

AD-A043 569

MAXWELL SCHOOL OF CITIZENSHIP AND PUBLIC AFFAIRS SYR--ETC F/G 5/9  
IMPACT MODEL OF MANAGERS' INTERPERSONAL COMMUNICATION STYLES IN--ETC(U)  
JUL 77 R KLAUSS, B BASS, J J DEMARCO N00014-76-C-0912  
TR-3 NL

UNCLASSIFIED

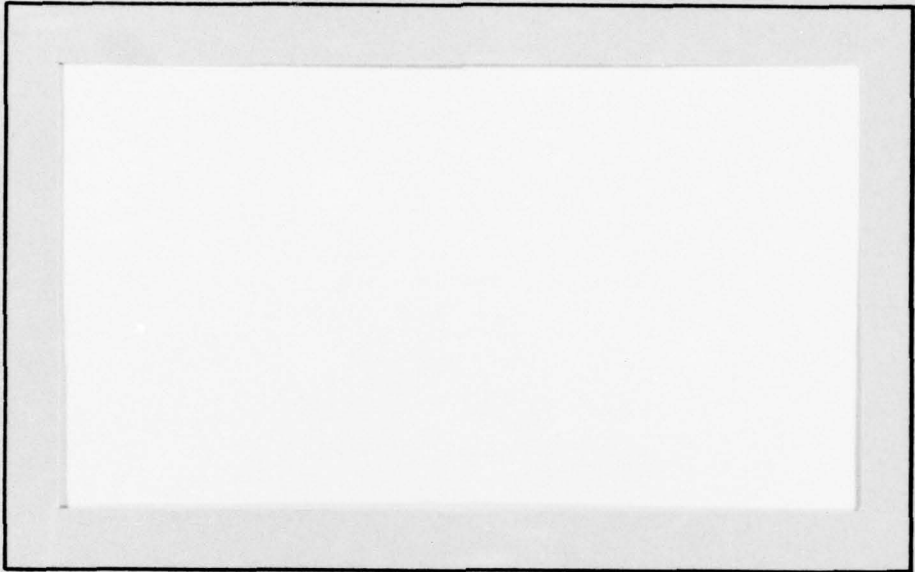
| OF |  
AD  
A043569



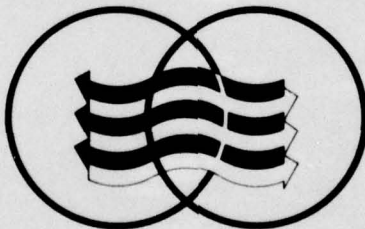
END  
DATE  
FILMED  
9 -77  
DDC

AD A 043569

12



MAXWELL TRAINING AND DEVELOPMENT PROGRAMS



DDC  
RECEIVED  
AUG 31 1977  
RET B

AD No. \_\_\_\_\_  
DDC FILE COPY

THE MAXWELL SCHOOL OF CITIZENSHIP AND PUBLIC AFFAIRS  
SYRACUSE UNIVERSITY

DISTRIBUTION STATEMENT A  
Approved for public release;  
Distribution Unlimited

12

IMPACT MODEL OF MANAGERS' INTERPERSONAL  
COMMUNICATION STYLES IN AN  
INDUSTRIAL AND A NAVY CIVILIAN ORGANIZATION

TR-3

Rudi Klauss  
Syracuse University

Bernard Bass  
University of Rochester

John J. DeMarco, Jr.  
Syracuse University

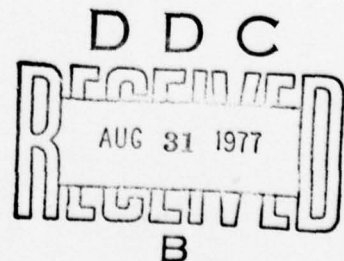
This research was sponsored by the Organization Effectiveness  
Research Programs, Office of Naval Research, under Contract  
No. N0001476-C-0912.

Approved for public release; distribution unlimited.

Reproduction in whole or in part is permitted for any purpose  
of the United States Government.

July, 1977

see 1473





ABSTRACT

Internal consistency and test-retest reliabilities of the 13 measures of a communications model were calculated along with factor validations and convergent validities. Path analytic trimming of the original model was completed for two results in two organizations. Generally, reliabilities, validities, and path coefficients were similar for the two organizations, one a private industrial firm, the other, a government agency.

ACCESSION for	
NTIS	White Section <input checked="" type="checkbox"/>
DDC	Buff Section <input type="checkbox"/>
UNANNOUNCED	<input type="checkbox"/>
JUSTIFICATION	
BY	
DISTRIBUTION/AVAILABILITY CODES	
Dist.	A B C D E F G H I J K L M N O P Q R S T U V W X Y Z or SPECIAL
A	-

IMPACT MODEL OF MANAGERS' INTERPERSONAL  
COMMUNICATION SYTLES IN AN  
INDUSTRIAL AND A NAVY CIVILIAN ORGANIZATION

While there is widespread agreement that communication gets at the core of organizational functioning and behavior, our understanding of the communication process remains quite primitive (Porter & Roberts, 1972). Our present research attempts to deal with the current gap in understanding of organizational communication and focuses specifically on the interpersonal level of managerial communication style and its impact on colleagues in a work setting.

A communication model is presented which proposes six components of a manager's interpersonal communication style. These are seen to influence his colleagues' sense of role clarity and their perceptions of the manager's credibility. These factors of role clarity and credibility in turn are seen to affect colleagues in terms of the role satisfaction, satisfaction with focal person, and effectiveness (Figure 1). The underlying development and formulation of this model are presented in previous reports (Klauss, 1977a, 1977b).

-----  
Insert Figure 1 about here  
-----

The particular purposes of this report are twofold. First, we will examine the reliability and validity of the various measures which have been developed and applied in our model. Second,

we will report on some data collected from military and industry samples to see the extent to which the model holds for each group.

## METHOD

### Survey Instrument

Beginning with a review of the literature and development of a pilot questionnaire (Klauss, 1976), we developed a set of variables which characterize a manager's interpersonal communication style (the six factors were originally derived from a factor analysis of a 73 item questionnaire completed by a sample of 397 managers in a large industrial organization. The remaining variables in the model are taken from previous research reported in the literature. The role clarity measure derives from the work of Rizzo, House and Lirtzman (1970), while the three credibility measures come from the factor analytic work of Berlo, Lemert and Mertz (1969) as well as Falcione (1974). The outcome (dependent) variables are derived from research reported by Bass and Valenzi (1974).

### Procedure

The data used in the analyses reported here were collected from Navy civilian personnel and industrial personnel. Managers were initially identified by the participating organizations and

were sent a package which included a questionnaire in which respondents were asked in a set of items to describe themselves and their work situation. The questionnaire also included a set of biographical variables concerning the manager.

These managers (hereafter referred to as focal managers) were also asked to distribute ten questionnaires to colleagues in their immediate work situation (subordinates, peers, and superiors) who, in turn, responded to the same basic set of items in terms of how they viewed the focal manager and the work situation. The completed questionnaires were sent through inter-office mail to a central collection point and then forwarded in batch to the researcher for analysis. This process yielded a basic profile for each focal manager in which the manager could compare his or her own score on the various measures in the model with the average response of his colleagues to those same variables. This information was then forwarded to the participating focal manager in a format that provided feedback on how others saw him and the work situation as compared with his own perceptions.

A total of 75 focal managers and 578 colleagues participated from the Navy organization (most of whom were civilian personnel). The industrial sample included 147 focal managers and 1,231 colleagues. A general profile of the biographical characteristics for each sample is summarized in Table 1. On the whole, the Navy focal persons tended to be slightly younger than their industrial counterparts. Also, the Navy sample contained a



greater proportion of females in both the colleague and focal manager roles. Department size was also different, with the industrial personnel coming from somewhat smaller units. In terms of departmental function, both samples revealed a spread of activities and job functions.

-----  
Insert Table 1 about here  
-----

## RESULTS

### Instrument Reliability

Two reliability analyses are reported here. First, the internal scale reliability of the thirteen scales utilized in our model were evaluated by calculating Cronbach's Alpha for the two samples--industrial and Navy. The results are reported in Table 2. All but one of the reliabilities were above .80.

-----  
Insert Table 2 about here  
-----

As an additional test of the reliability of our scales, a test-retest reliability analysis was performed for a group of 36 graduate students, some of whom had worked full-time for a few years or more while others had worked on a part-time or short term basis. They were administered the questionnaire twice, one week apart, and asked to describe a focal manager they previously or currently were working under.

For the 36 graduate students, test-retest correlation coefficients were calculated for the 13 scales, all of which were large and statistically significant as shown in Table 2. The stability of the measures ranged from highs of .90 for the two credibility factors (trustworthy and informative) and satisfaction with focal person) to a low of .36 for informal. There was a statistically significant increase in the means for satisfaction with focal person and for informal from test to retest but mean levels did not change significantly for the other 11 variables in the model. In all we concluded that the variables were all internally consistent. All but careful listener, informal and effectiveness were stable over the time tested.

#### Scale Validities

Two analyses were performed to assess the validity of our constructed scales. First, the individual questionnaire items used to form the 13 scales for each sample were "blindly" factor analyzed by the principal components method with varimax rotation to determine the consistency of the factor structure. In performing these analyses, the items were grouped into three separate sets for consideration. Thus, the communication style variables (colleague description of focal manager communication behavior) were treated as one domain for a factor analysis. The credibility variables (how colleagues interpret the credibility of the focal person) were treated in a second factor analysis, and role clarity together with the remaining variables concerning satisfaction and effectiveness (variables which focus on

colleagues' own attitude toward the job situation and organization) were grouped together as a third set for a third independent factor analysis. The resulting factor loadings are presented in Table 3. In all cases the scale items in both samples loaded highly on the predicted factors. In no case did the factor items load on an unexpected factor.

-----  
Insert Table 3 about here  
-----

For each measure obtained for each organization sample, a simple analysis of variance was performed to test the convergent validity of the scale scores for the colleague groups in describing their focal managers. For each measure, the variance between focal persons as rated by their colleagues on the average was compared with the variance "within" focal persons as seen in the ratings obtained from colleagues rating the same focal person. Eta coefficients, F-ratios, and their significance were computed (Table 4). A significant variance between groups would indicate that the colleague groups were describing characteristics which they attributed to their own focal person rather than responding randomly or to general beliefs or biases about managers in general. The greater the F-ratio and its significance and the larger the eta coefficient, which varies from 0 to 1, the greater the convergent validity as inferred from this analysis. (The rationale for this approach is provided by Bass et al., 1975).

-----  
Insert Table 4 about here  
-----

An examination of the eta values indicates similar patterns for the industrial and Navy civilian personnel, although the industrial respondents yielded somewhat higher eta's across the 13 variables (median of .54 versus .47). Most of the etas for the communication variables were quite high, with open and two-way slightly less consistent. Among the intervening variables, role clarity yielded relatively low etas while the three credibility variables were quite consistent. For the consequence factors, satisfaction with focal person and effectiveness were comparatively stronger than job/role satisfaction. This pattern is consistent with an interpretation that job/role satisfaction is highly individualistic and internal to the colleague respondent (as is role clarity) while the other factors pertain more directly to the focal person in question. Thus, two colleagues rating the same focal person could be working at totally different jobs. In general, the convergent validity for these scales is seen to be quite strongly supported by the analyses.

#### Organizational Patterns

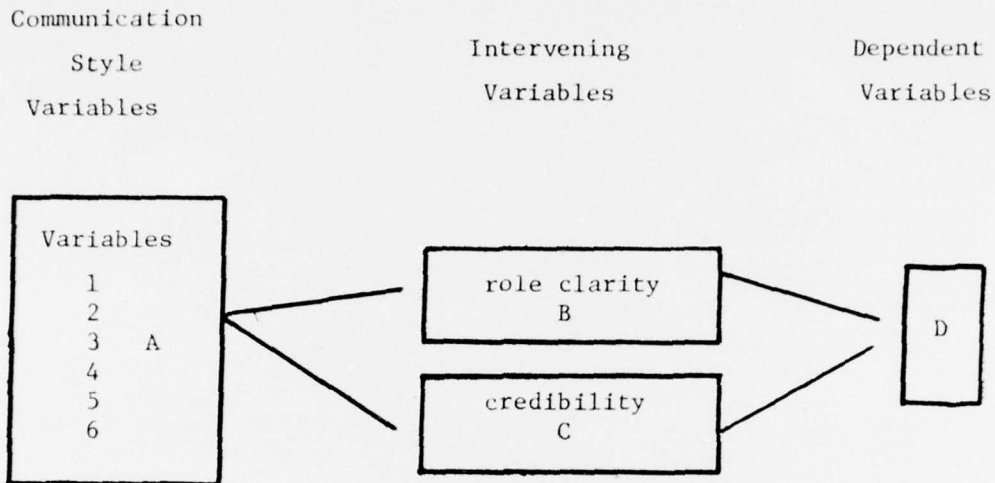
While the above reliability and validity analyses revealed quite similar results for both the Navy and industrial personnel, an additional examination of the data was also performed in order to assess the extent to which the proposed model (Figure 1) held for each organization setting.

Mean Differences. First, an analysis of mean differences between the two samples on the 13 scale scores was performed. An inspection of Table 5 reveals significant differences in 5 of the 13 scales at  $p < .01$  or better. These results indicate that the focal person in the Navy organization was perceived by colleagues as more informal and more trustworthy, as compared with industrial focal persons. Colleagues in the Navy organization also indicated greater satisfaction with the focal person, greater role clarity and a higher degree of work unit effectiveness. For the other factors, no significant differences or patterns emerged.

-----  
Insert Table 5 about here  
-----

Path Differences. In addition to the above examination of mean differences on the 13 variables, a path analysis was also performed to further examine the relationships proposed in our model. In particular we were interested in exploring the extent to which simpler models might be obtained which supported our proposed causal linkages and which might yield close to the same amount of explained dependent variable variance with fewer variables.

In the present study, the application of path analysis involved the determination of the path coefficients (standardized regression coefficients) for the various hypothesized causal paths depicted in the model presented (summarized in the following diagram).



This set of relationships was proposed for each of the three dependent variable measures and hence our analysis involved an examination of such a path diagram for each dependent variable.

The following procedure was employed for calculating the path coefficients for each diagram:

- 1) Regress D on A, B, and C. This provided initial path coefficients from B and C to D, as well as for any direct paths from A to D;
- 2) Regress B on A. This provided the path coefficients from A (variables 1-6) to B;
- 3) Regress C on A. This provided the path coefficients from A (variables 1-6) to C.

Having performed the initial analysis as outlined above for a given diagram, the resulting path coefficients were examined to see if a simplified model could be obtained. Paths with coefficients less than or equal to .15 were dropped, in instances where the path coefficient for both samples was below .15 and nonsignificant. The results of this analysis are reported below.

With regard to satisfaction with focal person, Figure 2 indicates a very similar pattern for both samples. Path coefficients for each set of colleagues were very close as were the  $R^2$  values. Hence we are inclined to conclude that all the communication style variables in the model are quite important as are focal person credibility dimensions of trustworthiness in informativeness. On the other hand, role clarity and dynamic do not appear to be critical in determining colleague satisfaction with focal person.

-----  
Insert Figure 2 about here  
-----

The path analysis for job/role satisfaction yielded a considerably simplified model as compared with the originally proposed model. Two communication style variables emerged as central components (open and two way, and informal) with role clarity as the key intervening variable impacting job/role satisfaction. None of the credibility variables were retained for either sample using our criterion of .15 for path coefficients. The pattern for both samples, was similar in terms of retained variables but the relative strength of the path coefficients differed considerably. For the industrial sample, open and two way emerged as

quite important compared with the Navy sample, while informal was more critical for the Navy civilian colleagues as contrasted with their industrial counterparts. In both samples, however, role clarity was the central ingredient for job/role satisfaction. It should be noted, however, that the amount of explained variance for this dependent variable was considerably lower (17-18%) as compared with satisfaction with focal person (61-65%). Hence the variables in the communication model in general appeared to contribute relatively less to job/role satisfaction.

-----  
Insert Figure 3 about here  
-----

Figure 4 provides the results for effectiveness. As can be seen from an inspection of the path diagram, all of the originally proposed variables were retained. However, in certain instances the path coefficient fell considerably below .15 for the industrial sample (brief and concise, careful listener leading to dynamic). Once again, open and two-way was considerably more important for the industrial sample in influencing role clarity. Trustworthy and informative appeared as the more important intervening variables (as compared with role clarity and dynamic) in impacting effectiveness. The overall explained variance for effectiveness was quite high ( $R^2 = .48 - .50$ ).

-----  
Insert Figure 4 about here  
-----



Conclusion

Communication research to date has not provided much insight into the components of particular communication behaviors of people and how these behaviors can affect other people in work settings. The model proposed and tested here attempts to address this issue by specifying a set of communication behaviors which can be related to employee satisfaction and effectiveness.

As the foregoing analyses indicated, the Communication Audit survey instrument yielded a consistent and rather strong pattern of reliability and validity. This pattern held in two types of organizational setting--military as well as industrial. Moreover, a considerable range of departmental functions were represented in both samples, thus providing a good sampling of the types of activities typically performed in most organizations. These results argue favorably for the general application of the model proposed in Figure 1 across a range of organizational contexts, and suggest that important components of interpersonal communication behavior can be measured and related to key organizational outcomes.

A word of caution is also in order, however. As indicated in our path analysis, the model captures only a portion of key organizational outcomes. This is particularly pertinent to job/role satisfaction in which only a limited amount of variance is explained. What this suggests is that job satisfaction is a complex, multifaceted phenomenon and that communication behavior has only a limited impact

at best. On the other hand, when it comes to satisfaction with focal person, it seems that communication behavior plays a considerably greater role. Effectiveness fits somewhere in between these two extremes.

Further research will help to clarify the extent to which the proposed model might be modified in the directions suggested by the path analysis reported here. In addition, attention needs to be given to potential exogenous variables which come into play in understanding the role and impact of interpersonal communication behavior in the work setting.

TABLE 1  
 Summary Profile of Biographical  
 and Organizational Variables

Variables	INDUSTRIAL PERSONNEL		NAVAL CIVILIAN PERSONNEL	
	Colleagues N=1206	Focal Persons N=147	Colleagues N=578	Focal Persons N=75
Average Age	38	40	38	38
Sex	89% Male 11% Female	97% Male 3% Female	76% Male 24% Female	80% Male 20% Female
Median Educational Level	15.5 years	16.0 years	16.5 years	16.7 years
Primary Function of Department or Division				
Production	13%	13%	2%	4%
Purchasing	9%	12%	1%	1%
R & D	8%	7%	5%	4%
Logistics	23%	19%	28%	31%
Engineering	15%	13%	23%	19%
Finance/Acc.	9%	9%	23%	19%
Other	23%	27%	18%	22%
Median Number of People in Dept. or Division		25		30
Median Number of People in Work Group		8		8
Median Number of People Reporting to you		3		2

TABLE 2

Reliability Analyses Of The 13  
Communication Model Scores

Scale	Coefficient Alpha's*		Test-Retest Correlation**
	Industrial Personnel (N=1231)	Navy Civilians (N=578)	36 Graduate Students
<u>Communication Style</u>			
Careful transmitter	.89	.91	.85
Open and two-way	.86	.86	.80
Frank	.88	.88	.72
Careful listener	.90	.93	.47
Brief and concise	.89	.94	.58
Informal	.88	.90	.36
<u>Intervening variables</u>			
Trustworthy	.91	.92	.90
Informative	.91	.93	.90
Dynamic	.85	.88	.60
Role clarity	.94	.94	.87
<u>Consequences</u>			
Effectiveness	.73	.81	.49
Job/role satisfaction	.89	.87	.85
Satisfaction with focal person	.93	.98	.90

\*The coefficients are computed on raw-scores.

\*\*All coefficients are significant at  $p < .002$  or better.

TABLE 3

Factor Structure of the 13 Communication Model Scores  
for Industrial Personnel and Navy Civilians\*

	<u>Factor Loadings</u>	
	1231 Industrial Personnel	578 Navy Civilians
<u>Focal Manager Communication Style:</u>		
<u>Item</u>	<u>Careful transmitter</u>	
Speaks deliberately	.58	.76
Chooses words carefully	.79	.71
Organizes thoughts before speaking	.69	.66
Polished in choice of words	.77	.64
	<u>Open and two-way</u>	
Asks for others views	.70	.58
Follows up with feedback	.60	.71
Gives feedback on suggestions	.68	.71
Receptive to differing viewpoints	.65	.41
	<u>Frank</u>	
Says what he thinks	.75	.65
Seeks out information	.27	.13
Doesn't mince words	.75	.74
Expresses views self-confidently	.50	.42
Levels with others	.66	.40
	<u>Careful listener</u>	
Doesn't interrupt speaker	.69	.71
Doesn't dominate discussions	.58	.59
Keeps mind on what's being said	.35	.42
Doesn't jump to conclusions	.53	.57
Lets other finish their points	.51	.51
Doesn't fidget when others speak	.30	.48

TABLE 3 Cont'd

	<u>Factor Loadings</u>	
	1231 Industrial Personnel	578 Navy Civilians
<u>Focal Manager Communication Style:</u>		
	<u>Brief and concise</u>	
Comments are brief	.62	.49
Isn't verbose	.79	.74
Speaks concisely	.77	.69
Sticks to the point	.61	.75
	<u>Informal</u>	
Informal, relaxed communicator	.71	.82
Natural self in relating to others	.66	.64
<u>Focal Manager Credibility:</u>		
	<u>Trustworthy</u>	
Congenial	.81	.78
Agreeable	.79	.77
Friendly	.82	.78
Pleasant	.81	.80
Fair	.65	.58
Gentle	.30	.33
Just	.62	.58
Kind	.38	.35
	<u>Informative</u>	
Well trained	.86	.81
Well qualified	.86	.82
Well informed	.71	.74
Appropriate prior experience	.83	.80
Authoritative	.17	.16
Skilled	.82	.84

TABLE 3 Cont'd

	<u>Factor Loadings</u>	
	1231 Industrial Personnel	578 Navy Civilians
<u>Focal Manager Credibility:</u>	<u>Dynamic</u>	
Aggressive in work	.78	.77
Not hesitant	.61	.54
Energetic	.66	.67
Not timid	.64	.59
Forceful	.74	.71
Active	.60	.61
<u>Colleague Role Clarity and Consequences:</u>	<u>Role clarity</u>	
Know job responsibilities	.80	.77
Certain about authority	.76	.71
Clear idea of responsibilities	.63	.61
Know what's expected in job	.84	.84
Allocate time properly	.72	.65
Have clear, planned objectives	.74	.67
	<u>Effectiveness</u>	
Overall work unit effectiveness	.76	.76
Effectiveness compared to other units	.83	.81
Extent improvements in effectiveness needed	.28	.22
	<u>Job/role satisfaction</u>	
Overall job satisfaction	.74	.73
Satisfaction in chances for promotion	.79	.78
Satisfaction that own interests/abilities effectively used	.79	.79
Satisfaction with own progress	.82	.75
	<u>Satisfaction with focal person</u>	
Extent focal person meets colleagues job needs	.85	.83
Extent focal person meets organizations needs	.80	.82
Overall satisfaction with focal person	.85	.82
Satisfaction with focal person's interpersonal approach	.78	.79

\*Principal components factor analysis with varimax rotation.

TABLE 4

Convergent Validity Analysis for Industrial  
and Navy Personnel

Variable	F Ratio		Eta Coefficient		Median Eta
	Industrial <sup>a</sup>	Navy <sup>b</sup>	Industrial	Navy	
Communication style					.51
Careful transmitter	2.11 <sup>***</sup>	1.71 <sup>*</sup>	.49	.44	
Open and two-way	1.70 <sup>**</sup>	1.51 <sup>*</sup>	.44	.42	
Frank	2.71 <sup>***</sup>	2.27 <sup>***</sup>	.55	.50	
Careful listener	3.70 <sup>***</sup>	4.57 <sup>***</sup>	.58	.65	
Brief and concise	4.63 <sup>***</sup>	3.07 <sup>***</sup>	.60	.55	
Informal	2.67 <sup>***</sup>	2.13 <sup>***</sup>	.52	.47	
Intervening variables					.56
Trustworthy	3.32 <sup>***</sup>	2.37 <sup>**</sup>	.56	.49	
Informative	3.29 <sup>***</sup>	3.48 <sup>***</sup>	.55	.57	
Dynamic	3.49 <sup>***</sup>	3.93 <sup>***</sup>	.59	.59	
Role clarity	1.31 <sup>*</sup>	1.05	.37	.35	
Consequences					.46
Effectiveness	2.13 <sup>***</sup>	1.87 <sup>*</sup>	.47	.45	
Job/role satisfaction	1.24	.78	.36	.30	
Satisfaction with focal person	3.00 <sup>***</sup>	2.15 <sup>**</sup>	.54	.47	
Median eta for each sample			.54	.47	

\* p < .05    \*\* p < .01    \*\*\* p < .001

<sup>a</sup> 140 groups; n = 1064 - 1191    <sup>b</sup> 41 groups; n = 292 - 323

Note: variations in n sizes are due to missing data.



TABLE 5  
 Mean Differences on Thirteen Communication Variables of  
 Industrial and Navy Personnel

Variable	Mean		t Value	SD	
	Industrial (N= 1086-1223)	Navy (N= 504-573)		Industrial	Navy
Communication style					
Careful transmitter	5.94	6.03	1.08	1.46	1.43
Open and two-way	5.61	5.66	.56	1.53	1.54
Frank	6.26	6.27	.05	1.39	1.36
Careful listener	6.87	6.91	.62	1.24	1.32
Brief and concise	7.10	7.04	-.79	1.41	1.50
Informal	6.21	6.54	3.60 <sup>***</sup>	1.84	1.73
Intervening variables					
Trustworthy	6.76	7.01	3.71 <sup>***</sup>	1.32	1.30
Informative	6.99	7.05	.86	1.37	1.52
Dynamic	6.86	6.82	-.62	1.32	1.46
Role clarity	6.87	7.08	3.00 <sup>***</sup>	1.40	1.25
Consequences					
Effectiveness	4.58	4.76	2.73 <sup>**</sup>	1.32	1.34
Job/role satisfaction	5.46	5.27	-1.98 <sup>*</sup>	1.79	1.87
Satisfaction with focal person	5.73	6.02	3.63 <sup>***</sup>	1.56	1.51

\*  $p < .05$     \*\*  $p < .01$     \*\*\*  $p < .001$

FIGURE 1  
 Model Representing Impact of Focal Manager's Interpersonal  
 Communication Style on Colleagues

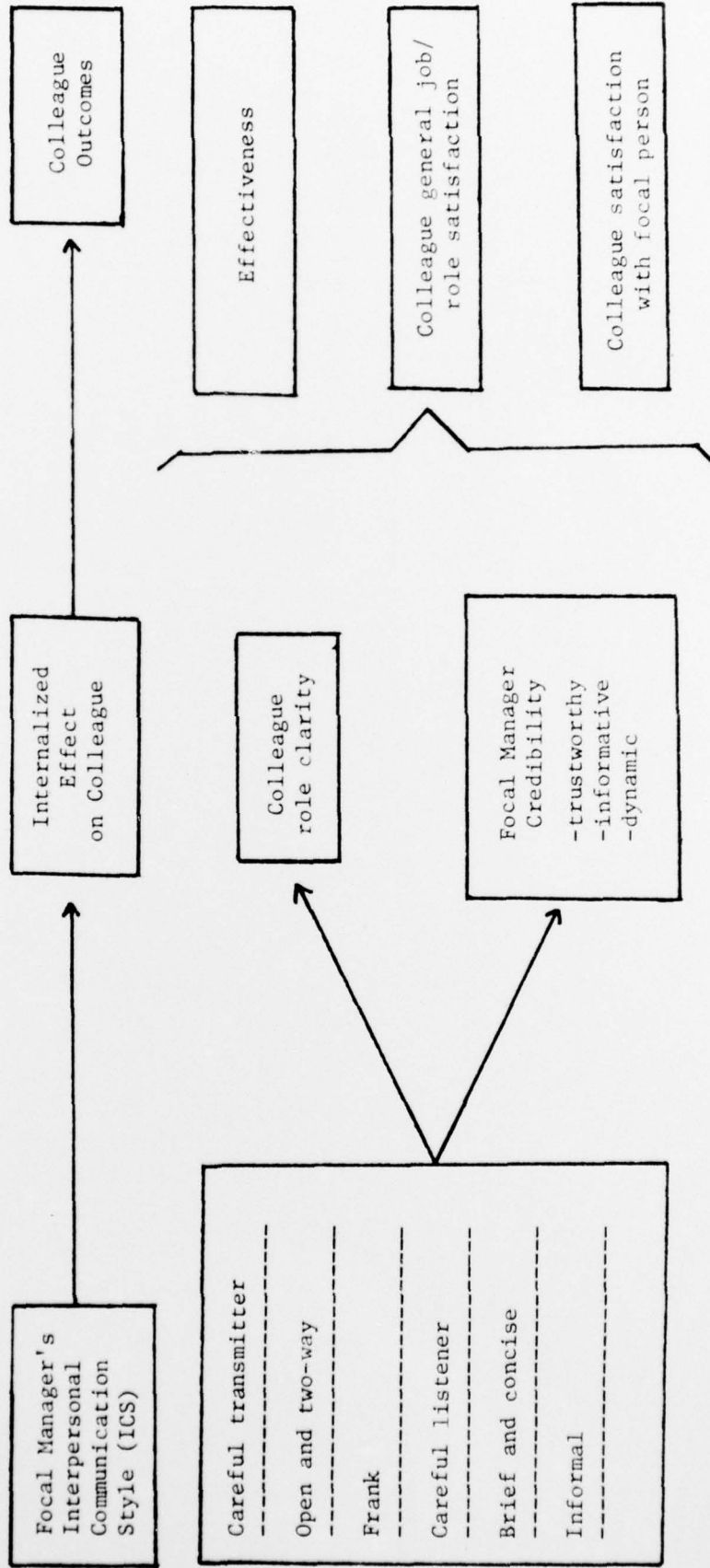


FIGURE 2

Path Analysis of Communication Styles, Credibility

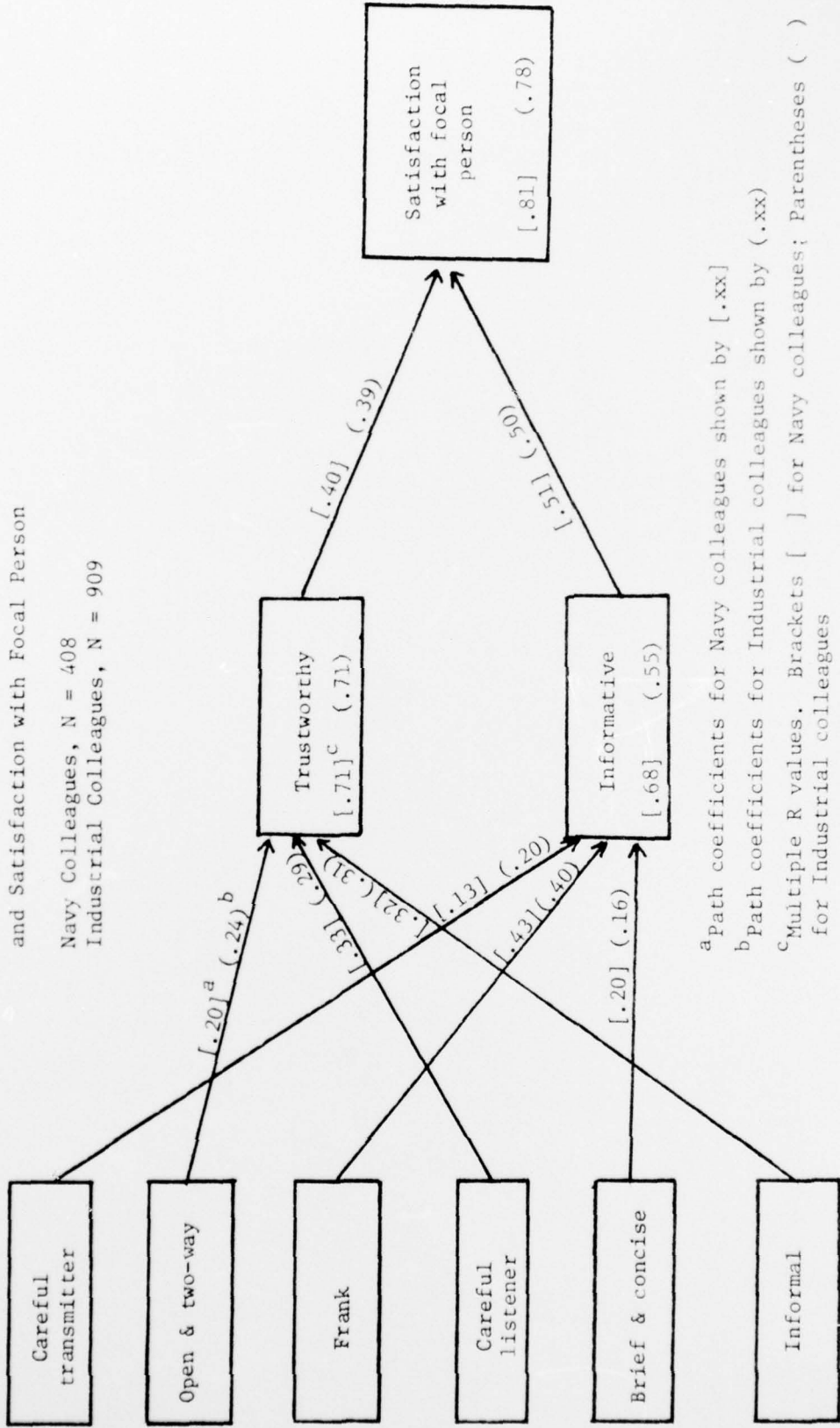
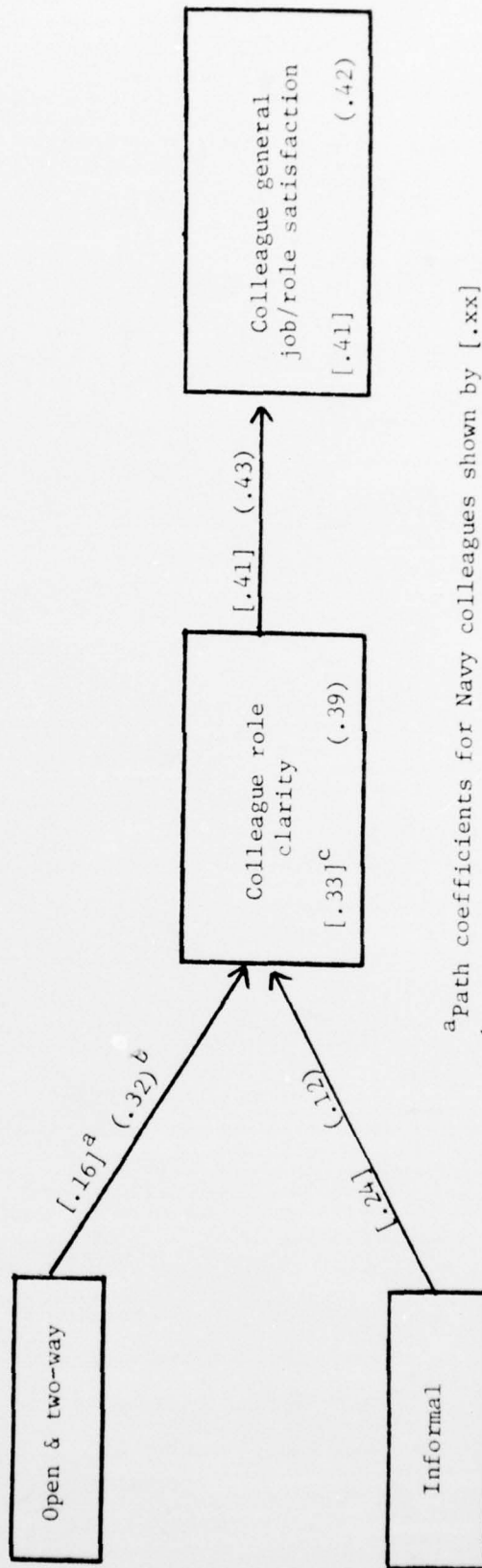


FIGURE 3

Path Analysis of Communication Styles, Credibility  
 And Role Clarity Leading to Colleague Role Satisfaction

Navy Colleagues, N = 408  
 Industrial Colleagues, N = 909



<sup>a</sup>Path coefficients for Navy colleagues shown by [ .xx ]

<sup>b</sup>Path coefficients for Industrial colleagues shown by ( .xx )

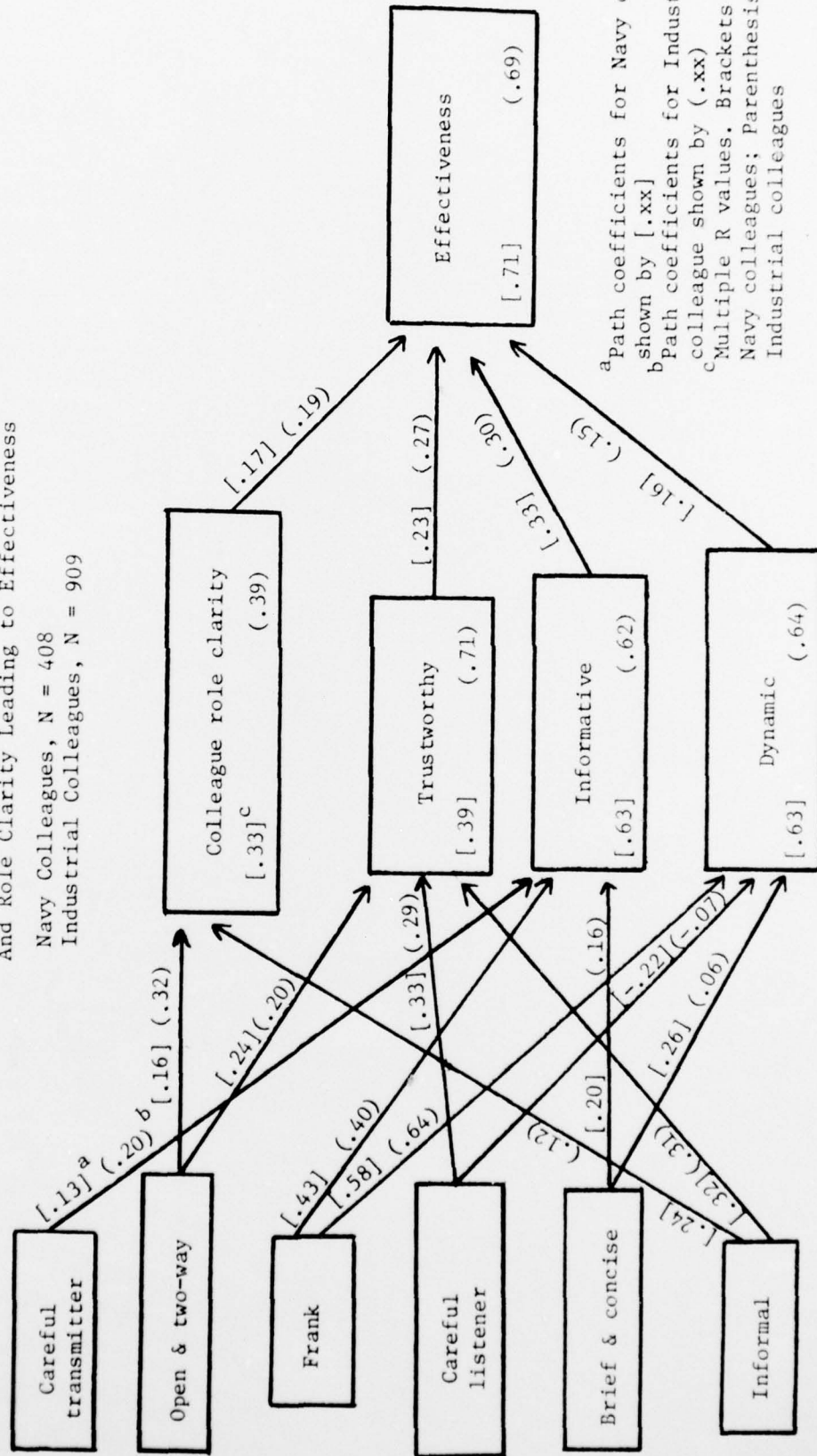
<sup>c</sup>Multiple R values. Brackets [ ] for Navy colleagues; Parentheses ( ) for Industrial colleagues

FIGURE 4

Path Analysis of Communication Styles, Credibility

And Role Clarity Leading to Effectiveness

Navy Colleagues, N = 408  
Industrial Colleagues, N = 909



<sup>a</sup>Path coefficients for Navy colleagues shown by [.xx]  
<sup>b</sup>Path coefficients for Industrial colleague shown by (.xx)  
<sup>c</sup>Multiple R values. Brackets [ ] for Navy colleagues; Parenthesis ( ) for Industrial colleagues

#### REFERENCES

- Bass, B. M. & E. R. Valenzi. Contingent aspects of effective management styles. Technical Report 67, Management Research Center, University of Rochester, Rochester, N.Y., 1974.
- Bass, B. M., E. R. Valenzi, D. L. Farrow & R. J. Solomon. Management styles associated with organization, task, personal, and interpersonal contingencies. Journal of Applied Psychology, 1975, Vol. 60, No. 6, 720-729.
- Berlo, D. K., J. B. Lemert & R. J. Mertz. Dimensions for evaluating the acceptability of message sources. Public Opinion Quarterly, 1969-1970, 33 (4), 563-576.
- Falcione, R. L. The factor structure of source credibility scales for immediate superiors in the organizational context. Central States Speech Journal, 1974, 25 (1), 63-66.
- Klauss, R. Dimensions of managerial interpersonal communication behavior and their relation to measures of satisfaction and performance. Ph.D dissertation, University of Rochester, 1976.
- Klauss, R. Development of the Bass-Klauss impact model of interpersonal communication. ONR Technical Report 1, Contract No. N0001476-C-0912, Syracuse University, Syracuse, N.Y., 1977.
- Klauss, R. Measuring the impact on subordinates of managers' interpersonal communication styles and credibility. ONR Technical Report 2, Contract No. N0001476-C-0912, Syracuse University, Syracuse, N.Y., 1977.
- Porter, L. & K. Roberts. Communication in organization. Technical Report No. 12, ONR Contract No. N0001469-A-02000 9001. University of California, Irvine, July 1972.
- Rizzo, J. R., R. J. House, & S. Lirtzman. Role conflict and ambiguity in complex organizations. Administrative Science Quarterly, 1970, 15, 150-163.

MASTER DISTRIBUTION LIST

MANDATORY

Office of Naval Research  
(Code 452)  
800 N. Quincy St.  
Arlington, VA 22217

Director  
U.S. Naval Research Laboratory  
Washington, D.C. 20390  
ATTN: Technical Information Division

Defense Documentation Center  
Building 5  
Cameron Station  
Alexandria, VA 22314

Library, Code 2029  
U.S. Naval Research Laboratory  
Washington, D.C. 20390

Science & Technology Division  
Library of Congress  
Washington, D.C. 20540

ONR FIELD

Director  
ONR Branch Office  
495 Summer St.  
Boston, MA 02210

Psychologist  
ONR Branch Office  
495 Summer St.  
Boston, MA 02210

Director  
ONR Branch Office  
536 S. Clark St.  
Chicago, IL 60605

Director  
ONR Branch Office  
1030 E. Green St.  
Pasadena, CA 91106

Psychologist  
ONR Branch Office  
1030 E. Green St.  
Pasadena, CA 91106

Research Psychologist  
ONR Branch Office  
536 S. Clark St.  
Chicago, IL 60605

PRINCIPAL INVESTIGATORS

Dr. Earl A. Alluisi  
Old Dominion Univ. Res. Foundation  
Norfolk, VA 23508

Dr. James A. Bayton  
Department of Psychology  
Howard University  
Washington, D.C. 20001

Dr. H. Russell Bernard  
Dept. of Sociology & Anthropology  
West Virginia University  
Morgantown, WV 26506

Dr. Arthur Blaiwes  
Naval Training Equipment Center  
Orlando, FL 32813

Dr. Milton R. Blood  
School of Business  
Georgia Institute of Technology  
Atlanta, GA 30332

Dr. Davis B. Bobrow  
Univeristy of Maryland  
Department of Government & Politics  
College Park, MD 20742

Dr. David G. Bowers  
Institute for Social Research  
University of Michigan  
Ann Arbor, MI 48106

Dr. John J. Collins  
Vice President  
Essex Corporation  
6305 Caminito Estrellado  
San Diego, CA 92120

Dr. Judith Daly  
Decision & Design, Inc.  
Suite 100  
8400 Westpark Dr.  
McLean, VA 22101

Dr. Harry R. Day  
University City Science Center  
Center for Social Development  
3624 Science Center  
Philadelphia, PA 19104

Dr. C. Brooklyn Derr  
Associate Professor, Code 55  
Naval Post Graduate School  
Monterey, CA 93940

Dr. George T. Duncan  
Carnegie-Mellon University  
5000 Forbes Ave.  
Pittsburgh, PA 15213

Dr. Samuel L. Gaertner  
Department of Psychology  
University of Delaware  
220 Wolf Hall  
Newark, DE 19711

Dr. William E. Gaymon  
Suite 200  
1055 Thomas Jefferson St., NW  
Washington, D.C. 20007

Dr. Paul S. Goodman  
Graduate School of Industrial Admin.  
Carnegie-Mellon University  
Pittsburgh, PA 15213

Dr. J. Richard Hackman  
Administrative Sciences  
Yale University  
56 Hillhouse Ave.  
New Haven, CT 06520

Dr. Leo A. Hazlewood  
CACI, Inc.  
1815 Fort Myer Dr.  
Arlington, VA 22209

Dr. Edwin Hollander  
Department of Psychology  
State University of New York  
at Buffalo  
4230 Ridge Lea Rd.  
Buffalo, NY 14226

Mr. Daniel F. Huck  
General Research Corp.  
Westgate Research Park  
McLean, VA 22101

Dr. Charles L. Hulin  
Department of Psychology  
University of Illinois  
Champaign, IL 61820

Dr. Rudi Klauss  
Syracuse University  
Public Administration Dept.  
Maxwell School  
Syracuse, NY 13210

Dr. Edward E. Lawler  
Battelle Human Affairs Research Cen.  
4000 N.E. 41st St.  
P.O. Box 5395  
Seattle, WA 98105

Dr. Arie Y. Lewin  
Duke University  
Duke Station  
Durham, NC 27706

Dr. Morgan W. McCall, Jr.  
Center for Creative Leadership  
5000 Laurinda Dr.  
P.O. Box P-1  
Greensboro, NC 27402

Dr. Terence R. Mitchell  
School of Business Administration  
University of Washington  
Seattle, WA 98195

Dr. William H. Mobley  
College of Business Administration  
University of South Carolina  
Columbia, SC 29208

Dr. Thomas D. Morris  
The Brookings Institution  
1775 Massachusetts Ave., NW  
Washington, D.C. 20036



Dr. James P. Murphy  
National Analysts  
A Division of Booz-Allen & Hamilton Inc.  
400 Market St.  
Philadelphia, PA 19106

Dr. Peter G. Nordlie  
Human Sciences Research, Inc.  
7710 Old Springhouse Rd.  
McLean, VA 22101

Dr. Herbert R. Northrup  
Industrial Research Unit  
University of Pennsylvania  
Philadelphia, PA 19174

Dr. A.F.K. Organski  
3068 Institute of Social Research  
University of Michigan  
Ann Arbor, MI 48104

Dr. Paul Pedersen  
Society for Intercultural Education,  
Training and Research  
107 MIB, University of Pittsburgh  
Pittsburgh, PA 15260

Dr. Manuel Ramirez  
Systems and Evaluations  
232 Swanton Blvd.  
Santa Cruz, CA 95060

Dr. Irwin Sarason  
Department of Psychology  
University of Washington  
Seattle, WA 98195

Dr. S. B. Sells  
Texas Christian University  
Fort Worth, TX 76129

Dr. H. Wallace Sinaiko  
Program Director  
Manpower Research & Advisory Services  
Smithsonian Institution  
801 N. Pitt St. - Suite 120  
Alexandria, VA 22314

Mrs. Alice I. Snyder  
Mental Health Clinic  
Naval Regional Medical Center  
Pearl Harbor  
FPO San Francisco 96610

Dr. Richard Steers  
Graduate School of Management &  
Business  
University of Oregon  
Eugene, OR 97403

Dr. Victor H. Vroom  
School of Organizational Management  
Yale University  
56 Hillhouse Ave.  
New Haven, CT 06520

Dr. Abraham R. Wagner  
Analytical Assessments Corp.  
357 South Robertson Blvd.  
Beverly Hills, CA 90211

Dr. J. Wilkenfeld  
Department of Government &  
Politics  
College Park, MD 20742

#### AIR FORCE

AFOSR/NL  
Bldg., 410  
Bolling AFB  
Washington, D.C. 20332

Military Assistant for Human  
Resources  
OAD (E & LS) ODDR&E  
Pentagon 3D129  
Washington, D.C. 20301

HQ, USAF  
AFMPC/DPMYP  
Randolph AFB, TX 78148

Air University Library/LSE-8110  
Maxwell AFB, AL 36112

#### ARMY

Office of the Deputy Chief of Staff  
for Personnel, Research Office  
ATTN: DAPE-PBR  
Washington, D.C. 20310

Chief, Plans & Operations Office  
USA Research Institute for the  
Behavior & Social Sciences  
Room 278  
1300 Wilson Blvd.  
Arlington, VA 22209

Army Research Institute  
Commonwealth Bldg.  
130 Wilson Blvd.  
Rosslyn, VA 22209

ARI Field Unit - Leavenworth  
P.O. Box 3122  
Fort Leavenworth, KS 66027

Headquarters, Forces Command  
AFPE-HR  
Fr. McPherson  
Atlanta, GA 30330

MARINE CORPS

Dr. A.L. Slafkosky  
Code RD-1  
HQ US Marine Corps  
Washington, D.C. 20380

Commandant of the Marine Corps  
(Code MPI-20)  
Washington, D.C. 20380

COAST GUARD

Chief, Psychological Research Branch  
U.S. Coast Guard (G-P-1/62)  
400 7th St. SW  
Washington, DC 20590

NAVY

Chief of Naval Personnel  
Assistant for Research Liaison  
(Pers-Or)  
Washington, D.C. 20370

Bureau of Naval Personnel (Pers 6)  
Assistant Chief of Naval Personnel  
for Human Resource Management  
Washington, D.C. 20370

Bureau of Naval Personnel (Pers-6a3)  
Human Resource Management  
Financial Office  
Washington, D.C. 20370

CDR Paul D. Nelson, MSC, USN  
Head, Human Performance Division  
(Code 44)  
Navy Medical R&D Command  
Bethesda, MD 20014

Assistant Officer in Charge  
Naval Internal Relations Activity  
Pentagon, Room 2E329  
Washington, D.C. 20350

Naval Postgraduate School  
Monterey, CA 93940  
ATTN: Library (Code 2124)

Professor John Senger  
Operations Research & Administration  
Sciences  
Naval Postgraduate School  
Monterey, CA 93940

CDR Robert S. Kennedy  
Head, Human Factors Engineering  
Branch (1242)  
USN Pacific Missile Center  
Pt. Mugu, CA 92133 NTC

Scientific Director  
Naval Health Research Center  
San Diego, CA 92152

Navy Personnel R&D Center  
Code 01  
San Diego, CA 92152

Commanding Officer  
Naval Submarine Medical Research Lab  
Naval Submarine Base New London,  
Box 900  
Groton, CT 06340

Commanding Officer  
Naval Training Equipment Center  
Technical Library  
Orlando, FL 32813

Naval Aerospace Medical Research  
Lab (Code L5)  
Naval Aerospace Medical Center  
Pensacola, FL 32512

Lt. Rebecca G. Vinson, U.S.N.  
Navy Recruiting District, Boston  
575 Technology Square  
Cambridge, MA 02139

Chief, Naval Technical Training  
NAS Memphis (75)  
Millington, TN 38054  
ATTN: Mr. Tom Warrick, N622

Dr. C. Brooklyn Derr  
Associate Professor, Code 55  
Naval Postgraduate School  
Monterey, CA 93940

Human Resource Management Center  
Box 23  
FPO New York 09510

Human Resource Management Center,  
Norfolk  
5621-23 Tidewater Drive  
Norfolk, VA 23511

Human Resource Management Center  
Bldg., 304  
Naval Training Center  
San Diego, CA 92133

Office Of Naval Research  
(Code 200)  
Arlington, VA 22217

ACOS Research & Program Development  
Chief of Naval Education & Training  
(N-5)  
Naval Air Station  
Pensacola, FL 32508

Human Resource Management Center  
Pearl Harbor  
FPO San Francisco, CA 96601

Human Resource Management School  
Naval Air Station Memphis (96)  
Millington, TN 38054

Capt. Bruce Stone, U.S.N.  
Director, Programs Development  
Division  
(Code N-35)  
Chief of Naval Education & Training  
Naval Air Station  
Pensacola, FL 32508

Capt. Charles Baldwin  
Bureau of Naval Personnel  
Pers 65  
Washington, D.C. 20370

Director, Human Resource Training  
Department  
Naval Amphibious School  
Little Creek  
Naval Amphibious Base  
Norfolk, VA 23521

Navy Materiel Command  
Employee Development Office  
(Code Sa-65)  
Room 150 Jefferson Plaza  
Bldg., #2  
1429 Jeff Davis Highway  
Arlington, VA 20360

Human Resource Management Center,  
Washington  
Washington, D.C. 20370

OTHER

Dr. Robert B. Tebbs  
Franklin University  
201 South Grant Ave.  
Columbus, OH 43215

HumRRO (ATTN: Library)  
300 N. Washington St.  
Alexandria, VA 22314

Director, Columbus Office  
HumRRO Central Division, Suite 23  
2601 Cross Country Dr.  
Columbus, GA 31906

Office of the Air Attache  
Embassy of Australia  
1601 Massachusetts Ave., NW  
Washington, D.C. 20036

Scientific Information Officer  
British Embassy  
3100 Massachusetts Ave., NW  
Washington, D.C. 20008

Canadian Defense Liaison Staff,  
Washington  
2450 Massachusetts Ave., NW  
Washington, D.C. 20008  
ATTN: Chief, Defense Research

Mr. Luigi Petrullo  
2431 N. Edgewood St.  
Arlington, VA 22207

Dr. John J. Collins  
6305 Caminito Estrellado  
San Diego, CA 92120