THE RELATION OF DOGMATISM TO GENERALIZATION EFFECTS WITHIN AND BETWEEN DIMENSIONS OF SOURCE CREDIBILITY

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ABSTRACT

THE RELATION OF DOGMATISM TO GENERALIZATION EFFECTS WITHIN AND BETWEEN DIMENSIONS OF SOURCE CREDIBILITY

By

Ralph W. Dent

This study sought to determine if there were differential generalized responses of high and low dogmatics to minimally induced information about the credibility of sources. In line with Rokeach's typology it was hypothesized that high dogmatics would generalize more to other scales within a single factor of source credibility than would low dogmatics (H_1).

It was further proposed that high dogmatics would generalize more from an induction on a single factor of source credibility to the other two factors of source credibility than would low dogmatics (H_1). The scales used were taken from the factor analytic research of Berlo, Lemmert and Mertz in Source Credibility.

Additional to the above hypotheses, it was also postulated that the high dogmatics would generalize most from inductions on the safety factor (H_3) while low dogmatics would generalize most from inductions on the qualification scales (H_4).

The results indicated that there was significantly more generalization both within and between factors on the part of high

dogmatics as compared with low dogmatics. H_1 and H_2 were confirmed.

The third hypothesis was not supported by the results. The high dogmatics generalized most from qualification. The difference between the qualification generalization score and the safety and dynamism generalization scores was significant beyond the .01 level. The fourth hypothesis predicted that low dogmatics would generalize more from an induction on qualification than on dynamism or safety. The results confirm this hypothesis. Since, however, the same order effects were found for high dogmatics it is not a discriminating variable of high vs. low dogmatics. If anything, the high dogmatics are most clearly discernable on their tendency to generalize from inductions on the qualification of a source.

In addition to the hypotheses there were other indexed variables. Neither age nor sex of subjects proved to be significantly related to generalization tendency. Number of years of school, however was significantly related such that the lower education group (on a median split) generalized significantly more than the higher education group. There was also a correlation of -.42 between dogmatism and years of school.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF APPENDICES

CHAPTER I

INTRODUCTION

The persuasiveness of messages can be predicted in part on the basis of the quality of the message; however, the credibility of the source has also been shown to be a useful predictor of response. In fact, manipulation of information about the source itself becomes a message sub-system which can be analyzed for its persuasive value. Little is known about the effects of this kind of sub-message manipulation. For example, what happens in the minds of receivers when they have fairly objective information about the qualifications of the source? What type of conclusions or inferences do receivers make about the safety or dynamism of the source? Is there a significant difference in the reactions to limited source information between highly dogmatic individuals and those of a lower dogmatism level? Are there predictable differences in the inferential behavior of receivers when the message sources are given positive as opposed to negative characteristics?

The purpose of this study is to investigate certain interaction effects within dimensions of source credibility and to investigate the relationship between these effects and dogmatism, as defined by Rokeach.

Researchers in the behavioral sciences have for many years recognized that the reactions of people to persuasive messages are strongly influenced by their perceptions of sources of its messages. Haiman (1949), Hovland and Weiss (1951), Kelman (1953), Mausner (1953), and Paulson (1954) all found that agreement with opinion messages was enhanced by the prestige of the sources.

Asch (1948) and Lewis (1941) found that the interpretation of meaning of messages is altered by attributing them to different sources. Bernberg (1953) has shown that source perception affects aesthetic judgments and Ducker (1938) noted the effect of these on food preferences.

In the past, much of the research in the field assumed that credibility was inherent in the role, status, age or sex of the source. Current research, however, places it in the area of receiver perceptions. Clevenger and Anderson (1965) point out that the emphasis has departed from the traditional view that ethos or credibility is intuitively determinable,and is moving toward the view that the basis for source effectiveness is to be found in the perceptions of the receivers.

Historically, the measurement of credibility has gone through several stages, and has been directed towards the assessment of the effects of different levels of credibility on such dependent variables as learning and attitude change. Usually, the construction of a credibility index has been of less importance in the research design. Some of the methods employed include: (1) Rank ordering of the sources by the subjects, along some single related dimension (Sherif, 1935: Das, Rath, Das, 1955); (2) "Prestige" indices derived from measures of attitude change (Kulp, 1934, Lurie, 1938); (3) Indices of credibility-related personal characteristics of the source based on sociometric data (Cole, 1954); (4) Assignment by subjects on linear rating scales (Saadi and Farnsworth, 1934, Lorge and Curtiss, 1936); (5) Response to several items using Thurstone or Guttman scaling techniques, (Walter, 1948); (6) Measuring credibility with Likert-type devices by the summation of ratings over a number of related scale items (Wolfinger,

1955; Gulley and Berlo, 1956); and, (7) Multifactoral measures of credibility in which factor analytic techniques are employed to discover which aspects of the source image are relevant to persuasive effectiveness (Anderson, 1961; Berlo and Lemert, 1961; Rarick, 1963).

In these methods, the variation is mainly in terms of (1) the level of source measurement, (2) the assumptions about dimensionality of credibility underlying particular measuring devices, and (3) the degree to which an attempt is made empirically to determine the dimensions of source image relevant to credibility.

Most of the early studies subsumed source information under the heading of "Prestige Suggestion". Later research diversified into specific topics such as Sincerity (Hildreth, 1953); Verbal fluency (Miller and Hewgill, 1964); Objectivity, (Hovland and Mandell, 1952); Physical attractiveness (Haiman, 1949); Competence (Hollander, 1960; Croner and Willis, 1961); and Apparent Sociability (Haiman, 1949; Barnes, 1960).

The traditional unidimensional approach to source credibility was questioned by Hovland, Janis and Kelley (1953). They proposed two dimensions, perceived expertness and perceived trustworthiness, as particularly relevant to persuasiveness of sources. They did not, however, supply empirical support for these dimensions.

Berlo, Lemert and Mertz (1966) found that the construct, credibility, subsumes three distinct factors which they labelled Safety, Qualification, and Dynamism. These three factors accounted for 59.93% of the total variance obtained in their factor analyses. The method used in their research was to interview subjects in their homes and have them judge three types of sources on semantic

differential scales. The sources were (1) Public sources with no context; (2) Interpersonal sources; and, (3) Public sources in relevant or irrelevant relation to a topic.

The Berlo, Lemert and Mertz research used six pairs of scales in both parts of their two-stage research. These scales were:

Safety:

Objective ..... Subjective

Unselfish ..... Selfish

Patient ..... Impatient

Safe ..... Dangerous

Just ..... Unjust

Calm ..... Upset

Qualification:

Trained ..... Untrained

Experienced ..... Inexperienced

Authoritative .... Unauthoritative

Skilled ..... Unskilled

Informed ..... Uninformed

Intelligent ..... Unintelligent

Dynamism:

Frank ..... Reserved

Fast ..... Slow

Energetic ..... Tired

Bold ..... Timid

Active ..... Passive

Aggressive ..... Meek

Although factor analytic techniques are obviously useful in identifing statistically independent factors for the construct of source credibility, it is questionable as to whether source stimuli are psychologically independent. The Gestalt psychologists concentrated their studies on man's holistic response to the stimuli around him. Bartlett (1932) in his classic studies of memory showed that subjects tend to complete missing elements in their perceptual field by supplying additional elements themselves. This tendency in the direction of "closure" is well recognized in the perceptual research of psychology.

Behaviorists have long recognized that similarity of stimuli, (e.g. red and pink), produce generalization of response to these stimuli. If a rat is positively rewarded for responding to a dim light, it also will respond, although not quite so strongly, to a bright light. The perceived similarity in the stimuli leads to the generalization in the learned response. In a similar vein, one would expect that the perceived similarity between the adjectives "fast" and "energetic" would lead a subject to generalize from one to the other. If I say a source is fast, the subjects--one would expect--would tend to rate that source more in the direction of energetic as opposed to tired.

Since the adjective scales within a factor all load on that factor we can expect that generalizations from one scale to another within a single factor will be fairly high. The scales that go together to make up a factor also have loadings on other factors. Although the factors themselves are independent, the scales may not be psychologically independent of the scales that load on the other factors. If inductions are made on scales in one factor and responses are obtained on scales from another factor we woudd still expect some generalization to occur.

When inductions are made between scales within a factor, the response generalizations of subjects should be greater than when the inductions are made from scales in one factor to scales in another factor. Little has been done in the past to predict the generalization effects of inductions in the various dimensions of credibility on the overall responses of subjects.

The Berlo, Lemert and Mertz study did not attempt to induce credibility, but rather identified the factor structure of the construct. Greenberg and Pettersen (1966), using these factors, induced credibility for unknown sources and observed the effects on the non-induced factors. The Berlo, Lemert and Mertz research used named sources such as John F. Kennedy, G. Mennen Williams and Fidel Castro. The Greenberg and Pettersen research identified their sources with pairs of initials such as S.W.

In the Greenberg and Pettersen research, four scales were used from each of the three factors. Inductions were made both from scale to scale and from sentences to scales. When the sentence inductions

were made, the information supplied was identical to the scale inductions. The procedure was to induce source credibility on two of the twelve scales and then test for generalization effects on the other ten scales. The induced responses were made on the typical seven-point semantic differential type rating scales.

Greenberg and Pettersen used both high and low intensity inductions. The high intensity inductions were either at the extreme right or left of the adjective pairs on the scales, and were scored either a 1 or a 7. The low intensity inductions were next to the midpoint 4, and were scored either 3 or 5. These same inductions were repeated on two additional groups using the sentence induction format. The total number of inductions per subject was nine. The dependent variable was the response to the ten additional scales from the induction on the two scales.

At one point, Greenberg and Pettersen reasoned that if the factors of source credibility function independently, generalizations should occur between scales within a factor, but not between scales representing different factors. At the same time, however, they suggested that "source perceptions are holistic and that information about some source component will generate perceptions of that same source which are non neutral". Their results verify the latter assumption. They managed to obtain generalizations across factors from inductions in a single factor. There was however, some difficulty in producing significant positive generalizations from dynamism to safety. The Greenberg and Pettersen results indicate that the scalar inductions "took" more effectively than the sentence inductions with their subjects. One of the aims in the present research is to modify the scalar method

of induction to increase its sensitivity and observe the interaction effects between and within the factors.

To talk about "source credibility" in isolation of receivers is not particularly fruitful. We all recognize that for different "audiences" different facets of the credibility of sources become important. Students are concerned about the competence of teachers. Housewives may be concerned about the trustworthiness and safety of a baby sitter. The congregation may be interested in the dynamism of their preacher. These specific audience behaviors are readily recognizable. There may also be recognizable personality differences in receiver behavior when given information about sources. Some personality theorists have postulated differential behaviors for different personality types.

Rokeach (1960) attempted to draw together the theories of the Personality Theorists and the Cognitive Theorists under a "single set of concepts, a single language, that is equally appropriate to the analysis of personality, ideology, and cognitive behavior." Within the framework of his research he concentrated on the relation between belief and thought and the possibility of a basic unity between them. He went on to tie together the ideological and conceptual systems with perceptual and esthetic systems. These are all subsumed under the construct of open and closed generalized states of mind.

Another facet of Rokeach's system is the acceptance or rejection of (1) ideas, (2) people and (3) authority. He classifies the first as a cognitive function, the second as involving the phenomenon of prejudice or intolerance and the third as authoritarianism in the Frenkel-Brunswik and Sanford (1945) sense. His concern with the ways

people believe rather than the contents of their beliefs allows him to group these areas under the general Dogmatism concept. He claims that "perhaps they are only different facets of the same thing, related to each other in a one-to-one fashion within the belief system." He comments as follows on the studies of Adorno, et al (1950): "Some of the major findings that come out of such studies are that persons who are high in ethnic prejudice and/or authoritarianism, as compared with persons who are low, are more rigid in their problem solving behavior, more concrete in their thinking, and more narrow in their grasp of a particular subject; they also have a greater tendency to premature closure in their perceptual processes and to distortions in memory, and a greater tendency to be intolerant of ambiguity." Frenkel-Brunswick relates the tendency to premature closure and general intolerance to ambivalence due to punishment in early parent-child relationships.

Independently of Rokeach, Kelman developed an influence typology (1961). His theory includes institutional relationships and the persuasive situations within institutions, as well as individual relationships. Neither Rokeach nor Berlo includes this social structural orientation; however, there are parallels between their work and the structural relationships arrived at by Kelman. Kelman's work generated three influence typologies. The first is compliance--the perceived power of the source to influence the receiver. Influence from this factor only operates in the physical presence of the source. Second, identification--subdivided into three types: (a) classical identification, (b) interdependent role expectations, (c) the true believer.

The underlying distinctive feature of identification is that it provides definition or self-identity for the individual. The third category is internalization. This occurs when the message is received and acted upon because it is consistent with the beliefs and cognitive views of the receiver. Kelman relates this to the rational processes of the receiver which are not isolated from other areas of the total cognitive system.

Rokeach's open-minded person seems to fit best into Kelman's "internalization" system while the closed-minded seems most closely affiliated with the "identification" system. There appears to be no parallel for the "compliance" category since this is more focal for institutional persuasion.

Looking at the Berlo-Lemert-Mertz factors, one would expect that Safety of a source would be more influential on the Rokeach closed-minded types, and through use of the Kelman identification process. In relation to this we note that the short-form dogmatism scale (used later in this research) contains some reference to sources in terms of trust or qualification on six of the twenty items (items 1, 3, 5, 7, 12 and 13).

The apparent qualification of a source, on the other hand, should be more influential on the open-minded, internalization types. The Rokeach model of open-minded/closed-minded persons is relevant to the importance of source credibility.

Powell (1961) found a clear-cut difference in the ability of open-minded versus closed-minded individuals to distinguish between information and source of information. He found that for closed-minded subjects the source was used as a reference point for evaluating

messages while for open-minded subjects the message was used as a reference point for evaluating sources. This indicates that source credibility is more important to closed-minded than to open-minded subjects.

On the basis of Rokeach's statement that closed-minded types have a greater tendency toward closure, one would expect them to generalize more than open-minded types when given minimal cues about the credibility of sources. Low dogmatics, on the other hand, will not accept information which is not logically consistent with the information they already have, assuming that it is possible to perceive the independence of different factors of credibility. It is therefore predicted that low dogmatics will generalize less from inductions on source credibility than will high dogmatics.

From the above rationale, the following hypotheses have been formulated.

H_1. High dogmatic Ss will generalize more to other scales within a single factor of source credibility than low dogmatic Ss.

This hypothesis will replicate the meaningfulness of the independent dimensions of credibility and will also serve to test the validity of the induction procedure and will test Rokeach's assumptions regarding tendency for closure of high dogmatics.

H_2 High dogmatic Ss will generalize more from an induction on one factor of source credibility to the other two factors than will low dogmatic Ss.

This hypothesis also tests Rokeach's assumptions regarding the tendency for "closure" of high dogmatics. This hypothesis concentrates on generalization between factors of credibility.

H_3. High dogmatic Ss will generalize more from inductions on the safety factor than from inductions on the qualification or dynamism factors.

H_4. Low dogmatic Ss will generalize more from inductions on the qualification factor than from inductions on the safety or dynamism factors.

These hypotheses arise from the personality typology attributed to the Rokeach "open-minded" and Kelman "internalization" types discussed in the preceding section.

In addition to the hypotheses other research questions will be investigated.

Credibility Dimensions and Polarity Inductions

The design for testing the hypotheses will also allow a comparison of differences in generalizing behavior (a) among dimensions of credibility, (b) between the positive and negative inductions and (c) for the interaction of these with each other and with dogmatism.

Education

Although the question of educational level is not of theoretic interest to this research and there are no data in the literature showing a relationship between education and dogmatism, it is felt that education should predict generalizability. If this variable proves to be significant it would be a useful variable in the application of the results of this research.

Age, Sex, Occupation

The additional indexed demographic data on age, sex and occupation also will be checked to see if any of these are significant predictors of generalization behavior.

CHAPTER II

METHOD AND PROCEDURES

This chapter describes the way in which the major variables were operationalized, the characteristics of the experimental subjects, the research design, and the procedures which were followed.

The Variables

Inductions for Source Credibility. The hypotheses are all concerned with the extent to which subjects do or do not use minimal information which is supplied about an unknown communication source's credibility as a basis for generalizing to other evaluations of the source's credibility. These generalizations can be of two types: either generalizations within the same dimension of credibility (i.e., safety to safety, qualification to qualification, or dynamism to dynamism), or generalizations from one dimension to another (e.g., safety to qualification, etc.). Within any induction, the given information can be positively valued (e.g., competent, trustworthy, or energetic) or negatively valued (e.g., incompetent, untrustworthy, or weak).

In developing the inductions six scales were used from each of the three factors generated by the Berlo, Lemert and Mertz study (see page 4). For the within-dimension inductions, 3 scales from each dimension were used to produce positive inductions while the remaining 3 scales were the response scales. For the negative inductions, the response scales of the previous pairings became the induction scales while the previous induction scales were used for the response scales

(see appendix B). In total, there were 18 within-dimension inductions, 9 positive and 9 negative. A sample positive and negative within-dimension induction is shown below:

Positive

TRAINED _____:_____:_____:_____:_____:_____:_____ UNTRAINED

INTELLIGENT _____:_____:_____:_____:_____:_____:_____ UNINTELLIGENT

This is a qualification to qualification induction and is coded in future discussion as +QQ. The + indicates positive plarity. The first letter represents the dimension of the induction scale and the second letter, the dimension of the response scale.

Negative

UNSELFISH _____:_____:_____:_____:_____:_____:_____ SELFISH

JUST _____:_____:_____:_____:_____:_____:_____ UNJUST

This is a -SS induction..

Between-dimension inductions were developed using a similar procedure. The six scales of each dimension were paired with the six scales of each of the other two dimensions, producing thirty six between-dimension inductions. Eighteen of these were positive and eighteen were negative. The final test instrument contained the following combination of induction response sets:

		Polarity of Information		
Within-Dimension		Positive	Negative	Totals
Safety	SS	3	3	
Qualification	QQ	3	3	
Dynamism	DD	3	3	
		9	9	18
Between-Dimension				
	SQ	3	3	
	SD	3	3	
	QS	3	3	
	QD	3	3	
	DS	3	3	
	DQ	3	3	
		18	18	36
				54

The following criteria were used in arranging the pairs:

1. Positive and negative inductions were altered to maximize the contrast and minimize response set.
2. Every third induction pair was a within-factor induction. Given the high probability of within-factor generalization, this was done to heighten the attention of the subjects to the between-dimension task, and to avoid a simple "neutral" response set from developing.

The actual instrument is in Appendix D.

Credibility Generalizations. Generalization is measured by the degree to which the respondent checks the paired scale in a similar category to that of the induction scale. If the subject is informed that the source is "very competent" and checks in the "very trustworthy" cate-

gory on the paired scale, the deviation from the induction is 0 and represents maximal generalization. Each scale position away from the induction position is represented by a 1 point deviation from the induction. There are 3 scale pairs for each type of induction. The deviations of these are averaged to give a mean generalization score for each of the within and between induction categories. This score ranges from zero (maximum generalization) to six.

Dogmatism. The hypotheses are concerned with the effect of varying levels of dogmatism on the tendency to generalize from minimal information. As a measure of dogmatism, the short-form Dogmatism Scale developed by Troldahl and Powell (1965) was used. This scale was developed from Rokeach's forty-item test (1960), and contains the twenty items which had the highest part-whole correlations. Although the short form introduces attenuation problems, it is pointed out by Troldahl and Powell that it allows for economy of administration and has a split-half reliability of .79. The short-form scale is in Appendix D.

Subjects

There were one hundred and fifty-one subjects, ranging in age from eighteen to sixty-one, with a mean age of thirty-three years. There were forty-two females and one hundred and nine males. Three distinct groups of subjects were used.

The police (n=59) were members of the police forces of two cities. Thirty of these represented the total force of a small city. The other group contained all the members of one precinct of a larger city.

The teachers were an intact group of 34 taking a summer course in community development at a university. The third group contained 50 hourly workers and 8 instructors who were attending an in-service training course in a large electrical company.

Research Design

There were three independent variables used in testing the hypothesis: (a) the induction of source information on each of three dimensions of credibility -- safety, qualification and dynamism; (b) the polarity of information about the source, high positive (favorable) or high negative (unfavorable); and, (c) a median split on dogmatism scores of the subjects. The dependent variable was the subject's credibility generalization score. A four factor repeated measures mixed design was used; credibility factor (3 values) by polarity (2 values) by dogmatism (2 values) by repeated measures. Subjects were nested within the dogmatism classification. Separate analyses were performed on the within-dimension and between-dimension credibility generalization scores.

These two analyses of variance test the four hypotheses, and also test for both main and interaction effects of induction polarity and the three credibility dimensions.

Three additional treatment by subjects analyses of variance will reveal whether inductions on a given factor produce differential responses among the three factors; i.e., whether safety generalizes most to safety, qualifications, or dynamism, etc.

Dogmatism, educational level and credibility generalization intercorrelations indicate the relationships among these three variables. If these correlations are significant, partial correlations between

dogmatism and generalization and between education and generalization will determine the relative contribution of each as a predictor of credibility generalization.

Simple t-tests test the differences between credibility generalization means for (a) males vs. females, (b) older vs. younger subjects, and (c) police vs. non-police.

Procedures followed

The police were obtained as subjects from two groups who had previously taken short courses in "general communication" from the experimenter. They were tested in lecture rooms at the precinct headquarters and were introduced to the experimenter by the chief of police in one group and the senior inspector in the single precinct group. The teachers and electrical employees were both attending courses at the time of testing and were tested in their regular lecture rooms.

All of the groups were told at the outset that they were taking part in research involving the study of attitudes.

The test instrument (appendix C and D) was passed out to the subjects and they were asked to complete the biographical data on the face sheet. This required them to give their name, sex, age, education and occupation. They were then asked to turn the page and the instructions printed at the top of the page were read aloud. The first item of the dogmatism scale was also read aloud. They were then told that "It is most important that you put a check in one of the six categories opposite each of the items. Do not skip any and do not check in more than one category for each statement. There are no right or wrong answers and the results of your opinion in this test will be treated

in strictest confidence. When you complete the next three pages close the booklets until we begin the second part of this survey."

The various groups tested managed to complete this part of the test instrument in about 10 minutes. They were then instructed to "open the booklets at page 4 and read the instructions carefully. If you have any questions raise your hand and I will try to clarify any ambiguities." There were very few requests for help. The subjects were usually finished with this part of the test instrument at the end of 30 minutes.

CHAPTER III

RESULTS

The basic data for the tests of the four hypotheses, and for many of the additional research questions, consist of the mean credibility generalization scores for each of the twelve within-dimension induction cells, and for each of the twenty-four among-dimension induction cells. These means, as well as the summary means for dimensions, polarity, and dogmatism, are included in the basic data table (see Table I).

The analyses of within-dimension and among-dimension inductions were performed separately; however, many of the questions require a comparison of these two analyses by type of effect rather than by the analysis itself. For this reason, the summaries of the two analyses are presented in Tables II and III, but the reporting of those results will be done by hypothesis or variable (see Tables II and III).

H_1: High dogmatic S's will generalize more to other scales within the same factor of source credibility than low dogmatic S's.

The F for dogmatism in the within-dimension analysis was statistically significant beyond the .05 level (mean generalization for high dogmatics was 1.26; for low dogmatics, 1.45). Hypothesis I is confirmed.

There was no significant interaction between dogmatism and the credibility dimensions or among dogmatism, credibility and polarity. We can examine the individual comparisons between high and low dogmatics for each of the three dimensions to detect the source of the significant main effect. The F between high and low dogmatics was significant for

TABLE I. Mean Credibility Generalization Scores

Within Dimensions	High Dogmatics			Low Dogmatics			Overall		
	Positive	Negative	Total	Positive	Negative	Total	Positive	Negative	Total
Safety	1.13	1.69	1.41	1.37	1.61	1.49	1.24	1.65	1.45
Qualification	.89	1.33	1.11	1.18	1.56	1.37	1.02	1.43	1.23
Dynamism	.85	1.66	1.26	1.19	1.80	1.50	1.00	1.72	1.36
Overall	.96	1.56	1.26	1.25	1.66	1.45	1.09	1.60	1.35
Among Dimensions									
Safety--Qualification	1.50	1.88	1.69	1.86	2.28	2.07	1.66	2.06	1.86
Safety--Dynamism	2.05	3.39	2.72	2.36	3.69	3.03	2.19	3.52	2.86
Safety Overall	1.78	2.64	2.21	2.11	2.99	2.55	1.93	2.80	2.36
Qualification--Safety	1.57	2.37	1.97	2.19	2.51	2.35	1.85	2.43	2.14
Qualification--Dynamism	1.55	2.08	1.82	2.02	2.33	2.18	1.76	2.19	1.98
Qualification Overall	1.56	2.23	1.90	2.11	2.42	2.27	1.80	2.31	2.06
Dynamism--Safety	2.18	3.60	2.89	2.45	3.52	2.99	2.30	3.56	2.93
Dynamism--Qualification	1.83	1.91	1.87	2.17	1.96	2.07	1.98	1.93	1.96
Dynamism Overall	2.01	2.76	2.39	2.31	2.74	2.53	2.14	2.75	2.45
Overall	1.78	2.54	2.17	2.18	2.71	2.46	1.96	2.62	2.29

TABLE II

Analysis of Variance of Generalization

Means Within Dimensions of Credibility

SOURCE	SUMS OF SQUARES	df	MS	F	P
Between Subjects	2400	150	16		
Dogmatism (D)	78	1	78	5.0	<.05
Subjects Within	2322	149	15.6		
Within Subjects	3852	755	5.1		
Credibility (C)	71	2	35.5	6.96	<.01
CXD	13	2	6.5	1.27	NS
CXSubj. Within D	1524	298	5.1		
Polarity	503	1	503	111.77	<.01
PXD	21	1	21	4.67	<.05
PXSubj. Within D	668	149	4.5		
CXP	26	2	13	3.82	<.05
CXPXD	7	2	3.5	1.03	NS
CXPXS (Within D)	1019	298	3.4		

TABLE III

Analysis of Variance of Generalization

Means Among Dimension of Credibility

SOURCE	SUMS OF SQUARES	df	MS	F	P
Between Subjects	8138	150	54.2		
Dogmatism (D)	452	1	452	8.75	<.01
Subjects Within	7686	149	51.6		
Within Subjects	14304	755	18.95		
Credibility (C)	909	2	454.5	39.38	<.01
CXD	76	2	38	3.29	<.05
CXSubj. Within D	3441	298	11.54		
Polarity (P)	3624	1	362.4	24	<.01
PXD	201	1	201	13.3	<.01
PXSubj. Within D	2250	149	15.1		
CXP	202	2	101	8.36	<.01
CXPXD	2	2	1	.09	NS
CXPXS (Within D)	3599	298	12.08		

the qualification dimension ($F=4.68$, df,1,149, $P < .03$) and the dynamism dimension ($F=6.18$, df,1,149, $P < .01$); however, there was no significant difference between high and low dogmatics on the safety dimension ($F=.45$, df,1,149, $P > .5$).

There was a significant interaction between dogmatism and polarity (see Table I_I). Again, we can examine the two individual comparisons. For positive inductions, high dogmatics (mean, .96) generalized significantly more than low dogmatics (mean, 1.25) ($F=10.3$, df,1,149, $P < .001$). There was no significant difference between the two dogmatism groups for negative inductions ($F=.79$, $P > .3$).

In summary, high dogmatics generalized significantly more than low dogmatics when scores were summed over all credibility dimensions, and generalized significantly more on two of the three dimensions (qualification and dynamism) when individual comparisons were made. Also, high dogmatics generalized significantly more than low dogmatics when scores were summed over both positive and negative inductions; however, dogmatism interacted with polarity. There was no significant difference between dogmatism groups for negative inductions, but the difference was significant for positive inductions.

H_2: High dogmatic S's will generalize more from an induction on one factor of source credibility to the other two factors than will low dogmatic S's.

The main effect for dogmatism in the between-dimensions analysis was statistically significant beyond the .01 level (mean generalization for high dogmatics was 2.17; for low dogmatics, 2.46). Hypothesis 2 is confirmed.

There was a significant interaction between dogmatism and credibility beyond the .05 level (see Table III). We can examine the individual comparisons between high and low dogmatics for each of the three dimensions to detect the source of the significant main effects. The F between high and low dogmatics was significant for the qualification dimension ($F=14.03$ df 1,149, $P < .01$). It was not quite significant for safety ($F=3.84$ df 1,149, $P < .06$), and there was no significant difference between high and low dogmatics on the Dynamism dimension ($F=2.64$ df 1,149, $P > .10$). The mean generalization scores for high dogmatics were Safety, 2.21; Qualification, 1.90; and Dynamism, 2.39. The mean generalization scores for low dogmatics were Safety, 2.55; Qualification, 2.27; and Dynamism, 2.53.

The interaction between dogmatism and polarity was significant beyond the .01 level (see Table III). Again we can examine the two individual comparisons. For positive inductions, high dogmatics (mean 1.78) generalized significantly more than low dogmatics (mean 2.18) ($F=15.76$, df, 1,149, $P < .001$). There was no significant difference between the two dogmatism groups for negative inductions ($F=.95$, df 1, 149, $P > .30$). The mean for the negative inductions for high dogmatics was 2.54 and for low dogmatics, 2.71.

In summary, high dogmatics generalized significantly more than low dogmatics when the scores were summed over all combinations of the between-dimensions combinations, and when the inductions are specifically in the qualification dimension.

High dogmatics also generalize more than low dogmatics when the inductions are positive but there are no significant differences between the two groups when the inductions are negative.

There was no significant second-order interaction among credibility dimensions, dynamism, and polarity.

H_3 and H_4: High dogmatic S's will generalize more from inductions on the safety factor than from inductions on the qualification or dynamism factor (H_3).

Low dogmatic S's will generalize more from inductions on the qualification factor than from inductions on the safety or dynamism factors (H_4).

These two hypotheses are tested by the significance of the mean square for the interaction of dogmatism and credibility dimensions. The F for interaction was significant; however, the significance cannot be attributed to H_3.

Contrary to the prediction, the highest generalization score for high dogmatism was not in the safety dimension; therefore, hypothesis three is not confirmed. The mean induction scores for both high and low dogmatics for each of the dimensions of credibility are presented in Table IV.

TABLE IV

Mean Generalizations Among Dimensions for High and Low Dogmatics for the Three Dimensions of Credibility

Inducing Dimension	MEAN GENERALIZATION SCORES	
	High Dogmatics	Low Dogmatics
Safety	2.21	2.55
Qualification	1.90	2.27
Dynamism	2.39	2.53

The high dogmatics generalized most, from qualification, not safety. The difference between the qualification mean and the other two means is significant ($F=111.13$, $df,1,298$, $P < .01$).

Hypothesis 4 predicted that the low dogmatics would generalize most from qualification. They do, and the difference between the qualification mean and the other two means is significant ($F=10.05$, $df,1,298$ $P < .01$). Hypothesis 4 is confirmed.

Credibility Dimensions and Polarity of Inductions

The design used to test the four hypotheses also provided a test for the significance of the differences among credibility generalization means for (a) the three credibility dimensions, (b) the positive vs. the negative inductions, and (c) the interaction between the two.

Credibility Dimensions. For the within-dimension analysis, the F among the three dimensions was significant ($F=6.96$, $df,2,298$, $P < .01$). The generalization mean within the qualification dimension was 1.23, within dynamism, 1.36, and within safety, 1.45. Individual comparisons of the differences between each of these pairs of means produced a significant difference between the qualification and dynamism means ($F=7.95$,$df,1,298$ $P < .01$) and between the qualification and safety means ($F=23.15$ $df,1,298$ $P < .01$). The difference between the dynamism and safety means is not significant ($F=.65$,$df,1,288$ $P < .05$).

In summary, for the within-dimension analysis, scales from the qualification dimension induced significantly more generalization to other qualification scales than dynamism scales induced to other dynamism scales or safety scales induced to other safety scales.

For the among-dimension analysis, the F among the three dimensions

also was significant ($F=39.38, df, 2, 298, P < .01$). Again, the generalization was greatest from the qualification dimension, followed by generalization from safety, and from dynamism (the mean generalizations were, respectively, 2.06, 2.36, and 2.45). Individual comparisons of the differences between each of these pairs of means produced a significant difference between the qualification and safety means ($F=7, df, 1, 298, P < .01$) and the qualification and dynamism means ($F=11.93, df, 1, 298 P < .005$). There was no significant difference between the safety and dynamism means.

In summary, then, there were significant overall differences in both analyses with respect to generalizations from the three credibility factors. The individual comparison tests produced similar results in both analyses. Inductions from qualification are more generalized, both to qualification and dynamism-safety than are inductions from either safety or dynamism. No difference was significant between dynamism and safety.

Polarity. For both the within-dimension and the among-dimension analyses, generalization was significantly greater for positive inductions than for negative inductions. For the within-dimension analysis, the mean generalization for positive inductions was 1.09, and for negative inductions, the mean was 1.60 ($F=111.77, df, 1, 149, P < .01$). For the among-dimension analysis, the mean generalization for positive inductions was 1.96, and for negative inductions, the mean was 2.62 ($F=24, df, 1, 149, P < .01$).

Credibility-Polarity Interaction. In addition to the two main effects, there was a significant interaction between credibility

dimensions and polarity of induction in both analyses. The mean generalization scores for the three dimensions and for positive and negative inductions--for both the within and among analyses--are presented in Table V.

TABLE V

Mean Generalization Scores for Within-Dimension and Among-Dimension Analysis: Three Credibility Dimensions and Positive and Negative Inductions

Inducing Dimension	Polarity			
	Positive		Negative	
	Within	Among	Within	Among
Safety	1.24	1.93	1.65	2.80
Qualification	1.02	1.80	1.43	2.31
Dynamism	1.00	2.14	1.72	2.75

The two significant interactions can be attributed to the fact that polarity made more of a difference for some credibility dimensions than it did for others. For the within-dimension analysis, there was a greater difference between generalization means for positive and negative dynamism inductions than there were for the other two factors. For the among-dimension analysis, there was a greater difference on negative inductions between qualification and safety than there was for positive inductions between qualification and safety. The lack of consistency between these two analyses suggests that the interactions may have been extrinsic.

Relative Generalizability among the Three Credibility Dimensions

The analyses of variance used to test the hypotheses do not provide a rigorous answer to two other questions: do the scale inductions

generalize more to other scales within the same dimension than they do to scales on other dimensions; do inductions generalize more to one or the other of the remaining dimensions. Answers to these questions require relating within-dimension generalizations to among-dimension generalizations. Given that grouping, we can perform three separate simple analyses of variance (one for each of the inducing dimensions) with subjects serving as their own control. The mean scores for both within-dimension and among-dimension credibility generalizations are presented in Table VI.

TABLE VI

Mean Scores for Within-Dimension and

Between-Dimension Credibility Generalizations

	Inducing Dimension		
Responding Dimension	Safety	Qualification	Dynamism
Safety	1.45	2.14	2.93
Qualification	1.86	1.23	1.96
Dynamism	2.86	1.98	1.36

Summaries of the three treatment by subjects analyses are presented in Table VII. All three of the F's are significant; i.e., no matter which dimension is used as the inducing scale, there are significant differences in the generalization responses across the three dimensions. Also, all comparisons of mean pairs are significant.

In all three cases, generalization responses were maximum when they were made on the same dimension as the inducing scale; i.e., there is significantly greater credibility generalization within a dimension than there is among dimensions. When Safety information is provided, there

TABLE VII

Three Treatment by Subject Analyses of Variance of Mean Credibility Generalization Scores, Based on Inductions from Each of the three Credibility Dimensions

Inductions from Safety

Source of Variance	Sums of Squares	df	MS	F	P	Individual Mean Comparisons
Dimensions	5866.34	2	2933.17	182.17	< .001	1.45--1.86 F=29.22, P< .01
Subjects	4494.53	150	29.96	1.86	< .001	1.45--2.86 F=344, P< .01
DxS	4830.32	300	16.10			1.86--2.86 F=173, P< .01
Total	15191.19	452				

Inductions from Qualification

Source of Variance	Sums of Squares	df	MS	F	P	Individual Mean Comparisons
Dimensions	2573.90	2	1286.97	127.25	< .001	1.23--1.98 F=6.98, P< .01
Subjects	5730.20	150	38.20	3.78	< .001	1.23--2.14 F=223, P< .01
DxS	3034.12	300	10.11			1.98--2.14 F=6.98, P< .01
Total	11338.22	452				

Inductions from Dynamism

Source of Variance	Sums of Squares	df	MS	F	P	Individual Mean Comparisons
Dimensions	6599.00	2	3299.50	272.31	< .001	1.36--1.96 F=71, P< .01
Subjects	4237.46	150	28.25	2.33	< .001	1.36--2.93 F=532, P< .01
DxS	3535.00	300	12.12			1.96--2.93 F=214, P< .01
Total	14471.46	452				

is more generalization to Qualification than there is to Dynamism. When Qualification information is provided, there is more generalization to Dynamism than there is to Safety. Finally, when Dynamism information is provided, there is more generalization to Qualification than there is to Safety.

Education

On a median split on education the subjects were divided into two groups. The lower half ranged from 8 to 12 years of school and contained an N of 80. The upper half had from 13 to 19 years of school and contained an N of 71. The results of comparing education with the generalizations from inductions test are summarised in Table VIII. The low education group generalized significantly more than the high education group on twelve of the 18 indices.

The correlational analysis indicated that there was a correlation of -.42 between dogmatism, as measured by the short form test and number of years of school of the subjects.

The correlations of credibility generalization with both dogmatism and education are reported in Table VIII.

Since there is a correlation of -.42 between dogmatism and education it was decided to do partial correlations on the above results controlling for education and dogmatism. Applying Ferguson's formula* to the data, controlling for education, the dogmatism correlation with the total combined inductions score was +.1. Controlling for dogmatism, the correlation with education becomes -.4. In other words,

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*George A. Ferguson, Statistical Analysis in Psychology and Education, McGraw Hill Book Co., New York, 1958.

TABLE VIII

Correlations of Education and Dogmatism

with Credibility Generalization

Factors	Education	Dogmatism
Total SS	-.13	.02
Total QQ	-.33	.14
Total DD	-.18	.17
Total "Within"	-.27	.14
Total SQ	-.51	.26
Total SD	-.23	.07
Total S to Q&D	-.47	.21
Total QS	-.52	.25
Total QD	-.25	.26
Total Q to S&D	-.45	.30
Total DS	-.23	.17
Total DQ	-.17	.12
Total D to S&Q	-.26	.19
Total "Between"	-.48	.28

education can predict 16% of the variance in generalizibility, and dogmatism only predicts 1%.

Sex, Age, and Occupation Groups

Simple one-way analyses of variance were computed to test for overall credibility generalization differences between (a) males and females, (b) older and younger subjects--split on median age, and

between (c) police and non-police subjects. For any overall analysis that produced a significant F, individual comparison t-tests were computed.

Males vs. females. There were 109 males and 42 females in the sample.

For the three sets of within-dimension inductions, the mean credibility generalization for males was 1.39, and for females, 1.24. These two means are not significantly different (F-1.83,df,1,149, P $>$.1).

For the six sets of among-dimension inductions, the mean credibility generalization for males was 2.28, and for females, 2.32. Again, these two means are not significantly different (F=.25,df,1, 149, P $>$ .6).

Sex differences are not significantly related to generalization scores.

Age. Subjects were split on the median age. Of the 151 subjects, 77 were 33 or older, and 64 were under 33.

For the three sets of within-dimension inductions, the mean credibility generalization for the older group was 1.34, and for the younger group, 1.37. These two means are not significantly different (F=.07, df,1,149, P $>$.7).

For the six sets of among-dimension inductions, the mean credibility generalization for the older group was 2.25, and for the younger group, 2.33. Again, these two means are not significantly different (F=1.09,df,1,149, P $>$.3).

Age differences are not significantly related to generalization scores.

Occupation: Police vs. non-police. There were three groups of subjects: police (59), teachers (34), and industrial employees (58). In order to test for differences between those who have entered law enforcement and others, the teachers and industrial employees were combined; i.e., there are then two groups of subjects police (59) and non-police (92).

For the three sets of within-dimension inductions, the mean credibility generalization for the police group was 1.32, and for the non-police group, 1.38. These two means are not significantly different ($F=.49$, $df,1,149$, $P > .5$).

For the six sets of among-dimension inductions, the mean credibility generalization for the police group was 2.14, and for the non-police group, 2.39. These two means are significantly different ($F=9.24$,$df,1,149$, $P < .001$).

Although police did not differ from non-police in making within-dimension generalizations, they did make significantly greater credibility generalizations among the dimensions.

Given this finding, we can further examine the nature of the significant difference. First, does the difference hold for both positive and negative inductions? The mean generalization for positive inductions for the police group was 1.78, and for the non-police group, 2.07. The mean generalization for negative inductions for police was 2.50, and for non-police, 2.70. Both of these differences are significantly different (for positive, $F=7.56$,$df,1,149$, $P < .01$); for negative, $F=6.57$,$df,1,149$,$P < .01$). In other words , the police vs. non-police difference holds both for positive and negative inductions.

Second, does the difference hold across all three dimensions of source credibility? Table IX shows the mean generalization for police and non-police groups on inductions from safety, qualification, and dynamism.

TABLE IX

Mean Generalization from Safety, Qualification, and Dynamism Inductions for Police and Non-police

Inductions from	Group		F	df	P
	Police	Non-police			
Safety	2.11	2.53	18.804	1,149	$<.001$
Qualification	1.90	2.16	6.39	1,149	$<.01$
Dynamism	2.41	2.47	.47	1,149	$>.5$

The difference between police and non-police is significant for both the qualification and safety dimensions, but not for the dynamism dimension.

The question remains as to whether the occupations groups are different as such, or whether they simply are correlated with dogmatism and that it is actually dogmatism which is producing the significant differences. A comparison of dogmatism scores between police and non-police produces no significant difference. The actual sample dogmatism means for police is lower rather than higher than the mean for non-police (mean for police, 7.88; for non-police, 8.29).

CHAPTER IV

DISCUSSION OF RESULTS

Summary of findings

The first hypothesis stated that high dogmatic S's will generalize more to other scales within the same factor of source credibility than low dogmatic S's. Hypothesis 1 is confirmed.

High dogmatic S's generalized significantly more than low dogmatics when scores were summed over all credibility dimensions, and generalized significantly more on two of the three dimensions (qualification and dynamism) when individual comparisons were made. Also, high dogmatics generalized significantly more than low dogmatics when scores were summed over both positive and negative inductions; however, dogmatism interacted with polarity. There was no significant difference between dogmatism groups for negative inductions, but the difference was significant for positive inductions.

H_2: High dogmatic S's will generalize more from an induction on one factor of source credibility to the other two factors than will low dogmatic S's.

The main effect for dogmatism is significant. Hypothesis 2 is confirmed.

Although there was an interaction between dogmatism and the credibility dimension, high dogmatics generalized more than low dogmatics on each of the three dimensions. The difference was significant on the qualification dimension.

High dogmatics also generalized more than low dogmatics when the inductions are positive but there are no significant differences between the two groups when the inductions are negative.

In the third hypothesis it was stated that, "High dogmatic S's will generalize more from inductions on Safety scales than from inductions on the qualification or dynamism scales".

This hypothesis was not supported by the results. In fact, the largest generalization for high dogmatics was from qualification. Since H_3 and H_4 are related, the two hypotheses will be discussed together.

In H_4 it was stated that "Low dogmatics will generalize more from inductions on the qualification scales than from inductions on the safety scales or dynamism scales."

The results confirm H_4 . The difference between generalizations from qualification and dynamism is .27 scale points.

Although the data confirm H_4 the lack of support for H_3 raises questions as to the adequacy of the theoretic rationale. Low dogmatics generalized most from qualification; however, high dogmatics also generalized most on inductions from qualification. The difference between qualification and dynamism for the high dogmatics is .49 scale points; between qualification and safety, it is .32 scale points. One must conclude from the among-dimensions analysis that all subjects generalize more when the induction is on the qualification dimension of an unknown source than when it is on the Safety or dynamism dimensions. The within-dimensions analysis leads to the same conclusions.

Implications of Findings for Theoretic Rationale

Since the generalization scores were much higher within the

dimensions of credibility than between them we have support for the factor analytic definition of the dimensionality credibility.

Although there was no significant difference between high and low dogmatics when the inductions were negative, there were significant differences when they were positive. This was true for both the within and between-dimensions inductions. There were no hypotheses formulated about the effect of polarity but it is obviously an important variable to consider. We need to know why it makes a difference and what the meaning is of the good-bad dichotomy. We also require more information about the hypothetical midpoint of the dimensions and the scales within the dimensions.

Another important research question concerns the identification of features which could affect the reversal of polarity of some scales when they are paired with other scales. Are some scales more clearly referential (e.g., intelligent - unintelligent) than others (e.g., fast - slow)?

There was support for the Rokeach notion of closure as a discriminating variable of high versus low dogmatics. Although the differences were statistically significant, they weren't big in terms of social significance.

The data supporting the higher generalization tendency of high dogmatics comes mainly from the positive inductions.

It was hypothesized in H_3 that the high dogmatics would generalize most on Safety. This hypothesis comes directly from Rokeach's typology where he characterizes the high dogmatic as being much more threatened by the world than low dogmatics. The reaction of the high dogmatics on the safety inductions does not support this personality configuration.

The high dogmatic should generalize more on safety scales than qualification or dynamism and possibly more on negative than positive inductions if he is, in fact, threatened by the world. Instead we find that he generalized significantly more on the positive scales than the low dogmatic and also significantly more on qualification than on safety or dynamism.

The reason for the difference between observed and expected behavior lies in the realm of conjecture but certainly warrants further investigation.

If we look at the results in relation to Kelman's influence typologies we see some confirmation of his classification. The low dogmatic type fits Kelman's "internalization" type since both theories assume that people act on beliefs which are consistent with their prior beliefs and congnitive views. Kelman relates this to the rational processes. The use of rational processes would tend to inhibit generalization across dimensions of credibility as well as between scales within a dimension. What both of them are saying is that some people are more rational than others. The more interesting question to solve at this point is, how do the more rational subjects behave when generalizing minimal source information and which dimensions of credibility exert a stronger influence on them.

The question of logical consistency refers to the ability of the subjects to discriminate between scales from different dimensions. To the degree that the low dogmatics do this better than high dogmatics and therefore generalize less, they are more logically consistent. An interesting question for future research would be, "Are the differences in source generalization due to differences in the high dogmatic approach to credibility or do high dogmatics

generalize more in a broad range of intellectual behaviors?"

Another area that warrents investigation is the relative persuasiveness of each of the three dimensions of credibility when attributed to sources in a persuasive message system.

Other Variables and Their Implications: Age, Sex and Occupation

Of the additional variables indexed, there is not much to be said about, age or sex as variables affecting generalization behavior. As demographic variables they did not produce significant differences in the generalization behavior of the subjects. Age may still produce significant differences in generalization of source credibility but the groups tested should include a wider spread of age and a representative sample in the 60-80 year range.

The police as a special occupation group, however, do warrant some attention. The categories in which they generalized more than the non-police were among-dimension generalizations from safety and qualification; and it is possible that the special nature of police work and the self-selection of men into this field can explain these kinds of differences; however, additional data are needed to test that possibility of this interest. Since the difference in the dogmatism scores was non-significant, an interconnection between dogmatism and occupation is not a concern with this occupational classification.

Education

The educational results are most impressive. The difference in generalizing behavior between the high and low education groups is just as significant as the differences between high and low dogmatics. To the experimenter's knowledge the correlation between dogmatism and

education has not been reported elsewhere. To the degree that the results closely parallel those based on the median split on dogmatism it is possible to use these findings in a more practical way since it is easier to get relatively accurate estimates of education than of the dogmatism of one's audience.

The generalizing of the subjects across factors suggests that a possible fruitful area of future research may be in dividing ones audience on the basis of ability to discriminate inferences from observations and compare their relative performance on an induction test similar to the type used in this research.

Scale Polarity

The differential influence of positive and negative inductions opens another area for further investigation. Why does polarity make more of a difference for some dimensions than for others? What happens to the polarity of some scales when they are paired with others (e.g., fast-slow and safe-dangerous?) Are some scales bipolar and others not? This opens the question of the various types of scales that possibly have been classified too broadly under the heading adjectives.

It is possible that the socialization process presents us with the best explanation of the polarity effect. If the subjects are punished for negative assertions about others and rewarded for positive assertions we would expect them to generalize more on the positive assertions and less on the negative. The social values of a different culture would produce different results with the use of the technique applied in this research. A considerable further investigation of the differential effects of positive and negative information is much needed.

To overcome the problem of polarity reversals of some of the scales, the data were recoded and scored on a 0-3 basis. With this system of scoring we get a measure of intensity of generalization which ignores the direction of the generalization. The analysis of the recoded data increased the generalization scores and resulted in even more significant differences between the high and low dogmatics. The differences were all in the direction predicted in the main research.

Many studies have been done in the past on credibility and more recently on the effects of credibility of sources on the persuasiveness of messages. With the factoring of the construct "credibility" into three dimensions by Berlo, Lemert and Mertz it has become possible to examine the effects of these dimensions upon each other and upon messages. It is hoped that this research has cast some additional light on the interaction effects operating within the multidimensional construct, credibility.

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A P P E N D I X A

SAFETY

1. Safe dangerous
2. Just unjust
3. Calm upset
4. Objective subjective
5. Unselfish selfish
6. Patient impatient

QUALIFICATION

7. Trained untrained
8. Experience inexperience
9. Authoritative unauthoritative
10. Skilled unskilled
11. Informed uninformed
12. Intelligent unintelligent

DYNAMISM

13. Frank reserved
14. Fast slow
15. Energetic tired
16. Bold timid
17. Active passive
18. Aggressive meek

APPENDIX B

POSITIVE INDUCTION			NEGATIVE INDUCTION		
Column 1	Column 2	Induction	Column 1	Column 2	Induction
1	7	S - Q	1	8	S - Q
2	13	S - D	2	14	S - D
3	9	S - Q	3	10	S - Q
4	14	S - D	4	16	S - D
5	11	S - Q	5	12	S - Q
6	15	S - D	6	18	S - D
7	2	Q - S	7	1	Q - S
8	16	Q - D	8	13	Q - D
9	4	Q - S	9	3	Q - S
10	17	Q - D	10	16	Q - D
11	6	Q - S	11	5	Q - S
12	18	Q - D	12	17	Q - D
13	1	D - S	13	2	D - S
14	8	D - Q	14	7	D - Q
15	3	D - S	15	4	D - S
16	10	D - Q	16	9	D - Q
17	5	D - S	17	6	D - S
18	12	D - Q	18	12	D - Q

A P P E N D I X C

On the following pages you will be given a brief amount of information about a person in the following manner.

	very	quite	slty.	don't know	slty.	quite	very	
competent	✓	:	:	:	:	:	:	incompetent

The ✓ mark indicates that this person is very competent.
The line immediately below the line with the check mark will contain another pair of words with possible positions for you to check.
You are to imagine that these two scales represent a person who is going to tell you something that is <u>important</u> to you and about which you presently hold opinions.
When you read the top line of the pair and see how the person is rated on that scale you are asked to place a similar ✓ in the second scale that you think would probably also describe this person, e.g.:

	very	quite	slty.	don't know	slty.	quite	very	
competent	✓	:	:	:	:	:	:	incompetent
inexperienced		:	:	:	:	:	:	experienced

You can see that this person is rated as very competent. You are asked now to place a ✓ on the line labeled "inexperienced . . . . . experienced" where you think you should rate this person.

Please note that you can check in any <u>one</u> of seven positions and that it is not necessary to check at the extremes unless you would tend to do so with that particular scale.

Each pair of scales on the following pages represents a different person who is going to tell you something.

Please write your name here _____
then begin.

A P P E N D I X D

Name _____ Sex M F Age _____

Education (Yrs. Completed) _____

Occupation _____

Name _____

	very	quite	slty.	don't know	slty.	quite	very	
safe	✓							dangerous
objective								subjective
safe							✓	dangerous
experienced								inexperienced
aggressive	✓							meek
intelligent								unintelligent
patient							✓	impatient
calm								upset
active	✓							passive
unselfish								selfish
just							✓	unjust
fast								slow
calm	✓							upset
patient								impatient
calm							✓	upset
skilled								unskilled
authoritative	✓							unauthoritative
objective								subjective
unselfish							✓	selfish
just								unjust

Name _____

	very	quite	slty.	don't know	slty.	quite	very	
skilled	✓							unskilled
active								passive
objective							✓	subjective
bold								meek
just	✓							unjust
unselfish								selfish
unselfish							✓	selfish
intelligent								unintelligent
informed	✓							uninformed
patient								impatient
objective							✓	subjective
safe								dangerous
intelligent	✓							unintelligent
aggressive								meek
patient							✓	impatient
aggressive								meek
trained	✓							untrained
skilled								unskilled
trained							✓	untrained
safe								dangerous

Name _____

	very	quite	slty.	don't know	slty.	quite	very	
frank	✓							reserved
safe								dangerous
informed							✓	uninformed
experienced								inexperienced
fast	✓							slow
experienced								inexperienced
experienced							✓	inexperienced
frank								reserved
authoritative	✓							unauthoritative
intelligent								unintelligent
skilled							✓	unskilled
energetic								tired
bold	✓							timid
skilled								unskilled
skilled							✓	unskilled
trained								untrained
energetic	✓							tired
calm								upset

Name _____

	very	quite	slty.	don't know	slty.	quite	very	
authoritative							✓	unauthoritative
calm								upset
experienced	✓							inexperienced
informed								uninformed
informed							✓	uninformed
unselfish								selfish
safe	✓							dangerous
trained								untrained
intelligent							✓	unintelligent
authoritative								unauthoritative
just	✓							unjust
frank								reserved
intelligent							✓	unintelligent
active								passive
energetic	✓							tired
aggressive								meek
fast							✓	slow
trained								untrained
calm	✓							upset
authoritative								unauthoritative

Name _____

	very	quite	slty.	don't know	slty.	quite	very	
active							✓	passive
fast								slow
unselfish	✓							selfish
informed								uninformed
frank							✓	reserved
just								unjust
fast	✓							slow
active								passive
energetic							✓	tired
objective								subjective
trained	✓							untrained
just								unjust
bold							✓	timid
frank								reserved
objective	✓							subjective
fast								slow
bold							✓	timid
authoritative								unauthoritative
frank	✓							reserved
informed								uninformed

Name _____

	very	quite	slty.	don't know	slty.	quite	very	
active							✓	passive
patient								impatient
patient	✓							impatient
energetic								tired
aggressive							✓	meek
energetic								tired
experienced	✓							inexperienced
bold								timid
aggressive							✓	meek
informed								uninformed

SHORT-FORM D SCALES

Name _____

Please read the following statements and check your opinion in the appropriate location to the right of the statement.

	AGREE			DISAGREE		
	VERY	QUITE	SLIGHTLY	SLIGHTLY	QUITE	VERY
In this complicated world of ours the only way we can know what's going on is to rely on leaders or experts who can be trusted.						
My blood boils whenever a person stubbornly refuses to admit he's wrong.						
There are two kinds of people in this world: those who are for the truth and those who are against the truth.						
Most people just don't know what's good for them.						
Of all the different philosophies which exist in this world there is probably only one which is correct.						
The highest form of government is a democracy and the highest form of democracy is a government run by those who are most intelligent.						
The main thing in life is for a person to want to do something important.						
I'd like it if I could find someone who would tell me how to solve my personal problems.						

	AGREE			DISAGREE		
	VERY	QUITE	SLIGHTLY	SLIGHTLY	QUITE	VERY
Most of the ideas which get printed nowadays aren't worth the paper they are printed on.						
Man on his own is a helpless and miserable creature.						
It is only when a person devotes himself to an ideal or cause that life becomes meaningful.						
Most people just don't give a "damn" for others.						
To compromise with our political opponents is dangerous because it usually leads to the betrayal of our own side.						
It is often desirable to reserve judgment about what's going on until one has had a chance to hear the opinions of those one respects.						
The present is all too often full of unhappiness. It is only the future that counts.						
The United States and Russia have just about nothing in common.						
In a discussion I often find it necessary to repeat myself several times to make sure I am being understood.						
While I don't like to admit this even to myself, my secret ambition is to become a great man, like Einstein, or Beethoven, or Shakespeare.						

	AGREE			DISAGREE		
	VERY	QUITE	SLIGHTLY	SLIGHTLY	QUITE	VERY
Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary to restrict the freedom of certain political groups.						
It is better to be a dead hero than to be a live coward.						