

U THANT FAVORS

THE INTERNATIONAL MONETARY FUND

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 4

Rate; THE CANADIAN SALE OF WHEAT TO CUBA

in light of the fact that

PREMIER KRUSCHEV FAVORS

THE CANADIAN SALE OF WHEAT TO CUBA

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 4

Rate; CULTURAL RELATIONS WITH KUWAIT

in light of the fact that

JACQUELINE KENNEDY FAVORS

CULTURAL RELATIONS WITH KUWAIT

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

Rate; RECENT FINANCIAL DEVELOPMENTS

in light of the fact that

GOVERNOR GENERAL VANIER FAVORS

RECENT FINANCIAL DEVELOPMENTS

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 4

Rate; COMMITTEES ON URBAN AFFAIRS

in light of the fact that

REV. MARTIN LUTHER KING FAVORS

COMMITTEES ON URBAN AFFAIRS

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 4

Rate; CULTURAL EXCHANGE WITH LUXEMBOURG

in light of the fact that

QUEEN ELIZABETH FAVORS

CULTURAL EXCHANGE WITH LUXEMBOURG

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 4

Rate; THE INTERNATIONAL CIVIL SERVICE

in light of the fact that

SENATOR BARRY GOLDWATER FAVORS

THE INTERNATIONAL CIVIL SERVICE

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 4

Rate; THE BRITISH CABINET SYSTEM

in light of the fact that

SIR WINSTON CHURCHILL WAS INDIFFERENT TO
THE BRITISH CABINET SYSTEM

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 4

Rate; THE INTERNATIONAL MONETARY FUND

in light of the fact that

U THANT IS INDIFFERENT TO
THE INTERNATIONAL MONETARY FUND

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 4

Rate; THE BRITISH CABINET SYSTEM

in light of the fact that

SIR WINSTON CHURCHILL OFFERED 100% SUPPORT
TO THE BRITISH CABINET SYSTEM

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 4

Rate; THE INTERNATIONAL MONETARY FUND

in light of the fact that

U THANT OFFERS 100% SUPPORT TO
THE INTERNATIONAL MONETARY FUND

fair _____ : _____ : _____ : _____ : _____ : _____ : _____ unfair

fast _____ : _____ : _____ : _____ : _____ : _____ : _____ slow

dirty _____ : _____ : _____ : _____ : _____ : _____ : _____ clean

strong _____ : _____ : _____ : _____ : _____ : _____ : _____ weak

tasty _____ : _____ : _____ : _____ : _____ : _____ : _____ distasteful

active _____ : _____ : _____ : _____ : _____ : _____ : _____ passive

bad _____ : _____ : _____ : _____ : _____ : _____ : _____ good

large _____ : _____ : _____ : _____ : _____ : _____ : _____ small

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant

worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable

APPENDIX 5

ABSTRACT OF

Intensity of Assertion and the Consistency Principle

APPENDIX 5

ABSTRACT OF

Intensity of Assertion and the Congruity Principle.¹

Osgood and Tannenbaum have formulated a model of cognitive dynamics which relates and quantifies those variables considered most important with respect to the prediction of the magnitude and direction of attitude change in a given situation. This congruity principle is, however, postulated subject to the influences of several limiting parameters; the intensity of assertion being one of these. Granting that the existing attitude toward both source and concept is of key-note importance in the prediction of attitude shift, this experiment was carried out to investigate the effect of the limiting parameter of intensity of assertion on the concept-shift of attitude.

In the first stage of the project, ninety-eight subjects, comprising four randomly chosen groups from the total of seven groups, ranked eleven assertive links in terms of the degree to which they were judged to link or bind the source to the concept. With the use of a normalized ranking method C scale values were determined for the assertive copula and three were chosen for later use in the communications content.

¹ Michael W. McCarrey, Master's thesis presented to the Faculty of Psychology and Education of the University of Ottawa, Ontario, 1967, ix-69 p.

In the second stage all 145 subjects judged six previously selected sources and concepts on an evaluative form of the S.D.

Roughly two weeks later in the third stage, three groups chosen at random by the order of distribution of three different test booklets, each rated the six concepts in light of assertive communications on the same evaluative form of the S.D. One group rated concepts in light of assertions of intensity I; another in the light of assertions of intensity II; while the third group rated concepts in view of assertions of intensity III. Mean concept-shift scores in view of each of the three treatments were compared to each other using a one-way analysis of variance model.

Through the use of these procedures it was found that when sources were judged as highly favorable and concepts as relatively neutral, mean concept-shift accompanying intensity I differed significantly from that accompanying intensities II and III in all instances. However, in no instance did mean concept-shift accompanying intensity II differ significantly from that accompanying intensity III.

In light of these results a curvilinear relationship between intensity of assertion and concept-shift of attitude is suggested wherein a point is reached after which greater intensities of assertion result in diminished attitude shift. Possible explanations for this reduced attitude shift have been presented in terms of a contiguity or incredulity effect. Recommendations for future research have also been made.