SECURITY CLASSIFICATION OF THIS PAGE *(When Data Entered)*

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER: 8	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE *(and Subtitle)*: CREDIBILITY AND COMMUNICATION IN WORK UNITS		5. TYPE OF REPORT & PERIOD COVERED: Technical, Interim 6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s): [by] Charles A. O'Reilly III [and] Karlene H. Roberts		8. CONTRACT OR GRANT NUMBER(s): N000314-69-A-0200-1054
9. PERFORMING ORGANIZATION NAME AND ADDRESS: Institute of Industrial Relations (Berkeley) University of California. (1) Berkeley, California 94720		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS: Organizational Effectiveness Research Programs Office of Naval Research Arlington, Virginia 22217		12. REPORT DATE: (2) June 1975 13. NUMBER OF PAGES: 16
14. MONITORING AGENCY NAME & ADDRESS *(if different from Controlling Office)*		15. SECURITY CLASS. *(of this report)*: Unclassified 15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT *(of this Report)*

Approved for public release, distribution unlimited

17. DISTRIBUTION STATEMENT *(of the abstract entered in Block 20, if different from Report)*

18. SUPPLEMENTARY NOTES

19. KEY WORDS *(Continue on reverse side if necessary and identify by block number)*

credibility
communication
trust

20. ABSTRACT *(Continue on reverse side if necessary and identify by block number)*

Attached

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE
S/N 0102-014-6601 |

Unclassified
SECURITY CLASSIFICATION OF THIS PAGE *(When Data Entered)*

CREDIBILITY AND COMMUNICATION IN WORK UNITS

by

Charles A. O'Reilly, III
School of Public Health

and

Karlene H. Roberts
Schools of Business Administration
University of California, Berkeley

Running Head: Credibility and Communication

June 1975

ABSTRACT

Previous research has consistently linked notions of interpersonal trust and source credibility to communication behavior. The study reported here used three dimensions of source credibility (safety, expertise, and dynamism) to extend the summative variable "trust" into components relevant to communication in organizational units. The credibility dimensions were shown to be differentially related to the frequency, accuracy, and openness of communication in work units. Perceptions of the accuracy and openness of information exchange were also related to the number of others contacted and the frequency of interaction.

CREDIBILITY AND COMMUNICATION IN WORK UNITS

Previous reviews of the organizational communication literature suggest that interpersonal "trust" consistently influences a broad range of communication behaviors of people at work (O'Reilly, Note 1). For example, research has demonstrated that high trust is associated with group accomplishment (Friedlander, 1970), efficient problem solving (Zand, 1972), more accurate transmission of information (Gibb, 1964; Read, 1962), and more cooperative behavior (Loomis, 1959). Recent investigations (O'Reilly & Roberts, 1974; Roberts & O'Reilly, 1974a; 1974b) have demonstrated that a lack of trust by a sender in a receiver is associated with propensities for the sender to withhold or distort information and perceptions by the receiver of a loss of information accuracy and communication openness. In the O'Reilly and Roberts (1974) study, trust by the sender in the receiver accounted for 22 percent of the variance in the upward transmission of information reflecting unfavorably on the sender.

In spite of the substantial empirical evidence linking trust and communication, little effort has been made to differentiate the broad notion of "trust" into specific components applicable to communication in an organizational setting. Early conceptualizations of interpersonal trust involved such elements as predictability, expectation, and risk (e.g., Deutsch, 1958). When applied specifically to communication behavior, trust has been seen as founded in the perceived characteristics of senders and receivers, i.e., their credibility, and the impact of these on message

acceptance and attitude change (e.g., Giffin, 1967; McGuire, 1969; Weiss, 1969). More recent research identifies three distinct perceived characteristics or components of source credibility; *safety* or general trustworthiness, *expertise* or qualification, and *dynamism* or general activity level (Berlo, Lemert & Mertz, 1969; Simon, Berkowitz & Moyer, 1970).

These elements of source credibility appear to differentiate and extend the summative variable "trust" used in previous investigations of organizational communication phenomena into components which may be related to important aspects of communication in organizations such as the frequency, accuracy, and openness of information exchange. One's general communication behavior in organizations may partially reflect perceptions of the credibility of the information milieu in terms of perceptions of safety, expertise, and dynamism. These perceptions may then be associated with variations in the quantity and quality of information exchanged, both by individuals and across groups.

Organizational climate factors such as consideration, warmth, supportiveness, etc. appear to be conceptually similar to a general notion of credibility as it is used here. Evidence exists linking these climate dimensions to communication in work units. For example, O'Reilly and Roberts (Note 2) report significant relationships between work group supportiveness, a climate factor, and a number of perceptual facets of communication reflecting the accuracy and openness of information flow in organizations. Bowers (Note 3) reports strong associations between organizational climate dimensions such as managerial support and interaction

facilitation and the extent to which people in work units keep each other informed. Hence, a broad notion of trust or credibility appears to be related to the quantity and quality of organizational communication.

To investigate the exploratory hypothesis that aspects of credibility differentially affect communication behaviors, this study examined relationships among the components of credibility discussed, two perceptual facets of communication seen as important for the functioning of organizational units (perceived accuracy of information and perceived openness of communication), and five sociometric measures of communication assessing frequency, amount, and type of interaction.

Method

Subjects

Respondents were employees in all job functions except MD's in twenty private general care medical practices. The practices ranged in size from two to twenty members with a mean of six and a median of five. One hundred ten (110) of a possible 122 respondents (90 percent response rate) were surveyed.

Procedure

Each medical practice was visited, the nature of the research explained, questions answered, and the questionnaire distributed. Addressed and stamped envelopes were provided and completed surveys returned directly to the researchers to insure respondent confidentiality and to

allow participants time to complete the questionnaire without disrupting normal operations.

Measurement

Each respondent provided some demographic information and responded to questions about the following:

(1) Credibility. An eighteen item bipolar adjective check list (seven point scales) which required the subject to indicate the extent to which the adjective pair described the information milieu in the practice. The eighteen items included six each assessing *safety* (unjust-just, cruel-kind, dangerous-safe, unfriendly-friendly, dishonest-honest, disagreeable-agreeable), *expertise* (trained-untrained, experienced-inexperienced, skilled-unskilled, informed-uninformed, authoritative-unauthoritative, qualified-unqualified), and *dynamism* (meek-agressive, tired-energetic, passive-active, timid-bold, hesitant-emphatic, forceless-forceful). These adjective pairs were drawn from the factor analytic results presented by Berlo, Lemert and Mertz (1969).

(2) Information accuracy and communication openness. Respondents indicated the extent to which they agreed or disagreed (on a seven point scale) with ten statements descriptive of the communication of information in their work groups. These ten items form two indices, one assessing information accuracy within the group, the other openness of communication. For example, items assessing information accuracy included agreement or disagreement with the following statements: (1) The information I receive is often inaccurate, and (2) It is often necessary for me to go back and

check the accuracy of information I have received. Examples of the five items assessing communication openness include: (1) It is easy to talk openly to all members of this group, and (2) It is easy to ask advice from any member of this group.

The indices were developed using two independent samples: 241 military enlisted personnel from a variety of job functions and work groups, and 87 members of five mental health teams. Discriminant validity for the two indices was assessed using a principal component analysis and varimax rotation. The rotated factor loadings and Cronbach alphas (an internal consistency measure) for the two development samples and the respondents from the medical practices used in this study revealed two orthogonal factors with high internal consistency among the items measuring each. Median rotated factor loadings for the accuracy index were .70 and -.22. Cronbach alphas were .84, .79, and .78 for the accuracy index. Median loadings for the openness index were .71 and -.21 with Cronbach alphas of .88, .86, and .85.

(3) Sociometric Information. Members of each practice were provided with a roster of all other members of the group and asked to indicate the frequency, type (task and social), and quantity (number of minutes) of interactions with other persons during the week. These data allowed assessment of both the total and average interaction rates for each respondent in terms of the frequency and number of interactions by content and number of minutes spent.

Analyses

The data were analyzed at two conceptual levels. First, product moment correlations were computed among variables for the entire sample (N = 110). These results permit an assessment to be made of the individual's communication behavior. Second, group means were computed for all variables for each of the 20 practices. Spearman rank order correlations were then computed using groups as the unit of analysis (N = 20). This allows comparison of group communication patterns across medical practices.

Results

Table 1 presents the rank order correlations among the three credibility dimensions and communication variables for the 20 medical practices. Safety, expertise, and dynamism are significantly related to the accuracy and openness of communication as well as to the number of others contacted, the number of social interactions, and the frequency of contact. In addition, safety and dynamism are also related to the number of task interactions. Size of the correlations suggest that safety and dynamism are the predominant factors. Groups characterized by high credibility report significantly more interaction than do practices characterized by low perceptions of credibility. Higher information accuracy is also reported in high credibility units.

Insert Table 1 about here

Significant correlations among the three credibility dimensions and communication variables for the entire sample (individual level of analysis) show similar although weaker associations. At this level of analysis all three components of credibility are related to the accuracy and openness of communication as well as the number of others contacted. Safety is also related to the frequency of contact and the number of task interactions. Dynamism is significantly related to the number of social contacts, an intuitively reasonable finding.

To further examine the communication patterns, the relationships between perceived information accuracy and communication openness are reported for both the individual and group level analysis in Table 2. At the individual level both accuracy and openness are associated with the frequency and number of others contacted. Information accuracy is also significantly correlated with the number of task-related interactions. At the group level, accuracy and openness are strongly associated with the frequency and number of interactions, both task and social. Interpretation provides convergent support for the validity of the openness index, i.e., perceptions of communication openness are associated with high sociometric interaction. Although developed to be orthogonal, perceptions of high information accuracy exist when communication is seen as more open.

Insert Table 2 about here

Although not reported in the tables, the independent impacts of accuracy and openness are seen most clearly in their relationships with a measure of job satisfaction (Kunin, 1955). Communication openness, but not information accuracy, shows strong significant associations with job satisfaction at both the individual ($r = .47$, $p < .01$) and the group level of analysis ($r = .32$, $p < .05$). People express satisfaction when much communication takes place but are not concerned necessarily with the accuracy of information transmitted.

Discussion

Previous investigations have identified the general notion of interpersonal trust and credibility as important correlates of communication in organizations. The findings reported here extend these studies by confirming the hypothesis that an explicated concept of credibility is differentially related to important facets of organizational communication.

The three credibility dimensions investigated in this study (safety, expertise, and dynamism) have been shown in studies of mass media communication and attitude change to be important determinants of the acceptability of a message from a source. Their effect, however, has never been examined in an organizational context. The results presented here demonstrate their relevance to organizational communication.

All three components are related to perceptions of the accuracy and openness of information exchange in work units. At the individual level, safety appears to be the predominant factor associated with task

communication. Dynamism or personal attractiveness is associated with increased social interaction. Respondents apparently evaluate and select social contacts on a different basis than task contacts. These differences would undoubtedly be more evident if respondents were asked to indicate their trust in specific others, instead of describing the group as a whole.

The importance of the components of credibility is, therefore, most visible when considering interaction within the work unit as a whole, rather than at the individual level. At the group level, units characterized by high safety, expertise, and dynamism show significantly higher perceptions of information accuracy and communication openness, higher interaction rates, and higher satisfaction than do low trust units. Although performance measures were not available for this sample, the clear implication of these results would be the expectation of better performance in those practices characterized by more open and accurate information exchange.

While the sample is a limited one, the findings appear to warrant additional research. Investigations should examine more closely the causal nature of the differentiated credibility-communication relationships, a broader range of communication variables, and credibility-communication performance interrelationships.

REFERENCE NOTES

1. O'Reilly, C. A. *The intentional distortion of information in organizational communication.* Unpublished manuscript, University of California, Berkeley, 1975.

2. O'Reilly, C. and Roberts, K. *Personnel ratings and systemic performance characteristics related to interpersonal communication in organizations* (Tech. Rep. 8). Berkeley, Calif.: University of California, Schools of Business Administration, 1975.

3. Bowers, D. *Work organizations as dynamic systems* (Tech. Rep.). Ann Arbor, Mich.: University of Michigan, Institute for Social Research, 1969.

REFERENCES

Berlo, D., Lemert, J., and Mertz, R. Dimensions for evaluating the acceptability of message sources. *Public Opinion Quarterly,* 1969, 33, 563-675.

Deutsch, M. Trust and suspicion. *Journal of Conflict Resolution,* 1958, 2, 265-279.

Friedlander, F. The primacy of trust as a facilitator of further group accomplishment. *Journal of Applied Behavioral Science,* 1970, 6, 387-400.

Gibb, J. Climate for trust formation. In L. Bradford, J. Gibb, and K. Benne (eds.), *T-group theory and laboratory method: Innovation in re-education.* New York: Wiley, 1964, 279-309.

Giffin, K. The contribution of studies of source credibility to a theory of interpersonal trust in the communication process. *Psychological Bulletin,* 1967, 68, 104-120.

Kunin, T. The construction of a new type of attitude measure. *Personnel Psychology,* 1955, 8, 65-77.

Loomis, J. Communication, the development of trust, and cooperative behavior. *Human Relations,* 1959, 12, 305-315.

McGuire, W. The nature of attitudes and attitude change. In G. Lindzey and E. Aronson (eds.), *Handbook of social psychology.* Vol. 3, (2nd ed.), Reading, Mass.: Addison-Wesley, 1969, 136-314.

O'Reilly, C., and Roberts, K. Information filtration in organizations: Three experiments. *Organizational Behavior and Human Performance*, 1974, 11, 253-265.

Read, W. Upward communication in industrial hierarchies. *Human Relations*, 1962, 15, 3-16.

Roberts, K. and O'Reilly, C. Failures in upward communication: Three possible culprits. *Academy of Management Journal*, 1974, 17, 205-215. (a)

Roberts, K. and O'Reilly, C. Measuring organizational communication. *Journal of Applied Psychology*, 1974, 59, 321-326. (b)

Simon, H., Berkowitz, N., and Moyer, J. Similarity, credibility, and attitude change: A review and a theory. *Psychological Bulletin*, 1970, 73, 1-16.

Weiss, W. The effects of the mass media of communication. In G. Lindzey and E. Aronson (eds.), *Handbook of social psychology*, Vol. 5, (2nd ed.), Reading, Mass.: Addison-Wesley, 1969, 77-195.

Zand, D. Trust and managerial problem solving. *Administrative Science Quarterly*, 1972, 17, 229-240.

FOOTNOTE

This study was supported by a Bureau of Health Manpower subcontract to the investigators from the Stanford Medical Center Primary Care Physicians Assistant Training Program and Office of Naval Research Grant No. 0314-69-A-0200-1054.

Requests for reprints should be sent to Karlene H. Roberts, Schools of Business Administration, University of California, Berkeley, 350 Barrows Hall, Berkeley, California, 94720.

TABLE 1

Spearman Rank Order Correlations Among Three Credibility Dimensions and Seven Communication Variables for 20 General Medical Practices

Communication Index	Credibility Dimensions: Dynamism	Expertise	Safety
1. Perceived information accuracy	.54***	.33*	.45**
2. Perceived communication openness	.67***	.45**	.74***
3. Number of others contacted	.63***	.45**	.69***
4. Frequency of contact	.65***	.31*	.79***
5. Number of task contacts	.77***	.17	.66***
6. Number of social contacts	.47**	.43**	.74***
7. Total time spent in interactions	.13	-.03	.10

*$p < .10$

**$p < .05$

***$p < .01$

TABLE 2

Correlations Between Perceptions of Information Accuracy and Communication Openness for the Individual (N = 110) and Group (N = 20) Level Analyses

	Individual[a]		Group[b]	
Communication Index	Accuracy	Openness	Accuracy	Openness
1. Number of others contacted	.27***	.31***	.30**	.34**
2. Frequency of contact	.23**	.17*	.42***	.49***
3. Number of task contacts	.19**	.14	.46***	.47***
4. Number of social contacts	.03	.06	.29**	.37***
5. Total time spent in interactions	-.08	-.09	.04	-.13

[a]Product moment correlations

[b]Spearman rank order correlations

*$p < .10$

**$p < .05$

***$p < .01$