## THE MEASUREMENT OF INTERPERSONAL ATTRACTION

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OR at least the past two decades, H theorists and researchers in interpersonal communication have centered much of their attention on interpersonal attraction. Not only has interpersonal attraction been found to be a facilitator of interpersonal communication across a wide range of cultures,1 but also much interpersonal communication exists for the primary purpose of enhancing interpersonal attraction.2 A review of the research literature on interpersonal communication suggests two very important conclusions: (1) The more people are attracted to one another, the more they will communicate with each other; and (2) The more we are attracted to another person, the more influence that person has on us in interpersonal communication.3

Two previous researchers have directed their attention specifically to assessing and measuring the dimensionality of interpersonal attraction. Triandis used two sets of questionnaire items related to various aspects of interpersonal attraction and factor analyzed the responses. He reported a five factor solution.4 The first factor, labeled "Toward social acceptance

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1 E. M. Rogers and F. Shoemaker, Communication of Informations (New York: The Free Press, 1971).

Press, 1971). <sup>2</sup> J. C. McCroskey, C. E. Larson, and M. L. Knapp, An Introduction to Interpersonal Com-munication (Englewood Cliffs, N.J.: Prentice-Hall, 1971), Chap. 3. <sup>3</sup> See E. Berscheid and E. H. Walster, Inter-

personal Attraction (Reading, Mass.: Addison-Wesley, 1969).

4 H. C. Triandis, "Exploratory Factor Analysis of the Behavioral Component of Social Attitudes," Journal of Abnormal and Social Psychology, 68 (1961), 420-430.

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with subordination versus rejection with superordination," appears to represent a task property of interpersonal attraction. The second factor represented a socioemotional category of interpersonal attraction. The other three dimensions which Triandis reported were factors with single scales loading on them and are of questionable reliability. Although there are some serious limitations to his factor analytic techniques, Triandis' results suggest the multi-dimensionality of the interpersonal attraction construct.

The second study which has attempted to measure dimensions of interpersonal attraction was reported by Kiesler and Goldberg.<sup>5</sup> Following Triandes' lead, these researchers generated items to represent task and socio-emotional properties of interpersonal attraction, employing a variety of measuring devices. They factor analyzed the results and used the sum of the factor scores for the extracted factors as dependent measures in an experimental design. We need be concerned here only with their factor analysis results. They extracted and rotated only the two factors with the highest eigenvalues, disregarding other possible solutions. Factor One represented "a socio-emotional category of interpersonal attraction closely related to what one might ordinarily call 'liking'."6 Factor Two was "a task category of interpersonal attraction, related to what one might ordinarily call 'respect'."7

5 C. A. Kiesler and G. N. Goldberg, "Multidimensional Approach to the Experimental Study of Interpersonal Attraction: Effect of a Blunder on the Attractiveness of a Competent Other." Psychological Reports, 22 (1968), 693-705.

<sup>6</sup> Kiesler and Goldberg, 700.

7 Kiesler and Goldberg, 700.

The interpretation of these factor analytic results is difficult since several items load strongly on both factors, and the authors failed to examine other solutions. Nonetheless, the results clearly indicate the multidimensionality of the interpersonal attraction construct.

Walter, Aronsen, Abrams, and Rottman conducted an extensive field experiment to test the hypothesis that one's romantic aspirations are influenced by aspirations in other areas.<sup>8</sup> In this study three properties of interpersonal attraction were measured using single scales. They included: physical attractiveness, personal attractiveness, and how considerate subjects were. The results showed that physical attractiveness was by far the most important determinant of how much a date would be liked by a partner.

It seems clear from these studies that what we refer to as interpersonal attraction is not a unidimensional construct. Rather it seems to be composed of at least three dimensions: 1) a social or liking dimension, 2) a task or respect dimension, and 3) a physical or appearance dimension. For the most part, previous research on interpersonal attraction has not taken this multidimensionality into account in the measuring instruments employed.

### Method

# Measurement Approach

Likert-type scales were selected as the most appropriate measurement device for our purposes. They yield results amenable to parametric statistical analysis, are comparatively easier to construct and administer than most other measures, and have been demonstrated to be highly reliable when properly developed.<sup>9</sup>

<sup>8</sup> E. Walster, V. Aronson, D. Abrahams, and L. Rottman, "Importance of Physical Attractiveness in Dating Behavior," *Journal of ePr*sonality and Social Psychology, 5 (1966), 508-516. <sup>9</sup> A. L. Edwards, *Techniques of Attitude* 

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## Procedures

Ten Likert-type items were generated for each of the three presumed dimensions of interpersonal attraction. Five were positively worded and five negatively worded for task, social, and physical properties of attraction.

The instrument offered a seven point strongly agree-strongly disagree response field. The 30 items were randomly ordered. Subjects were 215 undergraduate students enrolled in nine sections of introductory communication courses at Illinois State University.

The subjects were instructed to complete the instrument for "a classmate with whom you are acquainted." Subjects wrote the first name of a classmate on the top of the questionnaire. Each subject completed the instrument for one acquaintance.

### Statistical Analysis

The data were first submitted to principle components factor analysis with varimax rotation. The criteria for interpretation of the results included the following: (a) An eigenvalue of 1.0 was set for termination of factor extraction; (b) For an item to be considered loaded on a factor it was required to have a primary loading of at least .60 on that factor and to have no secondary loading above .40; (c) In order for a factor to be considered meaningful it was required to have at least three items loaded on it.

In order to determine the probable stability of the obtained factor structure in the absence of items not meeting criterion (b) above, a supplementary principle components analysis (with varimax rotation) was conducted including only the items meeting criterion (b).

The scales composed of the items loaded on the obtained factors were

Scale Construction (New York: Appleton-Century-Crofts, 1957).

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tested for internal reliability by means of the Hoyt procedure based on analysis of variance.<sup>10</sup>

## Results

The initial factor analysis produced

<sup>10</sup> C. Hoyt, "Test Reliability Estimated by Analysis of Variance," *Psychometrika*, 6 (1941), 153-160. the rotated three-factor solution reported in Table 1. This solution accounted for 49% of the total variance. Factor I was labeled "social attraction" and included items which had been generated for this property of interpersonal attraction. The highest loaded item, "I think he (she) could be a friend of mine" represents this dimension well. The social attraction

TA	В	LE	1

ROTATED FACTOR MATRIX FOR INTERPERSONAL ATTRACTION SCALES

		Social Attraction	Physical Attraction	Task Attraction
Soc	ial Attraction			
1.	I think he (she) could be a friend of mine	.76*	20	29
2.	I would like to have a friendly chat with him (her)	.70*	31	17
3.	It would be difficult to meet and talk with him (her)	64*	07	01
4.	ship with each other	60*	.17	.27
5. 6. 7. 8. 9. 10.	He (she) just wouldn't fit into my circle of friends He (she would be pleasant to be with I feel I know him (her) personally He (she) is personally offensive to me I don't care if I ever get to meet him (her) I sometimes wish I were more like him (her)	60* .65 .51 50 49 .27	.12 	.08 15 06 .24 .33 20
Phy	sical Attraction			
11. 12. 13. 14. 15. 16. 17. 18. 19. 20.	I think he (she) is quite handsome (pretty) He (she) is very sexy looking I find him (her) very attractive physically I don't like the way he (she) looks He (she) is somewhat ugly He (she) wears neat clothes The clothes he (she) wears are not becoming He (she) is not very good looking She (he) is well groomed He (she) is repulsive to me	.16 .14 .07 29 19 .25 23 11 .33 59	85* 83* 73* .65* 64* 63* 61* 53 32	$\begin{array}{c}06 \\ .01 \\06 \\ .22 \\ .14 \\25 \\ .25 \\ .22 \\26 \\ .31 \end{array}$
Tas	k Attraction			
21. 29	I couldn't get anything accomplished with him (her)	20	.08	.66*
	a job to do	.13	.28	.66*
23.	the job done	.31	15	64*
24. 25.	If I wanted to get things done I could prob- ably depend on him (her) He (she) would be a poor problem solver	.29 —.16	23 .15	63* .62*
26.	I think studying with him (her) would be impossible	07	07	.58
27.	You could count on him (her) getting a job done	.19	15	57
28.	I have the feeling he (she) is a very slow	-11	.17	.50
29. 30.	If we put our heads together I think we could come up with some good ideas He (she) would be fun to work with	.42 .56	18 18	49 15
	Eigenvalue after rotation	5.00	5.54	4.06

\*Items with acceptable factor loadings

factor accounted for 17% of the variance after rotation.

Factor II is labeled "physical attraction," again representing items intended to tap this property of interpersonal attraction. "I think he (she) is quite handsome (pretty)" was the item most highly loaded on this factor. The factor accounted for 18% of the total variance after rotation.

Factor III was labeled "task attraction" and accounted for 14% of the variance after rotation. "I couldn't get anything acomplished with him (her)" was the item with the highest factor loading on this dimension.

The obtained internal reliability estimate for the five items highly loaded on the social attraction dimension was .75. For the eight items on the physical attraction dimension the estimate was .80, and for the five items on the task attraction dimension .86.

Subsequent to the initial study, four studies have been conducted which employed these scales. Quiggens included four items from each dimension in his research on interpersonal attraction in a small group setting.<sup>11</sup> Factor analysis of his data indicated the presence of the same three dimensions of response ob-

<sup>11</sup> J. G. Quiggens, "The Effects of High and Low Communication Apprehension on Small Group Member's Credibility, Attraction and Interaction." M.S. Thesis, Illinois State University, 1972.

TABLE 2

ROTATED F	ACTOR	MATDIN	FOR	10	Dren mm	THEREPORT	1	0
		MULTINIA	LOK	10	DF21-LIL	INTERPERSONAL	ATTRACTION	SCALES

<u>N = 215</u>	Physical Attraction	Social Attraction	Task Attraction	
Social Attraction				
1. I think he (she) could be a friend of mine 2. It would be difficult to meet and talk with	23	73*	.33	
him (her) 3. He (she) just wouldn't fit into my circle of	04	.67*	.00	
4. We could never establish a personal friend-	.14	.67*	07	
5. I would like to have a friendly chat with	.22	.65*	25	
him (her)		64*	.19	
Physical Attraction				
<ul> <li>6. I think he (she) is quite handsome (pretty)</li> <li>7. He (she) is very sexy looking</li> <li>8. I find him (her) very attractive physically</li> <li>9. I don't like the way he (she) looks</li> <li>10. He (she) is somewhat ugly</li> <li>11. He (she) is not very good looking</li> <li>12. He (she) wears neat clothes</li> <li>13. The clothes he (she) wears are not becoming</li> </ul>	87* 85* 79* .75* .66* .64* .61* .60*	10 09 .04 .25 .15 .12 28 .25	.09 .03 .10 25 14 19 .25 26	
Task Attraction				
<ol> <li>He (she) is a typical goof-off when assigned a job to do</li> <li>I have confidence in his (her) abiilty to get</li> </ol>	.23	19	—.73°	
16. If I wanted to get things done I could prob-	13	25	.70*	
ably depend on him (her) 17. I couldn't get anything accomplished with	21		.70*	
18. He (she) wouldn't be a poor problem solver	.07* .15	.24 .11	66* 65*	
Eigenvalue after rotation Per cent of total variance accounted for	<b>4.64</b> 26	2.76 15	2.85 16	

\*Items with acceptable factor loadings

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served in our study, although one social attraction item (He/she just wouldn't fit into my circle of friends) had a secondary loading of .49 on the physical attraction dimension.

McCain and Repensky included the original 30 items in their research on the effect of camera shots on mediated interpersonal attraction.12 Factor analysis of their data indicated the presence of the same three dimensions of response as be-

12 T. A. McCain and G. R. Repensky, "The Effect of Camera Shot on Interpersonal Attrac-tion for Comedy Performers," Paper presented at 58th Annual Convention of the Speech Communication Association, Chicago, Illinois, 1972.

fore, although the items which defined the dimensions varied slightly from the previous results, as was expected, because of the difference in stimulus object.

Wakschlag used 22 of the original 30 items, those with satisfactory loadings in either our original study or the Mc-Cain and Repensky study, in a study of interpersonal attraction of televised student newscasters.13 Factor analysis indicated the presence of the same three dimensions of response with loadings es-

13 J. Wakshlag, "The Effect of Camera Angle and Image Size on Source Credibility and Interpersonal Attraction," M.S. Thesis, Illinois State University, 1973.

TABLE	3
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FACTOR LOADINGS AND RELIABILITY FOR INTERPERSONAL ATTRACTION MEASURE

(McCroskey-Weiner Study)\*\*\*

	Dha		Facto	T	Social	
Item Number**	Orthogonal	Oblique	Orthogonal	Oblique	Orthogonal	Oblique
1	.25	.11	22	08	71*	70*
2	06	.10	.10	05	.81*	.86*
3	17	03	.08	07	.75*	.78*
4	16	01	.20	.06	.77*	.78*
5	.27	.17	22	11	63*	50
6	.85*	.85*	10	02	22	05
7	.87*	.90*	02	.05	16	.00
8	.83*	.86*	.00	.07	12	.03
9	67*	65*	.13	.05	.29	.17
10	75*	78*	.10	.05	.10	06
11	09	05	.68*	.71*	.02	12
12	.08	.03	77*	80*	07	.08
13	05	- 03	85*	87*	17	02
14	05	05	77*	.76*	28	16
15	04	.05	.66*	.65*	.25	.14
Eigenvalue	3.40	3.36	3.00	2.94	3.07	2.80
Variance	23	22	20	20	20	19
Internal Reliability of 5 Best Items	.86		.81		.84	

\*satisfactory loading

1. I think he (she) could be a friend of mine.

2. It would be difficult to meet and talk with him (her).

3.

He (she) just wouldn't fit into my circle of friends. We could never establish a personal friendship with each other. 4

5. I would like to have a friendly chat with him (her).

6. I think he (she) is quite handsome (pretty).

7. He (she) is very sexy looking.

8. I find him (her) very attractive physically.

9. I don't like the way he (she) looks.

10.

He (she) is somewhat ugly. He (she) is a typical goof-off when assigned a job to do. 11.

12. I have confidence in his (her) ability to get the job done. If I wanted to get things done, I could probably depend on him (her). 13.

14. I couldn't get anything accomplished with him (her).

15. He (she) would be a poor problem solver.

••• N = 424

sentially the same as those observed in the initial study.

The final study indicating replication of our initial findings was conducted by McCroskey and Weiner.<sup>14</sup> The 5 best items on each dimension from our initial study were included. Their data were factor analyzed with both orthogonal and oblique rotations.

The results from both analyses (see Table 3) indicated the presence of three dimensions. All items met our original criteria in the orthogonal analysis, and all but one did so in the oblique analysis. Internal reliability estimates for the three dimensions were also comparable to those in the initial study (see Table 3).

<sup>14</sup> J. C. McCroskey and A. N. Weiner, "The Effect of Interaction Behavior on Source Credibility, Homophily, and Interpersonal Attraction in Small Group Communication," Unpublished paper. Department of Speech Communication, West Virginia University. 1973.

## DISCUSSION

The most important and obvious conclusion from this study is that interpersonal attraction does appear to be a multidimensional construct. Further, the scales presented here appear to tap three dimensions of interpersonal attraction—a social or personal liking property; a physical dimension based on dress and physical features; and a task-orientation dimension related to how easy or worthwhile working with someone would be.

On the basis of the results obtained in this investigation we offer an instrument composed of the 15 items reported in Table 3 for consideration by future researchers concerned with interpersonal attraction. Our data suggest that this instrument is capable of reliably measuring physical, social, and task attraction.