RESPONSE SET AND THE MEASUREMENT OF SELF-
DESIGNATED OPINION LEADERSHIP[*]

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ABSTRACT

The internal consistency and discriminating power of the Rogers
self-designating opinion leadership scale was investigated utilizing
concepts suggested by the "multitrait-multimethod matrix" approach to
evaluating convergent and discriminant validity. The ability of the
scale items to discriminate consistently between two types of opinion
leaders was found to be limited. Irrelevant method factors and response
set appeared to affect scores obtained on the scale.

Some time ago, Rogers and Cartano discussed the development of an improved instrument for measuring opinion leadership by the self-designating technique.[1] Frequently in studies of personal influence employing survey methods, opinion leaders have been identified on the basis of responses to only one or two questions.[2] Noting the problems of reliability connected with indices of opinion leadership derived from answers to a small number of questions, Rogers and Cartano went on to describe a self-designating opinion leadership scale consisting of six items. More recently, Troldahl and Van Dam have also proposed a multiple (seven) item scale for identifying public affairs opinion leaders that is comparable in certain respects to the Rogers instrument.[3] For both of these scales, a variety of evidence has been presented or cited concerning internal consistency and validity. However, what has not been explicitly considered in

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[1] Everett M. Rogers and David Cartano, "Method of Measuring Opinion Leadership," _Public Opinion Quarterly_, Vol. 26, No. 3 (Fall, 1962), pp. 435-441. Also see, Everett M. Rogers, _Diffusion of Innovations_, New York, Free Press, 1962, pp. 228-232.

[2] See, for example, Paul F. Lazarfeld, Bernard Berelson and Hazel Gaudet, _The People's Choice_, Third Edition, New York, Columbia University Press, 1968, pp.49-51; Herbert I. Abelson and W. Donald Rugg, "Self-Designated Influentiality and Activity," _Public Opinion Quarterly_, Vol.22, No.4 (Winter, 1959), pp.566-567; and Verling C. Troldahl, "A Field Test of a Modified 'Two-Step Flow of Communication' Model," _Public Opinion Quarterly_, Vol.30, No.4 (Winter, 1966-67), pp.609-623. Other general approaches to the problem of identifying opinion leaders (the use of key informants or sociometric techniques) are not well-suited to research designs involving cross-sectional samples.

[3] Verling C. Troldahl and Robert Van Dam, "A New Scale for Identifying Public-Affairs Opinion Leaders," _Journalism Quarterly_, Vol. 42, No. 4 (Autumn, 1965), pp. 655-657.

these discussions is the extent to which such measures are affected by various types of response set or irrelevant method variance. This issue has been raised in the past by others with regard to the self-designating method of identifying opinion leaders in general. For example, Abelson and Rugg mention the "reservations" they held in using this type of question because they "anticipated the responses would reflect a bias in the direction of inflating the number of self-designating influentials."[4] Bylund and Sanders detected patterns in responses to three self-evaluation questions including an opinion-leadership item which they believed to be symptomatic of "yeasaying."[5] While such suspicions have been voiced, it appears that only inferential evidence has been brought forth either to establish or to allay the concern.

This paper reports the results of an attempt to assess whether the Rogers opinion leadership scale is affected by problems of response set. The analysis to be discussed consists of two parts. First, we look for indications of the presence of irrelevant method variance in responses to the Rogers scale by utilizing concepts from Campbell and Fiske's "multitrait-multimethod matrix" approach to

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[4] Abelson and Rugg, op. cit., p. 567.

[5] H. Bruce Bylund and David L. Sanders, "Validity of High Scores on Certain Self-Evaluation Questions," Rural Sociology, Vol. 32, No. 3 (Sept., 1967), pp. 346-351.

establishing convergent and discriminant validity.[6] Following this, we investigate a particular variety of response style, acquiescence, by examining the relationship between answers to the opinion leader scale items and a separate measure of this response tendency --a slightly modified version of Couch and Keniston's "Agreement Response Scale."[7]

METHOD

Rogers and Cartano presented several pieces of evidence bearing on the underlined convergent validity of the Rogers scale.[8] More specifically, they cited three studies in which scores from the self-designating scale had been correlated with one or two measures of opinion leadership obtained by different methods (e.g., number of sociometric choices and ratings of key informants) and concluded that: "In general, positive correlations have been found between the self-designating and other measures of opinion leadership, but these relationships are from unity."[9] While correlations indicating some convergence among different methods of measuring opinion leadership are encouraging,

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Donald T. Campbell and Donald W. Fiske, "Convergent and Discriminant Validation by the Multitrait-Multimethod Matrix," Psychological Bulletin, Vol. 56, No. 2 (March, 1959), pp. 81-105.

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Arthur Couch and Kenneth Kenniston, "Yeasayers and Naysayers: Agreement Response Set as a Personality Variable," Journal of Abnormal and Social Psychology, Vol. 60, No. 2 (March, 1960), pp. 151-174.

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Some attention has been given to assessing the concurrent validity of self-designating measures of opinion leadership. See Rogers and Cartano, op. cit., p. 440 and the references cited therein and Troldahl and Van Dam, op. cit., p. 657.

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Rogers and Cartano, op. cit., p. 441.

when one considers using the Rogers scale alone, it would also be helpful to have some assessment of the relative contributions to these scores of method as opposed to trait variance—especially in light of the aforementioned concern that has been expressed about the possible contamination of self-designating measures of opinion leadership by response set. To evaluate this matter requires an examination of discriminant validity. Shared method variance or response set may produce correlations between instruments designed to measure different things. As Campbell and Fiske point out, instruments can be invalidated by correlating too highly with other instruments from which they were intended to differ. They argue: "For the justification of novel trait measures, for the validation of test interpretation, or for the establishment of construct validity, discriminant validation as well as convergent validation is required."[10] That is to say, not only is it necessary to show that a particular measure of some construct correlates strongly with a different measure of the same construct (convergent validity), but it also needs to be demonstrated that the measure does not correlate too markedly with measures of other constructs from which it purports to differ (discriminant validity).

Campbell and Fiske have devised a system for evaluating convergent and discriminant validity which requires a matrix of intercorrelations among test or scale scores for at least two traits or constructs, each measured by at least two methods. They specify several criteria for convergent and discriminant validity in terms of expected patterns

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  Campbell and Fiske, op. cit., p. 81.

of intercorrelation among different measures of different traits. The essential idea underlying their validity tests is that different measures of the same trait should correlate higher with each other than they do with measures of different traits. The initial part of the analysis to be reported here was undertaken to determine how well items in Rogers' self-designating opinion leadership scale meet this condition.

The data utilized were obtained from 168 adult females selected by an area sampling procedure from West Los Angeles. As part of a larger study of personal influence and family role conception, the entire Rogers scale was administered twice to the same sample with reference to two different subjects or topical categories: purchasing furniture and cooking. The "furniture" opinion leadership items were presented to respondents near the beginning of the interview and the "cooking" opinion leadership items toward the end. Table 1 shows the items from the Rogers scale as they were presented to respondents in this study along with the marginal distributions of the item responses for both furniture and cooking opinion leadership.

INSERT TABLE 1 HERE

The internal consistency of the scale when applied to these two topical areas appeared to be roughly the same as that found by Rogers and Cartano for the original application of the scale. The value of the Kuder-Richardson Formula 20 statistic was .835 for the furniture opinion leadership and .773 for cooking opinion leadership. This

compares favorably to the split-half reliability of .703 reported by
Rogers and Cartano.[11] The wording of the items and the order in which they
were presented to respondents in this study parallels the description
given by the latter authors.[12]

The final part of the questionnaire consisted of twenty items
originally developed by Couch and Kenniston in their research on
"yeasaying" as a short measure (the "Agreement Response Scale")
of that response tendency and modified for use in survey studies
by Wells.[13] The inclusion of this measure allows us to invest-
igate directly Bylund and Sanders' suspicion that self-designated
influentiality tends to be related to "yeasaying."[14]

11
 Rogers and Cartano, op. cit., p. 440.

12
 Ibid., pp. 439-440.

13
 Couch and Keniston, op. cit., pp.159-161. The exact form of the scale
 used is that found in William D. Wells, "The Influence of Yeasaying
 Response Style," Journal of Advertising Research, Vol. 1, No. 4 (June, 1961),
 pp.1-12. Wells has used this version of the Couch and Kenniston scale in
 a number of studies conducted among cross-sectional samples of the general
 population. See: William D. Wells and Joel Dames, "Hidden Errors in
 Survey Data," Journal of Marketing, Vol.26, No.4 (Oct., 1962), pp.50-54
 and William D. Wells, "How Chronic Overclaimers Distort Survey Findings,"
 Journal of Advertising Research, Vol.3, No.2 (June, 1963), pp.8-18.

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 Bylund and Sanders, op. cit., pp.350-351. It can also be noted that Camp-
 bell has suggested that scales of the "voluntary self-descriptive type"
 be correlated with external measures of acquiescence (and other) response
 sets as a check on validity. See Donald T. Campbell, "Recommendations
 for APA Test Standards Regarding Construct, Trait, or Discriminant Validity,"
 American Psychologist, Vol.15, No.8 (Aug. , 1960), pp. 546-553.

RESULTS

Prior to discussing the main body of findings, two comments about the format of the Rogers scale are in order. First of all, the items are presented so as to encourage dichotomous responses which can be scored in a straightforward "leader" versus "non-leader" fashion. However, as may be seen from Table 1, in the case of three of the six items (#3, #4, and #5) a substantial number of participants in this study refused to endorse either of the response alternatives provided.[15] Note that the frequency of non-response for these three items tended to remain at roughly the same level for both applications of the scale. An informal analysis of information supplied by interviews concerning non-respondents' reactions to these items indicated that they found the items somewhat ambiguous and were resisting the forced choice or dichotomous response format of the scale. For example, a typical reaction of non-respondents to item #3 ("thinking back to the last discussion you had about _____: (a) were you asked your opinion, OR, (b) did you ask someone else for their opinion?") was "both"--probably indicating that these respondents had in mind an occasion which they perceived as a two-way exchange of information. This non-response problem might be at least partially remedied either by altering the wording of the items to make them less equivocal or by providing a "neutral" response category which respondents are urged to use sparingly. The latter feature is incorporated in the Troldahl and Van Dam seven item public affairs opinion leadership scale which contains items similar to those found in the Rogers scale.[16]

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[15]The "non-response" frequencies recorded in Table 1 arose because respondents were either unable or unwilling to choose between the two response alternatives presented to them rather than as a result of items being ignored or otherwise not answered.

[16]Troldahl and Van Dam, op. cit., p. 656.

including a neutral response category may be a mixed blessing inasmuch as there is some reason to believe that it invites problems of response set.[17]

A second feature of the scale deserving mention is that the items are not evenly-balanced in the sense that for five of the six items shown in Table 1, the first alternative given always represents the "opinion leader" response. The exception is item #4 where the second alternative ("try to convince them of your ideas") reflects the opinion leader trait. In light of this imbalance, it is interesting to note that the "reversed" item (#4) elicited fewer opinion-leader responses than any of the other five items. Only about 20 percent of respondents endorsed the opinion leader response to item #4 in either the "furniture" or the "cooking" versions of the scale. The number is considerably smaller than the comparable figures for the other five items. Such a pattern might indicate an order or position bias --a tendency to accept (or reject) the alternative which appears in a given position regardless of content. In order to control for this type of response bias, a practice often followed is to randomize positions of alternatives reflecting a particular polarity of the trait or attitude being measured.[18] This would seem to be a precaution worth taking when utilizing this scale.

The above remarks point to certain aspects of the scale format which are potential sources of bias in scores obtained on the scale. To detect the actual presence of extraneous method factors requires a more systematic analysis of the item response data.

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 See, for example, the discussion in J.P. Guilford, _Psychometric Methods_, Second Edition, New York, McGraw-Hill, 1954, pp. 451 ff.

18_Ibid._, pp. 454-455.

Item Convergence and Discrimination

Full utilization of Campbell and Fiske's approach to assessing convergent and discriminant validity requires that several traits be measured by several methods in the same study. All measures of all traits are intercorrelated and a "multitrait-multimethod" matrix of these correlation coefficients is formed. The pattern of intercorrelations in the matrix are then examined to determine whether the criteria for convergent and discriminant validity enumerated by Campbell and Fiske are met. Their concepts were utilized here in connection with the data on furniture and cooking opinion leadership discussed above. In order to perform the type of analysis suggested by Campbell and Fiske, each item in the Rogers scale is treated as a separate measure of opinion leadership.[19] The "traits" are cooking and furniture opinion leadership. Hence, we have six measures (items) for each of the two traits. The dichotomous response to these twelve items (see Table 1) were intercorrelated.[20] Table 2 presents the matrix of associations.

INSERT TABLE 2 HERE

Given the uneven marginal distribution of the item responses, Yule's Q was

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[19] Campbell and Fiske's approach has been applied to individual items in attitude scales (rather than the total scores from multiple-item tests or scales) in the past. See, for example, Barry E. Collins, "An Experimental Study of Satisfaction, Productivity, Turnover, and Comparison Levels" unpublished Ph.D. dissertation, Northwestern University, June, 1963, pp.30-34. Ideally, of course, one would like to use independent or 'maximally different" methods in developing a multitrait-multimethod matrix. However, as Campbell and Fiske point out, some assessment of validity can be made even where the methods are not independent. Such is obviously the case here. See Campbell and Fiske, op. cit., pp.83-84. As well, since only one or two of these items are sometimes used to identify opinion leaders (rather than the entire scale), the question of how individual items compare with regard to validity is important.

[20] The non-responses shown in Table 1 were excluded when calculating the Q coefficients. As a result, the sample size upon which the Q's shown in Table 2 are based varies.

used to measure the association in the 2 x 2 contingency tables formed by cross-tabulating responses for pairs of items.[21] The letters "C" and "F" used in Table 2 refer to "cooking" and "furniture", respectively, and the subscripts correspond to the items listed in Table 1. Rogers and Cartano point out that the scale consists of two types of items: self reports or perceptions of past behavior (items 1,4, and 5) and "self-image" questions (items 2,3, and 6).[22] The Q coefficients were grouped in Table 2 according to this distinction.

Utilizing the matrix of Q's shown in Table 2, we can make several of the kinds of comparisons suggested by Campbell and Fiske. The first criterion they set forth is that correlations between different measures of the same trait should be statistically significant and "sufficiently large to encourage further examination of validity."[23] Meeting this condition is evidence of convergent validity. Translated into the present context, this criterion turns out to be the familiar requirement of internal consistency or item homogeneity--the six items in the Rogers scale should be intercorrelated with one another. As may be seen from Table 2, this is the case. The "within-scale" inter-item Q's for furniture opinion leadership are shown in parentheses in Table 2 while the equivalent within-scale Q's for cooking opinion leadership are enclosed in brackets. For the furniture opinion leadership scale, the fifteen interitem Q's ranged from .349 to .963 with a median of .729 and all but one of these associations were significantly different from zero at the .05 level.[24] The cooking opinion leadership items were somewhat less strongly intercorrelated but the median Q was still high (.570; range .179 to .893) and for only two of the fifteen

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[21] For a discussion of the Q coefficient see: Herbert Blalock, Social Statistics, New York, McGraw-Hill, 1960, pp.231-232.

[22] Rogers and Cartano, op. cit., p. 439, footnote 25.

[23] Campbell and Fiske, op. cit., p. 82.

[24] To test the significance of the observed associations between the items, the values of the Chi Square statistic for the corresponding 2 x 2 contingency tables were calculated.

Q's was the association non-significant. All three of the non-significant
associations involved item #4 which, as was pointed out earlier, is the
one "reversed" item in the scale.

Of greater interest for the purposes at hand are the criteria
for discriminant validity. Since response set and irrelevant method
factors tend to inflate correlations between similar instruments, one
would expect the ability of the Rogers scale to discriminate between
furniture and cooking opinion leaders to be limited if the scale is,
in fact, contaminated by such extraneous determinants of response.
The notion that these are "generalized" opinion leaders, would, of
course, suggest that some degree of positive association ought to
exist between opinion leadership in these two areas.[25] At the same
time, there is no reason to believe that the overlap between influ-
entials in these two areas will be anywhere near perfect.[26] Hence, the
matter of discriminating between types of influentials is a meaningful,
albeit severe, test of the Rogers scale.

As evidence of discriminant validity, Campbell and Fiske suggest
that a variable should correlate higher with another measure of the
same trait than it does with other variables having neither trait nor
method in common. They point out that while this is a limited and
and obvious requirement for discriminant validity, it is one that often

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[25] See, for example, Alan S. Marcus and Raymond A. Bauer, "Yes: There are
Generalized Opinion Leaders," _Public Opinion Quarterly_, Vol.28, No.4
(Winter, 1964), pp.628-632.

[26] For a review of the research on overlap in opinion leadership, see Rogers,
op. cit., pp.236-237. Also see David B. Montgomery and Alvin J. Silk,
"Patterns of Overlap in Interest and Opinion Leadership," _Proceedings of
the Fall 1969 Conference of the American Marketing Association_, in press.

is not met.[27] For the data shown in Table 2, this criterion would necessitate, for example, that the association between one furniture item (say F_1) and another (e.g., F_4) be greater than the association between the former (F_1) and each of the other five _different_ items measuring cooking opinion leadership (i.e., C_2, C_3, C_4, C_5, and C_6). Letting $Q(F_2F_4)$ represent the within scale association between F_1 and F_4, we require that its value be greater than that of each of the following five "between-scale" associations: $Q(F_1C_4)$, $Q(F_1C_5)$, $Q(F_1C_2)$, $Q(F_1C_3)$, and $Q(F_1C_6)$. Since there are five within-scale correlation with which to compare each item and five of the above type of between-scale correlations with which to compare each within-scale correlation, we have then a total of twenty-five possible comparisons for each cooking and furniture opinion leader item. The mechanics of carrying out this analysis involve comparing the value of each Q coefficient in Table 2 that is either in brackets or parentheses with every other Q in the same row or column of the matrix that is _not_ underscored _or_ in brackets or parentheses. The number of comparisons in which this validity requirement was met is summarized below for each furniture and cooking item separately-- the maximum number of confirmations possible is twenty-five per item:

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[27] Campbell and Fiske, _op. cit._, p. 82.

ITEM	SCALE	
	Furniture	Cooking
1	25	22
4	23	20
5	24	25
2	25	25
3	25	21
6	25	22
Total Number of con-firming comparisons	147	135
Maximum Number poss-ible (6 items x 25/item)	150	150

In general, the items met this test of discrimination quite well. When applied to furniture, the items tend to be somewhat more consistent in this regard than when administered with reference to cooking--a reflection of the previously mentioned fact that the interitem correlations for the furniture version of the scale were greater than those for cooking. Note that the three "image" items (#2, #3, and #6) and the self-reports of past behavior (#1, #4, and #5) appear to be about equally discriminating.

A second desideratum for discriminant validity mentioned by Campbell and Fiske that can be applied here is that "a variable correlates higher with an independent effort to measure the same trait than with measures designed to get at different traits which happen to employ the same method."[28] In the present context this implies that any furniture opinion leader item

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[28] Ibid., p. 83.

should be more strongly associated with the other items in the furniture scale than it is with the same item applied to cooking opinion leadership. To illustrate, each of the five within-scale associations involving F_1-- i.e., $Q(F_1F_4)$, $Q(F_1F_5)$, $Q(F_1F_2)$, $Q(F_1F_3)$, and $Q(F_1F_6)$--should be greater than the association between F_1 and C_1--$Q(F_1C_1)$. Hence, there are five comparisons to be made for every furniture scale item and five for every cooking item. The six "same item-different scale" associations in Table 2 are underlined. To test for discriminant validity, each underlined Q is compared with the five Q's in brackets or parentheses found in the same column and row of the matrix. The following is a tabulation of the number of comparisons which turned out to be in the direction required for discriminant validity (the maximum number of confirmations possible per item is five):

ITEM		SCALE	
		Furniture	Cooking
1		3	0
4		3	0
5		4	4
2		5	2
3		5	3
6		5	2
	Total Number of Confirming Comparisons	25	11
	Maximum Number Possible (6 items x 5/item)	30	30

The extent to which this requirement for discriminant validity is met again varies between the two applications of the scale--more markedly here than for the two criteria discussed above. Overall, the performance of items when applied to furniture was satisfactory but poor in the case of cooking. Discriminant validity was supported by three quarters of the comparisons made for the furniture items. Only about a third of the cooking comparisons were favorable. This suggests that there may be an interaction between the topic or content to which the scale is applied and some source of method variance. As before, Item #4 appears to be affected by method factors more than any of the other items excpet item #1. Note that both these items are self-reports of past behavior rather than self-image ratings.

The presence of method variance here is indicated by the difference in the level of the "same item-different scale" Q's and the "different item-different scale" Q's. For example, F_1 correlates much higher with C_1 than it does with any of the other five cooking items--i.e., $Q(F_1C_1)$ is greater than $Q(F_1C_4)$, $Q(F_1C_5)$, $Q(F_1C_2)$, $Q(F_1C_3)$, and $Q(F_1C_6)$. If only the tendency for opinion leaders in these two areas to overlap were producing a correlation between F_1 and C_1 we would not expect that $Q(F_1C_1)$ would turn out to be markedly and consistently higher than the five aforementioned associations. The fact this elevation does exist and to a considerable degree (see Table 2) suggests that the contribution of irrelevant method factors to scale scores

is non-trivial.[29] Comparing each of the six same item-different scale Q's
(underscored in Table 2) with the five different item-different scale Q's
(not underscored or enclosed in brackets or parentheses) in the same row
and column, we find the former exceed the latter for all thirty comparisons.
Thus, it is apparent that there is a substantial method component affecting
response to all of the items.

<u>Yeasaying and Naysaying</u>

An "Agreement Response Scale" (ARS) was developed by Couch and Keniston
as a short scale measure of "agreeing" response tendency.[30] These authors
(along with others) regard agreeing response set as a manifestation of
personality dynamics.[31] After exploring its relationship with a number of
personality tests, they suggested that "the best single characterization of
the traits associated with agreeing response set is <u>Stimulus Acceptance</u> vs.

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[29] Given the nature of these interitem correlations, one might well question
whether there is any real tendency for opinion leadership to be "generalized"
across these two areas. Although there is a considerable degree of assoc-
iation between the total scores for the two scales (the value of Goodman
and Kruskal's gamma is .360   for the 88 respondents who answered all items
in both scales), this correlation would appear to be more attributable to
the cumulative effects of the shared method variance mentioned above rather
than an indication of much "true" overlap between cooking and furniture opinion
leadership. Looking at the thirty different item-different scale Q's in
Table 2, we find that twenty-eight are positive but for only thirteen is the
association strong enough to be statistically significant at the .05 level.
If the overlap in opinion leadership between these two areas were real, on
the average one would expect to find something more than a half of there
associations to be significant.

[30] Couch and Keniston, <u>op. cit</u>., p. 159.

[31] This is a controversial matter. For a recent review and discussion of the
issues, see the papers in Irwin A. Berg, ed., <u>Response Set in Personality
Assessment</u>, Chicago, Aldine, 1967.

Stimulus Rejection."[32] Those obtaining high scores on the scale are labelled "yeasayers" while the low scorers are referred to as "naysayers." The version of ARS used here consisted of twenty items each rated on a seven point scale. Summing the responses gives a range of possible scores from 20 to 140. The actual scores ranged from 29 to 137 with a mean of 71. The scale displayed a satisfactory degree of internal consistency as indicated by a value of .836 for the Kuder-Richardson (formula 20) statistic.[33]

To investigate Bylund and Sanders suggestion that those who rate themselves as being highly influential tend to be yeasayers, the relationship between ARS and the Rogers scale was examined. The correlation between total scores on ARS and the Rogers scale was determined. In addition, the manner in which responses to individual items in the Rogers scale were related to ARS total scores was also analyzed.

The total score correlations yielded an unexpected result: yeasaying was significantly correlated with opinion leadership for furniture but not for cooking. The product-moment correlation coefficient for ARS and the furniture opinion leadership total score was .346 (p less than .01, one tail test) and that for ARS and cooking opinion leadership -.010 (not significant). Only the total scores for those who responded to all six items in the opinion leadership scale were used in calculating these coefficients.[34] An analysis of the non-responses indicated that

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[32] Couch and Keniston, op. cit., p. 170.

[33] This compares favorably with the split-half reliabilities reported by Couch and Keniston, op. cit., p. 160.

[34] For the furniture scale correlation the sample size was 126 and for the cooking scale coefficient it was 107.

they were related to yeasaying-naysaying, but not in the anticipated or usual fashion. In the case of the furniture scale, naysayers were more likely to respond to all six items than yeasayers.[35] This is the exact opposite of what one would predict based upon the notion that yeasayers respond impulsively while naysayers are characterized by delay, reluctance and inhibition of reponses.[36] The author has not been able to account for what appears to be a puzzling reversal.

The relationship between responses to each of the individual items in the furniture and cooking scales and the ARS total scores were also analyzed. The sample was divided into four groups according to the quartile values of the ARS total scores. Cross-tabulating these categories with the dichotomous responses to each item yielded the twelve 4 x 2 contingency tables summarized in Table 3.

INSERT TABLE 3 HERE

The nature of these relationships found in these tables may be more clearly seen in Figure 1 where the percentage of persons in the four yeasaying-naysaying groups who endorsed the opinion leader response has been plotted for each of the items.

INSERT FIGURE 1 HERE

Although none of the Chi Square statistics for the contingency tables

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[35]The relationship between yeasaying and non-response was examined by cross-tabulating yeasayers vs. naysayers and respondents vs. non-respondents. Yeasayers were those who scored above the median on ARS and non-respondents were persons who did not answer one or more of the items in the Rogers scale. Separate 2 x 2 contingency tables were formed for the furniture and cooking opinion leadership data. The values of the Chi Square statistics for the furniture and cooking tables were 7.5 (significant at .01 level) and 1.01 (not significant, p is greater than 30), respectively,p. 11.

[36]See Couch and Keniston, op. cit., pp.170-171 for a description of the personality traits associated with yaysayers and naysayers.

shown in Table 3 were significant (at the .05 level), certain regularities are discernible in Figure 1. For the furniture items, moving from the extreme naysaying group (I) to the extreme yeasaying group (IV), one notes a general tendency of increasing likelihood of self-designated influence. A similar trend does not consistently appear in the cooking data. Comparing the two extreme groups, one finds that for all six furniture items, yeasayers were more likely to respond as opinion leaders than were naysayers. This difference was found for only three of the six cooking items. Note that the item for which the relationship between yeasaying and opinion leadership appears most consistent in both its application is #4--the lone "reversed" item in the scale and the one which appeared most affected by method factors in the previous analysis.

We can only speculate as to the reasons why yeasaying seemed to affect responses to the scale when it was administered with reference to furniture but did not appear operative when the same items were presented with reference to cooking. Recall that in terms of internal consistency and discriminant validity, the furniture scale looked slightly better than the cooking version. Contrariwise, we find evidence that the furniture scale may be contaminated by acquiescence response set but this does not appear to be a problem with the cooking scale. However, the previous analysis also indicated that irrelevant methods factors were contributing to the scores obtained on both scales. The implication of all this would seem to be that neither the types of response bias which may afflict the Rogers scale nor the extent of their influence are independent of the topics or subject areas to which the items in the Rogers scale are applied. The substance or content of the items obviously varies according to the particular

variety of behavior or decision being studied. Clearly, ARS is not a "content-free" measure of acquiescence. It would be convenient to be able to explain away the differences in association observed between ARS and the two opinion leadership scores in terms of item content. However, the present author was unable to detect anything in the wording of the ARS items that would support such a contention.

There are other grounds for suggesting that for different areas of influence, different kinds of response set may be more or less of a serious problem. Previous research on response set would suggest that such could be the case. Referring to several studies, Jackson notes that "acquiescence will increase as a direct function of item ambiguity, and lack of personal relevance or neutral desirability levels."[37] Such factors might account for the differential manner in which ARS was found to be associated with furniture and cooking opinion leadership. The fact that the opinion leader responses to the scale items tended to be endorsed by a larger proportion of the sample wher asked with reference to cooking than for furniture might suggest that being a furniture opinion leader is less socially desirable or more neutral than being a cooking opinion leader. If this were the case, it would follow from Jackson's comment that acquiescence would be more of a factor in measuring furniture opinion leadership as compared to cooking opinion leadership. The possibility that self-designated measures of opinion leadership are affected by "social desirability" response set is a matter that merits special investigation. One would certainly expect most Americans to consider being an influential

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[37] Douglas H. Jackson, "Acquiescence Response Styles: Problems of Ident-ification and Control" in Berg, op. cit., p. 74.

more socially desirable than not. The tendency to attribute opinion
leadership to oneself as a socially desirable trait probably varies
widely for different areas of influence.

As Campbell and Fiske point out, validation is an ongoing process.
In many situations where the entire Rogers scale or a few self-designating
items are applied, it should be possible to make at least a partial
application of Campbell and Fiske's techniques by correlating the opinion
leader items with other questions or scales involving self-ratings
which are almost invariably included in studies of personal influence.
For investigations employing multiple measures of opinion leadership
(such as those cited by Rogers and Cartano) there is the opportunity
for a full assessment of discriminant as well as convergent validity.
Such opportunities should not be overlooked. Much that would be valuable
to other researchers could be learned from such evaluations concerning the
problem of identifying opinion leaders.

SUMMARY

The internal consistency and discriminant validity of the items
comprising the Rogers self-designating opinion leadership scale were
investigated utilizing notions suggested by Campbell and Fiske's multi-
trait-multimethod matrix approach to establishing convergent and dis-
criminant validity. While the items were shown to be highly inter-
correlated, their ability to discriminate consistently between two types
of opinion leaders was found to be limited and there were indications that
trait-irrelevant method factors have a substantial effect on scores
obtained on the scale. Acquiescence response set appeared to be present

when the scale was used to identify opinion leaders for one type of activity, but did not appear operative when the scale was administered to the same sample with reference to a different category of behavior. It is suggested that the types of response bias which may affect the Rogers scale and the extent of their influence will depend upon the nature of the referent behavior or are of opinion leadership to which the scale is applied. Randomizing the order in which response alternatives are presented and/or providing a neutral response category may help control some of the unwanted response bias.

TABLE 1

RESPONSES TO OPINION LEADERSHIP SCALE ITEMS FOR FURNITURE AND COOKING

Item	Furniture		Cooking	
	%	No.	%	No.
1. During the past month, have you given anyone any advice or information about ___ ___ ___?				
(a) Yes	35.7	60	65.1	108
(b) No	64.3	108	34.9	58
Totals	100.0	168	100.0	166
Non-Response		-		2
2. Compared with your circle of friends and neighbors, are you: (a) more likely, OR (b) less likely to be asked for advice about ___ ___ ?				
(a) more likely	39.1	63	50.6	81
(b) less likely	60.9	98	49.4	79
Totals	100.0	161	100.0	160
Non-Response		7		8
3. Thinking back to the last discussion you had about_____:	58.2	82	57.1	81
(a) were you asked your opinion, OR	58.2	82	57.1	81
(b) did you ask someone else for their opinion	41.8	59	42.9	61
Totals	100.0	141	100.0	142
Non-Response		27		26
4. When you discuss_ ___ ___ _, what part do you play:				
(a) mainly listen, OR	79.5	120	79.2	118
(b) try to convince them of your ideas	20.5	31	20.8	31
Totals	100.0	151	100.0	149
Non-Response		17		19
5. Which of these happens more often: (a) You tell your friends and neighbors about _____, OR	35.8	48	44.7	67
(b) they tell you	64.2	86	55.3	83
Totals	100.0	134	100.0	150
Non-Response		34		18
6. Do you have the feeling that you are generally regarded by your friends and neighbors as a good source of advice and information about _____?				
(a) Yes	47.8	77	65.1	102
(b) No	52.2	84	34.9	55
Totals	100.0	161	100.0	157
Non-Response		7		11

INTERCORRELATIONS AMONG OPINION LEADERSHIP ITEMS FOR FURNITURE AND COOKING

(Q values)

	F_1	C_1	F_4	C_4	F_5	C_5	F_2	C_2	F_3	C_3	F_6	C_6
F_1	--											
C_1	.584	--										
F_4	.016*	(.349*)	--									
C_4	.191	.365*	.824	--								
F_5	[.320*]	(.591)	.669	(.963)	--							
C_5	-.012*	[.570]	.475	[.801]	.616	--						
F_2	.294*	(.658)	.396	(.484)	.883	.429	--					
C_2	.260*	[.494]	.264*	(.853)	.391	[.795]	.594	--				
F_3	.338	(.555)	.146*	(.811)	(.684)	.346	(.683)	.172	--			
C_3	-.178*	[.495]	.168*	[.180*]	.342*	[.708]	.465	.371	.546	--		
F_6	.076*	(.698)	.233*	(.831)	(.772)	.359	(.814)	[.587]	(.729)	.279*	--	
C_6	.202*	[.430]	.362*	[.537]	.526	[.821]	.569	[.898]	.230*	[.571]	.628	--

*Chi Square for corresponding 2 x 2 contingency table not significant at the .05 level.

FIGURE 1

YEASAYING-NAYSAYING AND SELF-DESIGNATED OPINION LEADERSHIP
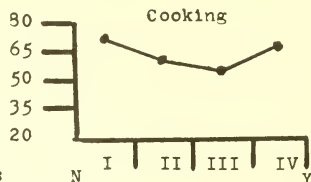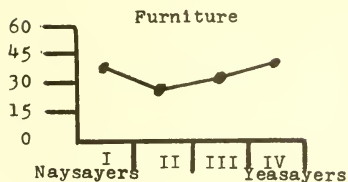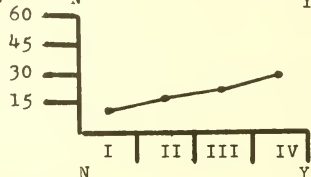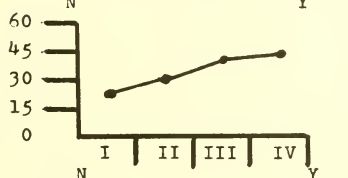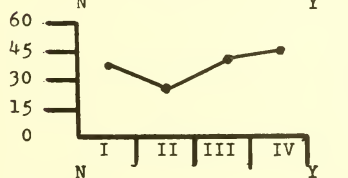
ARS Groups: I--Naysayers (Lower Quartile); IV--Yeasayers (Upper Quartile)

TABLE 3
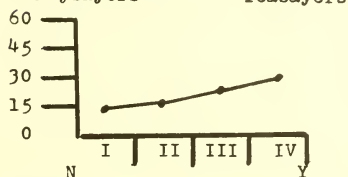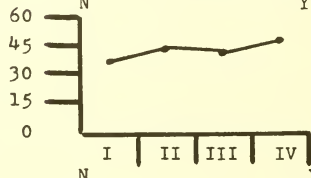
YEASAYING-NAYSAYING AND SELF-DESIGNATED OPINION LEADERSIP
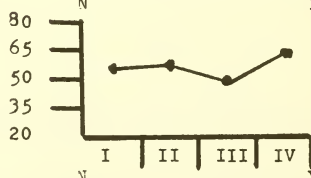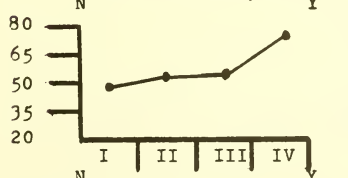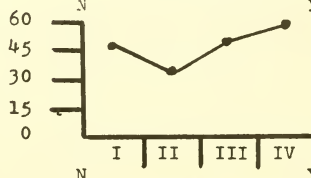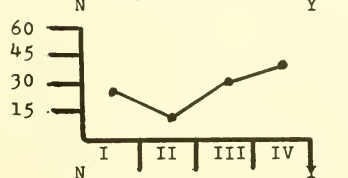
Opinion Leader Scale Item	Cooking				Furniture			
	Agreement and Response Scale (quartile)[*]							
	I(N)	II	III	IV(Y)	I(N)	II	III	IV(Y)
	% Giving Opinion Leader Response							
1 (Base)[**]	72.1	61.9	56.1	70.1	39.5	28.6	32.6	42.5
	(43)	(41)	(41)	(40)	(43)	(42)	(43)	(40)
	$\chi^2 = 2.99$[***]				$\chi^2 = 1.26$			
4	12.8	18.9	22.2	29.7	14.7	17.7	25.0	30.6
	(39)	(37)	(36)	(37)	(39)	(40)	(36)	(36)
	$\chi^2 = 3.39$				$\chi^2 = 4.79$			
5	38.9	47.4	42.1	50.0	23.5	31.5	42.1	46.2
	(36)	(38)	(38)	(38)	(34)	(35)	(35)	(30)
	$\chi^2 = 1.10$				$\chi^2 = 4.86$			
2	55.0	57.6	39.0	51.3	41.9	26.8	42.1	46.2
	(40)	(40)	(41)	(39)	(43)	(41)	(38)	(39)
	$\chi^2 = 3.16$				$\chi^2 = 3.60$			
3	55.8	57.8	48.5	65.0	50.0	54.1	54.3	75.8
	(34)	(38)	(33)	(37)	(36)	(37)	(35)	(33)
	$\chi^2 = 1.59$				$\chi^2 = 5.62$			
6	73.2	61.0	62.1	63.2	47.6	34.2	51.3	59.0
	(41)	(41)	(37)	(38)	(42)	(41)	(39)	(39)
	$\chi^2 = 1.67$				$\chi^2 = 5.25$			

[*]IV designates the extreme "yeasaying" group and I corresponds to the extreme "naysaying" group as determined by scores on Couch and Keniston's Agreement Response Scale."

[**]The bracketed figures represent the total number of persons giving either a "leader" or "non-leader" response to each item. Those not responding were excluded. The non-response frequencies are shown in Table 1.

[***]With three degrees of freedom, the critical value of χ^2 at the .05 level is 7.82.