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ABSTRACT

This paper reports the development of a measure of perceived homophily. In both an initial investigation and in a replication, four dimensions of response were observed. These dimensions were labeled attitude, value, appearance, and background. Additional results indicated that opinion leaders are perceived as more homophilous than non-opinion leaders on the dimensions of attitude, value, and background. The scales found to measure these dimensions are suggested for consideration by researchers concerned with homophily or interpersonal similarity in human communication. (Author)

TOWARD THE MEASUREMENT OF PERCEIVED HOMOPHILY IN INTERPERSONAL COMMUNICATION

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Abstract

This paper reports the development of a measure of perceived homophily. In both an initial investigation and in a replication, four dimensions of response were observed. These dimensions were labeled Attitude, Value, Appearance, and Background. Additional results indicated that opinion leaders are perceived as more homophilous than non-opinion leaders on the dimensions of Attitude, Value, and Background. The scales found to measure these dimensions are suggested for consideration by researchers concerned with homophily or interpersonal similarity in human communication.

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Toward the Measurement of Perceived Homophily in Interpersonal Communication

One of the most basic principles of interpersonal communication is that source-receiver similarity (homophily) increases the likelihood of communication attempts and promotes communication effectiveness (Rogers and Bhowmik, 1970; Rogers and Shoemaker, 1971). While this general principle has been supported in numerous studies, recent research indicates that the principle must be modified to account for the fact that certain moderate dissimilarities between generally homophilous communicators appear to enhance effectiveness even to a greater degree (Simons, Berkowitz, and Moyer, 1970; King and Sereno, 1973; Alpert and Anderson, 1973). Rogers and Shoemaker (1971) refer to this relationship as "optimal heterophily." The best example of this relationship between communicators is the opinion leader-follower relationship commonly observed in mass communication and diffusion research.

Measurement of communicator homophily has taken a variety of forms in previous research. Most field investigators have judged communicator homophily on the basis of observer coding of the characteristics of the individuals studied (for an excellent summary of this research, see Rogers and Shoemaker, 1971). Some laboratory investigations have also employed this approach. Others have asked subjects to complete various scales concerning themselves so that the investigator can estimate the degree of homophily present (Byrne, 1961). Still others have asked subjects to complete various scales on themselves and on other persons so that the investigator can estimate the subject perceived homophily present (Alpert and Anderson, 1973). Each of these approaches has led to meaningful research results which have led to the present theoretical formulations. Each, however, includes an element which can introduce error into the research and reduce the value of the research results. In each case, the investigator, not the subject is the determiner of the degree of homophily present. Thus, subtle, but important dissimilarities among subjects can be overlooked, and the resultant theory may have reduced validity.

The assumption underlying the current investigation is that people's perceptions of other people determine to a major extent whether there is a communication attempt made and have a major impact on the results of any communication encounter. The results of the research on source credibility and interpersonal attraction strongly support the validity of this assumption (Littlejohn, 1971; Wheeless, 1973; Bersheid and Walster, 1969). Consequently, it is important that an approach to the measurement of homophily be developed that is based on subject perceptions without the imposition of investigator interpretation. The current study was undertaken as an initial step toward that goal.

Generation of Research Instrument

The number of elements of similarity-dissimilarity between two people approachs infinity. It was recognized at the outset that a single investigation could not hope to isolate all of the possible similarities-dissimilarities that subjects could perceive in one another. Thus, it was important to reduce to manageable proportions this initial effort by excluding some known areas of similarity-dissimilarity which could be investigated later. The primary areas excluded were the dimensions observed in previous research on source credibility. While it was recognized that these perceptions of communicators are vitally important to interpersonal communication, currently available instruments for the measurement of source credibility (see, for example, McCroskey, Jensen, and

Valencai, 1973) can be converted easily to measure perceived homophily on the various dimensions. For example a scale used to measure Competence in the McCroskey, Jensen, and Valencia (1973) instrument would appear as follows:

Competent 1 2 3 4 5 6 7 Incompetent

This could be converted to the following form to measure perceived similarity:

Much More Competent 1 2 3 4 5 6 7 8 9 Much Less Competent

An alternative method would be to have the subject complete the scale on a target person and also on her or himself. Difference scores between the target person and the self could then be computed as an estimate of perceived homophily on the various credibility dimensions.

A second group of similarity-dissimilarity variables that were excluded were variables that are essentially dichotomous, sex and race being prime examples. The concern of the present investigation was with the development of scales which would provide continuous measures of perceived similarities and dissimilarities. Such non-continuous elements as sex and race, therefore, were considered beyond the scope of the present study.

Because of the extensive, successful use of the semantic differential technique for the measurement of other communicator perceptions, such as source credibility, a modification of this technique was chosen for this study. The extensive literature on diffusion of innovations and interpersonal attraction was reviewed in order to identify elements of similarity-dissimilarity that have been found to have an impact on interpersonal communication. As a result of this survey, a 47-item research instrument was developed (see Appendix A). The research was conducted in two phases.

Phase 1

Procedure

The first phase of this investigation was concerned with the identification of the dimensions of perceived homophily present in our research instrument. In order to obtain this information it was decided that a subject sample was needed that had at least two characteristics. First, the subjects had to know one another and have interacted for more than a brief period of time so there would be a clear basis for perceptions of homophily. The sample needed to be reasonably heterogeneous so that there would be sufficient variance in responses for statistical analyses (particularly factor analysis) to be meaningful. Since previous research has indicated that heterophilous individuals tend to avoid communicating with each other (Rogers and Shoemaker, 1971), it was decided that the subject population to be used should be one that included people with considerable diversity but that, because of unusual circumstances, were put in a position where they were forced to interact with each other over a period of time and became reasonably well acquainted. The sample selected included 224 students enrolled in a lower-division course in small group communication. The subjects included students from all of the colleges and schools in the university, represented several states, and a wide variety of social and family backgrounds. Limitations of the sample that should be kept in mind when generalizing from our results

include the fact that the subjects were homogeneous with respect to age (17-25), race (predominately white), culture (general American), and intellectual level (all college students).

At the time the data were collected the subjects had participated in several group discussion assignments over the period of a month. The data were collected while the subjects were seated in five-person groups that had just completed a twenty-minute interaction. Each subject completed the research instrument for "the person on my left," "the person on my right," and "the person to whom I most often turn for advice, other than a member of my family." In each case the subject recorded his or her own and the other person's sex. The data collected on the two group members were considered the primary data for this study. The data concerning the person turned to for advice were believed to be related to opinion leadership.

Data Analyses

The data for the group members on the left and right were treated as independent data sets. Each was submitted to principle components factor analysis and varimax rotation. For a factor to be considered meaningful it was established that at least three items had to have satisfactory loadings (.60 or higher) on that factor with no secondary loading of above .40. The data for the opinion leaders were scored according to the resulting factors in order to provide an estimate of the degree of perceived homophily of opinion leaders on each dimension.

Results

The factor analyses of the two data sets (left and right) yielded highly similar results. In both cases four interpretable factors were obtained. These factors were labeled Attitude, Value, Appearance, and Background. Since the two data sets provided such highly similar results, they were combined and reanalyzed together. The results, virtually identical to the two previous analyses, are summarized in Table 1.

Since opinion leaders, on the basis of previous research, are presumed to be more homophilous with their followers than non-opinion leaders, if the present scales have any validity as an index of homophily they should reflect these differences. Consequently, the scales were scored by factor for the opinion leaders and for the people in the subjects' small group (left and right). These scores, converted to a seven-step scale base, are reported in Table 2. The scores on three of the factors clearly reflected the expected distinction between opinion leaders and non-opinion leaders. Scores on the Appearance factor, however, did not. Only a small difference in the expected direction was observed. Since it was suspected that sex of subject and sex of opinion leader would be likely to confound the scores on this factor, a two-way analysis of variance was performed on the data for the subjects who had recorded both their own and their opinion leader's sex (N=136). A significant interaction ($F=19.40$, $p<.0001$) was observed. Opinion leaders of the same sex were perceived as more homophilous on this factor by the subjects than were opinion leaders of the opposite sex (Male subjects, Male OL=3.34, Female OL=2.47; Female subjects, Male OL=2.33, Female OL=3.44). Similar analyses of the data for the other factors indicated no significant interactions.

A supplemental finding was that sex of source and receiver may interact in the selection of opinion leaders ($X^2=4.50$, d.f.=1, $p<.05$). While male subjects selected almost an equal number of male (n=32) and female (n=29) opinion leaders, female subjects showed a strong preference for females (n=60) over males (n=45) for opinion leaders.

Phase 2

Procedure

An important step in the development of a factor-based instrument is establishing that the factors observed in one setting can be replicated under other circumstances. Consequently, 18 items representing the four factors obtained in the first phase of this investigation were combined with scales for source credibility (McCroskey, Jensen, and Valencia, 1973) and interpersonal attraction (McCroskey and McCain, 1972) and administered to a second group of subjects enrolled in basic communication courses. In this instance, the subjects were given minimal information concerning the person about whom they were to complete the scales. They were told only that the person was in a four-member group discussion and that he or she talked a certain percentage of the time. That percentage was systematically varied from 0 to 95 percent.

Data Analysis

The 519 completed instruments were submitted to factor analysis and varimax rotation employing the same criteria as in the first phase of this study.

Results

The results of the factor analysis indicated that the four dimensions presumed to be present in the data were 1) independent of one another and 2) independent of measures of either source credibility or interpersonal attraction. Table 3 reports the obtained factors and item loadings, excluding the factors and items related to the other measures. No homophily item had a loading above .30 on any credibility or attraction factor. Similarly, no credibility or attraction item had a loading above .30 on any homophily dimension.

Conclusions

Although generalizations from an initial investigation such as this one must be made with extreme caution, the obtained results point to some possible conclusions worthy of consideration in later research. First, it is reasonably clear from the present results that perceived homophily is a multi-dimensional construct. There are at least four replicable dimensions, which we may label Attitude, Value, Appearance, and Background. Second, these perceptions of potential communicators are factorially independent of perceptions of source credibility and interpersonal attraction.

Some tentative support is present for the concept of optimal heterophily. Although opinion leaders were perceived as substantially more homophilous than other students by these student subjects, on at least three dimensions, the absolute scores on the dimensions were substantially below the point of maximum

homophily (7.0). Whether this reflects a real difference or only an artifact of measurement must be explored in later research.

There is some indication from these results that sex may be an important factor in the selection of opinion leaders, particularly for females. This possibility should also be explored further in later research.

Although the present investigation was only an initial attempt to refine the homophily construct, the results provide a first-generation measure which should prove useful to researchers concerned with this important communication variable.

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Table 1

Items With Satisfactory Loadings
in First Study

Item	Factor Attitude	Value	Appearance	Background
Doesn't think like me - thinks like me	.72*	.28	-.12	.00
Behaves like me - Doesn't behave like me	-.69*	-.17	.03	.21
Similar to me - Different from me	-.68*	-.21	.14	.03
Like me - Unlike me	-.70*	-.26	-.21	-.10
Perceives things like me - Doesn't perceive things like me	-.76*	-.22	.03	.19
Personality similar to mine - Personality different from mine	-.63*	-.23	.10	.01
Does things unlike I do - Does things like I do	.63*	.38	-.19	-.03
Shares my beliefs - Doesn't share my beliefs	-.60*	-.28	.07	.03
Shares my attitudes - Doesn't share my attitudes	-.68*	-.20	.03	.11
Dislikes things I dislike- Likes things I dislike	-.60*	-.31	.16	-.01
Morals unlike mine - Morals like mine	.09	.70*	-.14	-.14
Sexual attitudes different from mine - Sexual attitudes like mine	.09	.67*	-.03	.05
Doesn't share my values - Shares my values	.24	.70*	-.07	-.12
Treats people like I do - Doesn't treat people like I do	-.31	-.62*	.11	.13
Doesn't share my emotions - Shares my emotions	.26	.60*	-.03	.01
Politics different from mine - Politics like mine	.07	.60*	-.21	-.09
Looks different from me - Looks similar to me	.03	-.16	.67*	-.06
Different size than I am - Same size I am	-.17	-.15	.66*	-.04
Same weight I am - Different weight than I am	.21	.20	-.61*	.02
Wears like I do - Wears hair different than I do	.14	.11	-.71*	-.11
From social class similar to mine - From social class different from mine	.07	.23	-.10	-.69*
Culturally different-Culturally similar	-.15	-.11	.09	.61*
Economic situation like mine - Economic situation different from mine	.23	.07	-.08	-.66*
Status different from mine - Status like mine	-.11	-.14	.17	.61*
Family like mine - Family different from mine	.03	-.07	-.12	0.63*
Background different from mine - Background similar to mine	.00	.11	.07	.62*
Eigenvalue	4.93	3.42	2.07	2.60
Variance	19	13	8	10

*Primary loading

Table 2

Mean Scores on Factors for
Opinion Leaders and Non-Opinion Leaders*

Factor	Non-Opinion Leaders	Opinion Leaders
Attitude	3.88	5.11
Value	3.91	5.23
Appearance	2.85	3.01
Background	4.33	5.13

*Scores on 7-point scale, higher scores reflect greater homophily.

Table 3

Factor Loadings for Second Study

Item	Factor: Attitude	Value	Appearance	Background
Behaves like me - Doesn't behave like me	.80*	-.01	.12	-.13
Similar to me - Different from me	.82*	.00	.12	-.15
Doesn't think like me - Thinks like me	-.66*	.16	-.01	.15
Perceives things like me - Doesn't perceive things like me	.69*	-.25	-.01	-.19
Personality different from mine - Personality similar to mine	-.72*	.02	-.21	.15
Like me - Unlike me	.73*	-.16	.15	-.14
Morals like mine - Morals unlike mine	.29	-.72*	.13	-.25
Doesn't share my values - Shares my values	-.17	.70*	-.13	.27
Sexual attitudes like mine - Sexual attitudes different from mine	.15	-.60*	.13	-.29
Looks different from me - Looks similar to me	.25	-.23	-.70*	.09
Same size I am - Different size than I am	.24	-.31	.73*	.01
Different weight than I am - Same weight I am	-.04	-.08	-.79*	.01
Wears hair different than I do - Wears hair like I do	-.11	.05	-.83*	.05
Status like mine - Status different from mine	.19	.27	.09	.67*
From social class similar to mine - From social class different from mine	.15	-.18	.04	-.82*
Culturally similar - Culturally different	.14	-.03	-.05	-.81*
Economic situation like mine - Economic situation different from mine	.08	-.04	.01	-.85*
Family like mine - Family different from mine	.27	-.14	.07	-.66*
Eigenvalue	3.70	1.81	2.50	3.31
Variance	21	10	14	18

*Primary Loading

Appendix A: Research Instrument

My Sex: M F Person's Sex: M F

Status different from mine	1 2 3 4 5 6 7	Status like mine
Resembles me	1 2 3 4 5 6 7	Doesn't resemble me
Doesn't share my attitudes	1 2 3 4 5 6 7	Shares my attitudes
Dresses different from me	1 2 3 4 5 6 7	Dresses similar to me
Education similar to mine	1 2 3 4 5 6 7	Education different from mine
Looks different from me	1 2 3 4 5 6 7	Looks similar to me
Occupation different from mine	1 2 3 4 5 6 7	Occupation like mine
Behaves like me	1 2 3 4 5 6 7	Behaves different from me
Similar to me	1 2 3 4 5 6 7	Different from me
From social class similar to mine	1 2 3 4 5 6 7	From social class different from mine
Has had experiences similar to those I have had	1 2 3 4 5 6 7	Has not had experiences similar to those I have had
Treats people different than I do	1 2 3 4 5 6 7	Treats people like I do
Different size than I am	1 2 3 4 5 6 7	Same size I am
Religion same as mine	1 2 3 4 5 6 7	Religion different from mine
Thinks like me	1 2 3 4 5 6 7	Doesn't think like me
Does things unlike I do	1 2 3 4 5 6 7	Does things like I do
Culturally different	1 2 3 4 5 6 7	Culturally similar
Shares my beliefs	1 2 3 4 5 6 7	Doesn't share my beliefs
Age different from mine	1 2 3 4 5 6 7	Age similar to mine
Same weight I am	1 2 3 4 5 6 7	Different weight than I am
Perceives things like me	1 2 3 4 5 6 7	Perceives things different from me
Wears hair like I do	1 2 3 4 5 6 7	Wears hair different than I do
Like me	1 2 3 4 5 6 7	Unlike me
Ethnically similar	1 2 3 4 5 6 7	Ethnically different
Background different from mine	1 2 3 4 5 6 7	Background similar to mine
Economic situation like mine	1 2 3 4 5 6 7	Economic situation different from mine
Morals unlike mine	1 2 3 4 5 6 7	Morals like mine
Doesn't share my emotions	1 2 3 4 5 6 7	Shares my emotions
Doesn't share my values	1 2 3 4 5 6 7	Shares my values
Likes people I like	1 2 3 4 5 6 7	Doesn't like people I like
Doesn't like environment I like	1 2 3 4 5 6 7	Likes environment I like
Likes entertainment I like	1 2 3 4 5 6 7	Doesn't like entertainment I like
Associates with my friends	1 2 3 4 5 6 7	Doesn't associate with my friends
Dislikes things I dislike	1 2 3 4 5 6 7	Likes things I dislike
Sees things different than I do	1 2 3 4 5 6 7	See things like I do
Posture like mine	1 2 3 4 5 6 7	Posture different from mine
House (apartment, room, etc.) like mine	1 2 3 4 5 6 7	House (apartment, room, etc.) different from mine
Hair is different from mine	1 2 3 4 5 6 7	Hair is like mine
Aspirations different from mine	1 2 3 4 5 6 7	Aspirations like mine
Health different from mine	1 2 3 4 5 6 7	Health like mine
Habits different from mine	1 2 3 4 5 6 7	Habits like mine
Complexion different from mine	1 2 3 4 5 6 7	Complexion like mine
Politics different from mine	1 2 3 4 5 6 7	Politics like mine
Accent different from mine	1 2 3 4 5 6 7	Accent like mine
Sexual attitudes different from mine	1 2 3 4 5 6 7	Sexual attitudes like mine
Family like mine	1 2 3 4 5 6 7	Family different from mine