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Image of Mass Media News Sources

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NE of the clearest conclusions that may be drawn from the last several decades of research concerning effects of mass media is that what the listener or reader brings to the media situation (i.e., his or her background and preconceived notions) is a much more important determinant of media impact than anything in the media itself. One thing the receiver brings to the situation (which much research suggests may be the single most important factor determining media impact) is a perception of the image of the particular media source. Over the past decade laboratory research on persuasion has consistently found source image to be a multidimensional perception. Unfortunately, most field research investigating media has continued to assume this phenomena to be a unidimensional perception and has employed comparatively unsophisticated measurement, using questions such as "Which of the following sources of news do you think provides the most reliable information: newspapers, television, radio, news magazines, or some other?"

A plausible explanation for the popularity of this unsophisticated approach, beyond the fact that it is convenient, is that little attention has been paid to isolation of dimensions of the image of media sources or the development of specific measures of those dimensions. Consequently, researchers wishing to employ multidimensional measures, either in laboratory or field investigations, have been forced to turn to available source credibility scales, predominantly those developed by McCroskey¹ and by Berlo, Lemert, and Mertz,² which were originally developed in a context of non-mediated communication not intended for use in media research.

Tucker has noted the error in assuming that these scales are universal.³ He noted that varying subject-type or source-type may cause the dimensionality of source credibility scales to change. McCroskey, Scott, and Young have provided a direct test of the generalizability of these scales.⁴ Their results indicated that the use of either of these sets of scales to measure the credibility of sources who were either spouses or peers (when the research subjects were adults) would be undefendable. They also found that scales developed by Norman,⁵ Markham,⁶ and Whitehead⁷ did not generalize to sources of this type.

It is clear from the Tucker critique and the research reported by McCroskey, Scott, and Young that the available scales for the measurement of source credibility should not be assumed to be universally applicable measures of source credibility. Rather, we need research designed to determine perceptions of source image for different types of sources on the part of different kinds of receivers to find measures of specific communication contexts. This paper reports a series of studies conducted as a part of a larger research program which has as its purpose the isolation of the dimensions of source image and the development of measures of those dimensions for a wide variety of source-types and subject populations.⁸ The focus of the studies reported below is the image of media sources perceived by adult and college student populations.⁹

The present studies were designed to provide data relating to four research questions: (1) Does dimensionality of the perceived image of media sources differ from dimensionality of perceived image of other types of sources? (2) Does dimensionality of the perceived image of media sources differ across varying subject populations? (3) What is the comparative importance of the various dimensions of the perceived image of media sources in the prediction of variance in communication or communication-related behavior? and (4) Can a measure be developed that can be used by researchers concerned with the image of media sources with reasonable assurance that it will be reliable and valid across varying subject populations?

Method

The current investigation initially employed semantic differential-type scales representing dimensions of source credibility

reported by Norman, ¹⁰ McCroskey, ¹¹ Markham, ¹² Whitehead, ¹³ and Berlo, Lemert, and Mertz. ¹⁴ All of the scales with high loadings on given factors in these studies were included, but because of several duplications of items, the item pool was reduced to 53. After the pilot phase of this study, 11 items in the original data pool were omitted having failed to attain satisfactory factor loadings on any factor for any source-type. Four additional items were then added to the item pool for the purpose of possibly strengthening obtained factors in the first investigation that appeared to be clear dimensions of response but which had only two or three items with satisfactory loadings. Therefore, the final item pool had 46 semantic differentialtype scales.¹⁵ Measures of potential communication behavior and communication-related behavior were nine Likert-type statements with response options falling on an 11-step continuum bound by bipolar adjectives.¹⁶

Sources: Sources employed in this investigation were all news media sources: the three network television news programs, The New York Times, Time, Newsweek, the local newspaper you most often read, this school's student newspaper (student subjects only), the local radio station to which you most often listen, and the local late evening television news program you most often watch. These sources were selected to represent a cross section of the media news sources to which it was believed subjects were most often exposed. It was assumed these sources would insure considerable variability in such responses.

Subject Type: Data were collected from three subject populations. The first sample was composed of 204 randomly selected adults in Bloomington-Normal, Illinois. These individuals were contacted directly by 10 graduate student interviewers, and served in the pilot study. The second sample was composed of 707 randomly selected adults in Peoria, Illinois, contacted directly by 18 graduate student interviewers. The third sample involved 459 predominantly white college students from Illinois State University enrolled in basic communication classes required of all students at the University. The instruments were administered during regular class periods.

Data Analysis: Data from the three phases of the investigation were analyzed separately.¹⁷ All were submitted to principal components factor analysis and varimax rotation. Unity was inserted in the diagonals and an eigenvalue of 1.0 was established as the criterion for termination of factor extraction. For an item to be considered loaded on a resulting factor, a loading of .60 or higher on the factor was required with no loading of .40 or higher on any other factor. For a factor to be considered meaningful, the requirement was set that two scales must have satisfactory loadings on that factor. All data analyses were performed with the cooperation of the computation centers at Illinois State University and West Virginia University.

Where sample size permitted (in excess of 400) the data were divided into two subsets and analyzed to determine whether internal replication was possible. The Peoria subjects were randomly assigned to the two subsets. The Illinois State subjects were divided by the sex of the respondent.

The second set of analyses performed on the data were canonical correlation analyses computed between scores on the obtained factors for the sample and the nine measures of potential communication behavior and responses to communication behavior. Each sample was analyzed separately using the .05 level for significance.

The third phase analysis employed step-wise multiple regression analyses. Scores were computed for each obtained dimension of credibility for each subject sample based on all of the items with satisfactory factor loadings on the given dimensions. So that the scores on the various dimensions could be placed on the same continuum for comparison, the score for each dimension was divided by the number of items loading on that dimension. These scores were then employed as predictor variables in multiple regression analyses. The criterion variables for the analyses were the measures of potential communication behavior and responses to communication behavior. Each criterion measure was analyzed separately. The criterion established for termination of the step-wise multiple regression analyses was when an entering variable in the analysis had a non-significant (p < .05) partial correlation with the criterion variables or when extraction of an additional step would account for less than a 1% increase in variance accounted for from the analysis.

The first multiple regression analyses conducted were based on the factor structure for the data sample under consideration (e.g., the Peoria factor structure for Peoria data). Subsequently, analyses were conducted employing the factor structure of other samples on the data under consideration (e.g., the Illinois State structure on Peoria data).

Results

Factor Analyses: Factor analysis of the data provided by the subjects in the pilot study indicated the presence of four

factors accounting for 70% of the total variance of the satisfactorily loaded items. The factors were labeled "Competence," "Extroversion," "Composure," and "Character-Sociability."

Analysis of the data provided by the Peoria sample indicated the presence of five dimensions of response in each subset of the sample. These factors accounted for 62% of the total variance of the satisfactorily loaded items in each subset. The same dimensions which appeared in the pilot study were again observed, except that the "Character-Sociability" dimension split to form two dimensions.

Results of data provided by Illinois State subjects also indicated presence of five factors for each subset in the sample. These factors appeared to be essentially the same as those obtained from the Peoria data, and therefore were given the same labels. The obtained factors accounted for 63% of the total variance of satisfactorily loaded items for both male and female subjects. A comparison of results of these analyses suggested presence of five dimensions of response. Whether "Character" and "Sociability" should be considered two dimensions or parts of a single dimension deserved some attention. The results of such investigation suggested that it was probably better to treat them as two dimensions, since in two samples they were clearly separate. Assuming independence of these "two" dimensions cause little difficulty, for the worst that could happen if the assumption were false would be to obtain two perfectly correlated scores for the assumed independent factors. If, on the other hand, a single score were computed for "Character-Sociability," and the dimensions were truly independent, the obtained score would be quite meaningless. Our results clearly indicated that under some circumstances (as yet unspecified) "Character" and "Sociability" represented independent responses. Consequently, we must begin to develop theory concerning how these variables affect the mass communication process and, in turn, how communication behavior of mass media sources affects these perceptions of receivers. Theory concerning a combined "Character-Sociability" dimension may prove as useless in the long run as previous theory since the presumed unidimensional source image construct has been demonstrated to be multidimensional.

Table I includes suggested scales for the measurement of "Competence," "Extroversion," "Composure," "Character," and "Sociability." Researchers wishing to measure a combined "Character-Sociability" factor may employ the scales suggested for the two factors separately.

TABLE I

Suggested Scales for Measurement of Mass Media News Source Image

Dimension/Scales	Primary Loadings*			Secondary Loadings*		
	Pilot Sample	Peoria Sample	ISU Sample	Pilot Sample	Peoria Sample	ISU Sample
COMPETENCE						
qualified-unqualified	.85(1)	.74(1)	.75(1)	.21(4)	.26(5)	.31(3)
expert-inexpert	.82(1)	.73(1)	.77(1)	.25(2/3)	.28(5)	35(5)
reliable-unreliable	.83(1)	.74(1)	.77(1)	.29(2/3)	.34(2)	.29(3)
believable-unbelievable	.78(1)	.71(1)	.69(1)	.33(2/3)	.35(2)	.24(2/3)
incompetent-competent	71(1)	66(1)	77(1)	35(2/3)	39(2)	.39(5)
intellectual-narrow	.58(1)	.71(1)	.70(1)	.24(4)	.33(3)	.29(3)
valuable-worthless	.74(1)	.74(1)	.75(1)	.34(2/3)	.27(2/3)	.28(3)
uninformed-informed	85(1)	63(1)	58(1)	16(4)	31(5)	.32(5)
CHARACTER						
cruel-kind	72(2/3)	74(2)	74(2)	23(4)	23(1)	24(3)
unsympathetic-sympathetic	59(2/3)	68(2)	63(2)	16(5)	31(1)	21(1)
selfish-unselfish	57(2/3)	64(2)	66(2)	19(4)	21(3)	25(1)
sinful-virtuous	57(2/3)	59(2)	63(2)	27(5)	28(1)	17(4)

SOCIABILITY						
friendly-unfriendly	.70(2/3)	.62(3)	.72(3)	.28(1)	.38(2)	.32(2)
cheerful-gloomy	.72(2/3)	.64(3)	.72(3)	.18(1)	.31(2)	.27(2)
good natured-irritable	58(2/3)	.64(3)	.67(3)	.32(5)	.32(2)	.32(2)
sociable-unsociable	.75(2/3)	.58(3)	.59(3)	24(1)	.27(5)	.21(5)
Composure						
composed-excitable	.84(4)	.63(4)	.79(4)	24(1)	.27(1)	.14(2)
calm-auxious	.87(4)	.59(4)	.72(4)	23(1)	.33(5)	.22(1)
tense-relaxed	NA	61(4)	59(4)	NA	.38(2)	.19(5)
nervous-poised	59(4)	62(4)	58(4)	.37(5)	.32(2)	23(2)
Extroversion						
meek-aggressive	77(5)	68(5)	68(5)	.11(1)	24(2)	.15(3)
timid-bold	82(5)	68(5)	75(5)	29(1)	26(2)	.15(3)
talkative-silent	.58(5)	.67(5)	.59(5)	23(2/3)	28(1)	.19(1)
extroverted introverted	68(5)	59(5)	.57(5)	24(2/3)	.21(3)	.27(3)
verbal-quiet	NA	.69(5)	.58(5)	NA	.34(1)	.31(3)

* Numbers in parentheses after loading indicate factor on which loading appeared: 1-Competence, 2-Character, 3-Sociability, 4-Composure, 5-Extroversion, 2/3-Character/Sociability.

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Canonical Correlation Analyses: There were two canonical correlation analyses computed on the data for each sample. The first analysis employed scores based on the obtained factors in the sample (one variable group); scores based on the measures of potential communication behavior and communicationrelated behavior comprised the other group. The second set of analyses substituted computed scores utilizing the recommended scales in Table I for the factor scores for the first set of variables. The second set of variables remained the same as in the first analyses. The data from the pilot investigation were not subjected to canonical analyses because only four measures of potential communication behavior or communication-related behavior were employed.

Analyses of Peoria data resulted in one significant canonical relationship both where credibility scores were based on the Peoria factor analysis results and where generalized scales served as the basis for credibility scores. Both analyses of the Illinois State data yielded two significant canonical relationships.

The first canonical variable in all analyses indicated a significant association between all of the image factors and all of the measures of potential communication and communicationrelated behavior. In each instance, "Competence" was the image factor most highly correlated with the first canonical variable. Thus, it would appear that perceived "Competence" is the best predictor of potential communication and communicationrelated behavior on the part of receivers. "Character" and "Sociability" were the next best predictors followed fairly closely by "Composure" and "Extroversion." These results strongly suggest the need for measurement of all five credibility dimensions in order to predict receiver behavior.

An examination of the results from the Illinois State data relating to the second significant canonical relationship suggest that, although significant, these canonical relationships may be of little importance. All of the measures of potential communication and communication-related behavior either had low or nonsignificant correlations with the second canonical variable. Consequently, extended interpretation in the absence of careful replication does not seem appropriate.

Regression Analyses: The regression analyses provided data concerning three important questions. The first of these was "Can the dimensions of perceived media source image predict substantial variance in potential communication-related behavior?" The second question was "Do differences in factor structure among the populations affect the ability of source image dimensions to predict communication-related behavior?"

The final question was "What is the comparative importance of observed image dimensions in the prediction of potential communication-related behavior?"

Although there was a considerable range across criterion variables and subject populations, the obtained multiple correlations for the most part ranged from .5 to .7. The answer to our first question, therefore, was a qualified "yes." Dimensions of media source image could predict substantial variance in potential communication and communication-related behavior. This conclusion should be tempered with an awareness that a multiple correlation of .7 represented predictable variance of less than 50%. Given the nature of the criterion variables employed in this study (single 11-step scales), this probably represented a realistic estimate of variance predictability. The reliability of single scales of this sort is always questionable.¹⁸ With better measures of communication-related behavior, a better answer to this question should be possible.

The primary analyses employed the factor structure for the predictor variables that was generated by the same subjects who provided the responses representing the criterion variables. Supplementary analyses used factor structures based on the other data samples. If the source of the factor structure were an important consideration in predicting potential communicationrelated behavior, we should expect considerable variability in multiple correlations between predictor and criterion, variables when predictor variables represent factor structures generated by different populations. Examination of results (not reported in detail here) indicated no such major variability. Rather, roughly equivalent multiple correlations were obtained on all criterion variables regardless of which factor structure served as the basis of predictor variables. The answer to our second question, therefore, appeared to be "no." Differences in factor structure among the six populations investigated in this study did not substantially affect the ability of the dimensions to predict potential communication-related behavior.

The third important question to which regression analyses were directed was concerned with the comparative importance of the obtained dimensions in the prediction of potential communication-related behavior. An examination of the regression equations obtained for the criterion variables for each sample indicated that all dimensions obtained in this study contributed, under certain conditions, to the prediction of potential communication-related behavior. However, the three dimensions which most consistently accounted for the most variance were "Competence," "Character," and "Sociability."

Conclusion

The first research question was whether dimensionality of the perceived image of media sources differed from that for other types of sources. While the dimensions observed in this study differ sharply from those reported previously involving other types of sources, the answer to our question appears to be "no." The discrepancy between these and previous results was most likely the result of employing different scale samples. Essentially the same five dimensions of response were observed for other types of sources (public figures, peers, spouses, organizations, and teachers) in other phases of our research program.¹⁹ although the scales with the highest loadings, thus the best measures of those dimensions, varied substantially across source types. Since our scale sample included those scales reported prior to the beginning of our research program, we may reasonably assume that the dimensionality observed here is the best representative of the combined results from the previous research.

Our second research question asked whether dimensionality of the perceived image of media sources varied as a function of differing subject populations. Our results indicate no major variability. However, data we have collected but not reported here indicates that dimensionality may differ for blacks, and dimension importance may differ for Japanese-Americans. Unfortunately, our sample size in these two instances was too small to generate reliable data for generalization. Thus, while we may conclude that dimensionality of perception of the image of media sources for predominately white, American college students and adults was consistent, further research involving subcultural groupings and other nationalities is required before any universal generalization concerning this research question may be offered.

The third research question concerned importance of observed dimensions in prediction of communication-related behavior. Our results suggest that all five are important, but that "Competence," "Character," and "Sociability" are probably the most important.

Finally, this investigation sought development of a measure of media source image that could be used across subject populations with reasonable assurance of reliability and validity. Within the generalizability reservation noted above, the scales in Table I are offered as such a measure. Internal reliability estimates (employing analysis of variance procedures ²⁰) for each of the dimensions with each of the samples exceeded .90. Con-

struct validity is suggested both by visual examination of the scales and the fact that reasonable factorial stability was observed. Predictive validity is suggested from results of our analyses involving prediction of data on communication and communication-related behavior scales. One additional reservation must be stressed. These scales are offered for use as measures of the image of mass media *news* sources only. Whether they can be employed for other types of mass media sources is a question to be addressed in later research. These scales are definitely not appropriate for other types of sources which have been included in other phases of our research program.

Notes

¹ J. C. McCroskey, "Scales for the Measurement of Ethos," Speech Monographs 33:65-72 (March 1966).

² D. K. Berlo, J. B. Lemert, R. Mertz, "Evaluating the Acceptability of Message Sources," *Public Opinion Quarterly* 33:563-576 (March 1970).

³ R. K. Tucker, "On the McCroskey Scales for the Measurement of Ethos," Central States Speech Journal 22:127-129 (Summer 1971).

⁴ J. C. McCroskey, M. D. Scott, and T. J. Young, "The Dimensions of Source Credibility for Spouses and Peers," paper presented at the convention of the Western Speech Communication Association, Fresno, California, November 1971.

⁵ W. T. Norman, "Toward an Adequate Taxonomy of Personality Attributes: Replicated Factor Structure in Peer Nomination Personality Ratings," *Journal of Abnormal and Social Psychology* 66:574-583 (June 1963).

⁶ D. Markham, "The Dimensions of Source Credibility of Television Newscasters," *Journal of Communication* 18:57-64 (March 1968).

⁷ J. L. Whitehead, Jr., "Factors of Source Credibility," Quarterly Journal of Speech 54:59-63 (February 1968).

⁸ For interim reports of other phases of this research program see J. C. McCroskey, T. Jensen, and C. Valencia, "Measurement of the Credibility of Peers and Spouses," paper presented at the International Communication Association Convention, Montreal, Quebec, April 1973; J. C. McCroskey, T. Jensen, and C. Todd, "The Generalizability of Source Credibility Scales for Public Figures," paper presented at the Speech Communication Association Convention, Chicago, Illinois, December 1972; J. C. McCroskey, T. Jensen, C. Todd, and J. K. Toomb, "Measurement of the Credibility of Organization Sources," paper presented at the Western Speech Communication Association Convention, Honolulu, Hawaii, November 1972; and J. C. McCroskey, W. E. Holdridge, and J. K. Toomb, "An Instrument for Measuring the Source Credibility of Basic Speech Communication Instructors," Speech Teacher 23:26-33 (January 1974).

⁹ For a more detailed report of this research, including extended tabular results, see J. C. McCroskey, T. Jensen, and C. Valencia, "Measurement of the Credibility of Mass Media Sources," paper presented on the "Top Three Plus Critics" program, Behavioral Science Interest Group,

Western Speech Communication Association Convention, Albuquerque, New Mexico, November 1973. Single copies may be obtained at no cost by writing the author.

¹⁰ Norman, "Taxonomy of Personality Attributes," p. 574-583.

¹¹ McCroskey, "Measurement of Ethos," p. 65-72.
¹² Markham, "Source Credibility," 57-64.
¹³ Whitehead, "Factors of Source Credibility," p. 59-63.

¹⁴ Berlo, et. al., "Message Sources," p. 563-576.

¹⁵ The scales employed were: intelligent-unintelligent, sociable-unsociable, nervous-poised, cheerful-gloomy, tense-relaxed, sinful-virtuous, believable-unbelieveable, good natured-irritable, intellectual-narrow, cooperative-negativistic, selfish-unselfish, calm-anxious, inexperiencedexperienced, verbal-quiet, logical-illogical, undependable-responsible, headstrong-mild, friendly-unfriendly, confident-lacks confidence, untrainedtrained, unsympathetic-sympathetic, admirable-contemptible, awful-nice, qualified-unqualified, extroverted-introverted, just-unjust, unpleasantpleasant, timid-bold, energetic-tired, good-bad, repulsive-attractive. uninformed-informed, composed-excitable, incompetent-competent, cruelkind, talkative-silent, expert-inexpert, passive-active, impressive-unimpressive, adventurous-cautious, crude-refined, reliable-unreliable: The scales which were added after the pilot study were: tense-relaxed, outgoing-withdrawn, verbal-quiet, confident-lacks confidence; the scales dropped after the pilot study were: unimaginative-imaginative, irrational-rational, consistent-inconsistent, jealous-not jealous, original-unoriginal, artistically sensitive-artistically insensitive, scrupulous-unscrupulous, persevering-fickle, careless-tidy, secretive-open, biased-unbiased.

¹⁶ The statements used were: When I need information on an issue, I consider this source as a source of information, to be: Worthless-Extremely Valuable; When I am faced with making a decision, I consider this source's opinions to be: Worthless-Extremely Valuable; As a communicator, I consider this source to be: Inferior-Superior; I seek opportunities to communicate with this source: Not at all-Very often; If this source asked you to change your opinion on something, how likely would you be to do so? Very Unlikely-Very Likely; If this source asked you to do something you had not done before, how likely would you be to do so? Very Unlikely-Very Likely; If this source said something was false that you believed was true, how likely would you be to change your mind? Very Unlikely-Very Likely; How well do you like this source? Very Little-Very Much; and How well would you like to work with this source? Very Little-Very Much.

¹⁷ Procedures employed in the analyses of the data were based on suggestions by W. W. Cooley and P. R. Lohnes, Multivariate Procedures for the Behavioral Sciences (New York: John Wiley and Sons, 1962).

¹⁸ The internal reliability estimates for the scores for the dimensions of credibility for each sample always equalled or exceeded .90.

¹⁹ See footnote 8.

²⁰ See, for example, J. P. Guilford, *Psychometric Methods* (New York: McGraw-Hill, 1954).