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Surveying the Man-In-The-Middle of an Industrial Organization.

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INDUSTRIAL ORGANIZATION.

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**SURVEYING THE MAN-IN-THE-MIDDLE
OF AN INDUSTRIAL ORGANIZATION**

A Dissertation

**Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy**

in

The Department of Psychology

**by
James Agnew Vaughan, Jr.
B.A., Millsaps College, 1958
M.A., Wesleyan University, 1960
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ABSTRACT

The man-in-the-middle in industrial organizations faces a unique set of problems by virtue of the fact that he has dual responsibilities. He must answer to his superiors, on the one hand, and his subordinates, on the other. Rapid technological developments in production and information systems, along with certain culturally based changes in expectations of workers and supervisors, have intensified these problems.

The purpose of this study was to search for patterns in the way in which the men-in-the-middle of a given organization describe with whom they consult about a number of different organizational problems.

The Ss for the study were 109 supervisors from a large industrial organization involved in the manufacture of liquid rockets. The Ss represent a subsample from three levels of supervision from five departments: Research and Development, Engineering, Engineering Services, Administrative Services and Operations. They are somewhat unique because of their relatively high level of education and the specialized nature of their training. .

The method employed in this investigation was a written survey. The survey instrument was the Pittsburgh Administrative Review (PAR), a self-descriptive, multiple-choice questionnaire designed specifically for this type study. PAR yields 14

subscale scores, six of which indicate the degree of attention paid certain problem areas and eight of which indicate the degree of consulting reported with certain loci of concern in the organization. PAR also contains some objective questions concerning the nature of the individual's position in the organization.

Scoring of the questionnaire was accomplished on the IBM 7070 computer. The resulting subscale scores were submitted to a series of analyses of variance, grouped on the basis of the Ss' responses to specific questions on PAR and other objective organizational data. A principle axis factor analysis was utilized to provide an additional set of factor scores, which were also submitted to analyses of variance as described above.

Five well-defined factors emerged from the analysis. Factor I was named Consideration for Subordinates. It appears to represent the same dimension as the consideration factor isolated in the Ohio State Leadership Studies. A high score on Consideration for Subordinates was most often accompanied by a low score on Factor II, Concern for Authority. The latter factor represents a tendency to consult with one's boss and formal organizational policy when making decisions.

Factor III, Regard for Self, reflects a high degree of self-concern and rejection of others in decision-making. Factor IV, Distribution of Reward, measures a high degree of concern with schedules of remuneration.

Factor V, General Organizational Concern, represents what is perhaps the most rational approach to the problems faced

by the man-in-the-middle. The pattern is one of consulting with relevant persons about relevant problems.

Consistent differences were found between the reported consulting patterns of Ss with white-collar and Ss with blue-collar subordinates. The former group consulted more with subordinates while the latter paid more attention to the boss and rulebook.

Several of the analyses of variance yielded significant differences in Concern for Authority. Those Ss who showed an extremely low regard for authority also evidenced a general lack of concern about other organizational matters.

A consistent trend was found with supervisory level in the organization and Concern for Authority. Those in the higher levels reported the least amount of consulting with boss and rulebook, while those in the lower levels reported the most.

Subjects in Engineering departments showed a higher degree of consideration for subordinates than any of the Ss in other departments. This is seen as evidence of a new breed of technical supervisors.

INTRODUCTION

Much has been written in recent years about the nature of organizations in general, and more specifically, about the nature of channels of communications, hierarchies of authority and the rapidly changing patterns of management and supervision. Many writers have begun to focus attention on the perennial man-in-the-middle, i.e., the person in the organization who is continually subjected to pressure from above in the form of his superiors' expectations and explicit orders concerning output, and from below in the form of his subordinates' expectations that he look out for their welfare (Blau & Scott, 1962; Dubin, 1961; Tannenbaum, et al., 1961; Bass, 1960; Leavitt, 1958; Roethlisberger, 1945). The significance of the man-in-the-middle phenomenon is brought home by the fact that virtually everyone, at one time or another, finds himself in this situation, whether it be in industry, a social club, church, one's family, etc.

The problems of the man-in-the-middle in industry have become intensified with many recent developments in culture and technology. Argyris (1957) emphasizes the dilemma in which management finds itself in attempting to adhere to traditional management principles and at the same time to allow for the fulfillment of the mature personalities which our culture is striving to produce. The increasing level of education of workers today is closely associated with a sharp rise in the

amount of responsibility, authority and income they expect to receive and a sharp drop in the amount of pressure and close supervision they are willing to accept.

Likert (1961) points to the need for greater cooperation and participation at all levels of management. With the increase in research and development, the rapid growth of new fields of engineering, the increased use of more complex forms of mathematics and statistics and the introduction of large computers, the transmission and retention of information needed to solve complex problems presents a serious problem and challenge to management. Many decisions require the knowledge and know-how of many experts from different fields so that the "chief" can no longer make individual decisions based on the "best facts" available. In fact, it is fairly commonplace for the subordinates to command more of the relevant facts in the situation than their superiors.

When one begins to study the men-in-the-middle in a given organization, he very soon appreciates the statement that "flow charts tell one kind of story and the behavior of people another story, often a contradictory one" (Gilmer, 1961).

Research Findings

This study is a self-descriptive survey of the man-in-the-middle in a large industrial organization, the main purpose of which is to seek out patterns in these self-descriptions of behavior. A number of general patterns of behavior by men-in-the-middle have been reported (Bass & Vaughan, 1962):

1. Some identify completely with superiors and organizational

demands, disparaging any concern for subordinates. They reduce intimacy with subordinates to avoid any sense of guilt over lack of consideration for them or compromise by being friendly, but only "off the job" (Hites, 1953).

2. Some identify completely with subordinates, probably leading to failure to carry out responsibilities to their organization (Hites, 1953).

3. Some successfully initiate structure for their subordinates as demanded by their organization, at the same time maintaining considerate, friendly awareness of the needs of their subordinates (Roff, 1950).

4. Some acquiesce to their superiors and rationalize their position to their subordinates (Roff, 1950).

5. Some are hypocritical, insincere, practicing duplicity in order to avoid disapproval from above or below, i.e., they tell the boss about how lazy their subordinates are and tell their subordinates what a slave driver the boss is (Titus, 1950).

6. Some develop blind spots in their environment so that they refuse to accept the existence of conflict (Dalton, 1960).

7. Some deal with superior-subordinate conflicts by a form of withdrawal, wearing a "mask," seemingly neutral and objective (Pfiffner, 1951).

8. Some employ other of the various defense mechanisms to cope with the superior-subordinate conflict such as: displaced aggression--"some outside agitators are inciting my subordinates to rebel or confusing my boss about what my subordinates are really like"; introjection--"the failure of my subordinates is my fault; I'll take the blame."

Barnes (1960) discusses some of the unique problems of the engineering supervisor as the man-in-the-middle. He is forced to play two roles which are the source of much conflict. To management he plays the role of the engineer, stressing scientific principles, quality and developmental work; and to the engineers beneath him, he displays a dominant concern for productivity and practicality.

The present study was designed to go a step beyond the previously cited works and identify specific patterns of behavior, namely, with whom the man-in-the-middle consults when faced with certain types of problems within the organization.

It is well documented that superiors and subordinates quite often have different and conflicting expectations of the man-in-the-middle (Brooks, 1955; Stouffer, 1957; Bass, 1960; Roethlisberger, 1956; Halpin, 1957). Jambor (1954) reports that the intensity of role conflict differs as a function of the status level from which it derives. The supervisor who occupies the middle status position experiences more conflict and anxiety when his superiors' expectations conflict with his own than when his own conflict with his subordinates' expectations. While the present study is not directed specifically at a comparison of role expectations, it is hoped that some insights will be gained concerning the expectations of the man-in-the-middle. To date, most of the work in this area has been concerned with what others in the organization expect of the man-in-the-middle; this study will reverse the procedure and focus on what the man-in-the-middle expects of others.

Hypotheses

The following are some specific hypotheses which the author proposed to investigate:

1. The tendency to consult with subordinates varies inversely with the sheer size of department while the tendency to consult with the boss varies directly with same. As the number of subordinates increases, the problems of communication downward are intensified, while the communication channels upward become more accessible, and in fact, demand more frequent communication because of increased responsibility.

2. The tendency to consult with subordinates will be greater in departments that are essentially semi-professional or skilled rather than semi-skilled or unskilled. The former group possesses more relevant information necessary in the operation of given departments.

3. The tendency to consult with one's boss will correlate positively with tendency to consult with peers but negatively with tendency to consult with subordinates.

4. Those who report a relatively high degree of consultation with their subordinates will also report their subordinates to be more satisfied with their jobs.

5. Those who feel that their boss is coercive will consult more with peers and persons above them in the organization other than their boss.

PROCEDURE

Survey Instrument

The survey instrument employed in this study was a multiple-choice questionnaire, the Pittsburgh Administrative Review (PAR), a copy of which may be seen in Appendix A. PAR is self-administering and can be broken down into three distinct sections.

Section 1. The first section (items i-viii) is informational in character and is intended to provide some objective data about the individual's relationship to his organization.

Section 2. The second section (items 1-48) is designed to obtain fourteen subscale scores as follows: Each item refers to one of eight possible loci of concern and one of six possible problem areas, and all possible combinations between the various loci of concern and problem areas are included. Table I shows the design.

It can be seen from Table I that eight subscale scores (based on six items each) will indicate with whom the individual consults or whom he "considers," irregardless of problem area; and six subscale scores (based on eight items each) will indicate his judgment of the relative importance of the problem areas over all loci of concern. The eight loci of concern seem to be all inclusive, whereas the six problem areas are simply six among many which seem to be of significance in industrial organizations. Four of the six are major headings in March & Simon's (1958) Organizations.

TABLE I

Design of 48 Questions Relating to
Reference Group and Problem Areas

	<u>Problem Area</u>					
	1. Intraorgan- izational Decisions	2. Partici- pation	3. Conflict	4. Coordination and Mainte- nance of Dept. Program	5. Planning and Inno- vation	6. Distribu- tion of Rewards
7. Boss	19	34	39	11	1	28
8. Peers	33	20	16	4	29	40
9. Subordinates	36	12	3	30	42	44
10. Rulebook	15	2	27	21	45	10
11. Outsiders	5	26	41	46	7	17
12. Self	25	24	47	8	14	22
13. Persons above me in the or- ganization other than my boss	38	6	13	23	35	31
14. Persons below me in the or- ganization in other depart- ments	48	43	9	18	32	37

Locus of Concern

Half of the items in this section were cast negatively so that a choice of the alternative "always" actually indicates "never" in reference to the particular content. This was done to counteract a possible acquiescence effect, a general tendency to agree with items, regardless of their content.

Section 3. The third section (items 49-58) contains eight questions concerning the six problem areas and two questions concerning the relative satisfaction of the individual's subordinates and the effectiveness of his department. The first eight questions of this section differ from the previous 48 in that the alternatives are specific behaviors rather than frequency responses, and some contain two reference groups rather than one.

As one sees in the Introduction to PAR in Appendix A, PAR was administered to the Ss three different times, calling for three different responses. This study, however, only considered the first set of responses, namely, the Ss' descriptions of their actual behavior. Each S completed the questionnaire individually with no time limit, and all data was collected within a three week period.

Subjects

The subjects for the study were 109 supervisors and managers from a large industrial organization on the West coast of the United States. Subsamples from 12 different departments are represented in the total sample as follows:

<u>Function of Department</u>	<u>No. of Depts.</u>	<u>No. of Supervisors</u>
Research & Development	2	18

<u>Function of Department</u>	<u>No. of Depts.</u>	<u>No. of Supervisors</u>
Engineering	3	28
Engineering Services		
Fabrication	1	9
Quality Control	1	9
Administrative Services		
Procurement	1	9
Technical Services	1	9
Contracts	1	9
Operations		
Manufacturing	1	9
Test Area	1	9

Three levels of management are represented as follows:

1. Upper Managers (14)
2. Middle Managers (46)
3. Lower Managers and Supervisors (49)

In terms of training and experience, these Ss are probably typical of the type which one would find in any large industry involved in the design and manufacture of rockets and rocket-related components. At the same time, they are, no doubt, quite different from the personnel one would expect to find in a more traditional industry involved, for example, in the manufacture of some common consumable product. The Ss in the present study contain many more people trained in diverse, complex technologies and highly specialized skills and professions, almost all of whom are college graduates.

Scoring

Scoring the questionnaire was accomplished by means of an IBM 7070 Item Analysis Program (Bendig, 1962a). Numerical weights were assigned to the alphabetic alternatives on the

questionnaire as follows: For all positive questions, A = 5, B = 4, C = 3, D = 2 and E = 1; for all negative questions, A = 1, B = 2, C = 3, D = 4 and E = 5. Therefore, the higher the numeric score on a given item, the greater the degree of consulting or concern the subject is indicating. Means and standard deviations of items 1 to 48 were computed on this basis.

The mean and standard deviation are not appropriate descriptive statistics for items i to viii and 49 to 58 because of the discontinuous nature of the alternatives. The frequencies of the alternatives chosen for these items are shown instead.

Scores on each of the 14 subscales were computed for each S by summing the weights of the items assigned to a given subscale. For example, a score on the Boss subscale was obtained by summing the weighted responses to items 1, 11, 19, 28, 34 and 39. Again, a high numeric score on a given subscale indicates a greater degree of consulting or concern. A reliability estimate of each subscale was obtained, using the Kuder-Richardson Formula 20 (Downie, 1958).

Factor Analysis. A second method of scoring was derived from a factor analysis of items 1 to 48. The intercorrelation matrix for the items was obtained using the Pearson Product Moment Correlation Formula. A principle axis factor analysis (Bendig, 1962b) was performed on the matrix and the resulting factors were submitted to a varimax rotation (Bendig, 1961). From this rotated structure, five factors were chosen to be used in scoring.

Factor Scores. There are several ways to obtain factor scores, the guiding principle being to combine the items which

load highest on a given factor in a manner that best predicts the factor. Cattell (1952) points out that although a number of sophisticated weighting techniques utilizing multiple regression are available, the gain over simply summing the raw scores is not usually appreciable, especially in cases where the factor loadings of the items are not very different. Since the latter was true of this data, the simple method of summing the raw scores was chosen for scoring. In cases where there were high positive and negative loadings on the same factor, the negative item scores were subtracted from the positive ones.

Analyses of Variance. Both sets of scores described above were then evaluated by a series of simple analyses of variance. The first series utilized the responses to the items in sections one and three of PAR to break the Ss into groups. For example, the frequencies of responses to item 1 concerning department size were as follows:

<u>Size of Department</u>	<u>Frequency</u>
A. 5 or less	24
B. 6-10	20
C. 11-20	22
D. 21-30	11
E. over 30 persons	30

(Any subject who did not respond to the item in question was not included in the analysis of that item.) These then formed the groups for 19 separate analyses of variance, 14 on the subscale scores and 5 on the factor scores. Questions viii, 52 and 54 were not utilized in this fashion because the distribution of alternatives chosen was not sufficient to warrant breaking the data into groups.

Additional analyses of variance were performed among the departments and the levels in the organization.

RESULTS

Item Responses

Table II shows the mean responses and the standard deviations for items 1 to 48. (For purposes of interpretation, 1 = never, ..., 5 = always.) Table III displays the frequencies of the alternatives chosen for items i to viii and 49 to 58.

Table IV shows the means, standard deviations and reliability coefficients of the subscales. An inspection of this table reveals that even though the first six subscales referring to problem areas were composed of more items, their reliability estimates were considerably lower than all of the locus of concern subscales with the exception of the self scale. This would seem to indicate that the problem under consideration yields less consistency than person with whom one is consulting. The Ss were more consistently different in attending to specific others or themselves regardless of the problem.

The usefulness of individual problem area subscale scores then is quite questionable because of their low estimated reliability. However, these scores were included in the analyses of variance, and they did yield some consistent differences which will be discussed later. While the reliability estimates of the loci of concern are not astounding, they are gratifyingly high, considering the small number of items on which they are based. Also, they are conservative, for individual differences

TABLE II
Means and Standard Deviations
for Items 1 to 48

Item	$\bar{X}$	SD
1. Boss - Plan. and Innov.	3.96	.77
2. Rulebook - Participation	3.40	1.17
3. Subordinate - Conflict	3.96	.66
4. Peers - Coord. & Maint.	3.45	.90
5. Outsiders - Intraorgan. Dec.	3.89	.85
6. Persons above - Participation	2.27	1.05
7. Outsiders - Plan. and Innov.	3.50	.82
8. Self - Coord. & Maint.	3.26	1.11
9. Persons below - Conflict	3.32	1.02
10. Rulebook - Dist. of Rew.	3.89	1.06
11. Boss - Coord. & Maint.	2.49	1.06
12. Subordinates - Participation	3.36	.94
13. Persons above - Conflict	3.75	.84
14. Self - Plan. and Innov.	2.82	1.00
15. Rulebook - Intraorgan. Dec.	3.38	.75
16. Peers - Conflict	2.88	.99
17. Outsiders - Dist. of Rew.	2.33	1.09
18. Persons below - Coord. & Maint.	3.06	.98
19. Boss - Intraorgan. Dec.	4.33	.80
20. Peers - Participation	2.46	.80
21. Rulebook - Coord. & Maint.	3.64	.88
22. Self - Dist. of Rew.	3.89	.98
23. Persons above - Coord. & Maint.	3.85	.90
24. Self - Participation	3.41	.90
25. Self - Intraorgan. Dec.	3.54	1.13
26. Outsiders - Participation	2.70	1.08
27. Rulebook - Conflict	3.33	1.15
28. Boss - Dist. of Rew.	3.31	1.57
29. Peers - Plan. and Innov.	3.74	.95
30. Subordinates - Coord. & Maint.	3.55	.91
31. Persons above - Dist. of Rew.	1.78	1.05
32. Persons below - Plan. and Innov.	3.29	.95
33. Peers - Intraorgan. Dec.	4.11	.82
34. Boss - Participation	3.33	.90
35. Persons above - Plan. and Innov.	4.08	.75
36. Subordinates - Intraorgan. Dec.	3.78	.83
37. Persons below - Dist. of Rew.	2.20	1.06
38. Persons above - Intraorgan. Dec.	3.88	1.00
39. Boss - Conflict	3.89	.88
40. Peers - Dist. of Rew.	2.67	1.02
41. Outsiders - Conflict	3.67	.83
42. Subordinates - Plan. and Innov.	4.11	.65
43. Persons below - Participation	2.40	1.03
44. Subordinates - Dist. of Rew.	4.00	1.11
45. Rulebook - Plan. and Innov.	3.00	1.11
46. Outsiders - Coord. & Maint.	2.75	.96
47. Self - Conflict	3.49	1.06
48. Persons below - Intraorgan. Dec.	2.28	.93

TABLE III
Frequencies of Alternatives Chosen
on Items 1 to viii and 49 to 58

<u>Item</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>Q*</u>
1	24	20	22	11	30	2
ii	48	20	24	13	0	4
iii	9	22	24	47	5	2
iv	8	16	30	45	9	1
v	42	21	17	4	-	25
vi	44	31	7	5	6	16
vii	34	66	2	-	-	7
viii	63	1	0	1	0	44
49	0	8	27	74	0	0
50	1	4	26	67	5	6
51	9	35	50	1	3	11
52	0	4	5	96	0	4
53	17	2	73	9	3	5
54	72	3	1	2	11	20
55	24	7	6	3	58	11
56	8	23	66	2	6	4
57	23	63	9	6	0	8
58	31	62	12	1	1	2

* Indicates item was judged by subject as not applicable to himself.

TABLE IV
Means, Standard Deviations, and
Reliability Coefficients of the Fourteen Subscales

<u>Subscale</u>	<u>Mean</u>	<u>SD</u>	<u>Items</u>	<u>r_{tt}</u>
<u>Problem Area</u>				
1. Intraorgan. Dec.	29.22	2.87	8	.239
2. Participation	23.37	3.26	8	.293
3. Conflict	28.30	3.22	8	.359
4. Coord. & Maint.	26.08	3.41	8	.403
5. Plan. & Innov.	28.52	3.05	8	.366
6. Dist. of Rew.	24.07	3.71	8	.287
<u>Locus of Concern</u>				
7. Boss	21.32	3.48	6	.558
8. Peers	19.33	2.90	6	.474
9. Subordinates	22.78	2.67	6	.435
10. Rulebook	20.65	3.61	6	.607
11. Outsiders	18.86	3.10	6	.522
12. Self	20.43	2.90	6	.280
13. Person Above	19.62	3.02	6	.497
14. Person Below	16.57	3.51	6	.614

on each item were systematically reduced by the treatment of missing data. Group means were substituted for missing data; hence, all reliability estimates err in the conservative direction. Nevertheless, these reliabilities are much too low to be used for anything but large sample research.

Factor Patterns

The intercorrelation matrix for items 1 to 48 is shown in Appendix B. These correlations become interesting only in the light of the factor analysis. In Table V one finds the unrotated factor structure along with the communalities. The writer experimented with the extraction of factors and found seven to be a reasonable number, in terms of both mathematical significance and psychological meaning. The extraction of additional factors dropped off sharply at this point, as did the number of items defining the new factors. The communalities are not very large with this number of factors, but this is to be expected when dealing with items which are likely to contain a large amount of specific variance. To increase the average communality, one would have to extract many more factors which would have little psychological meaning or utility.

The results of a varimax rotation of the seven factors are shown in Table VI. The writer performed several other rotations using different combinations of factors, but this particular resolution proved to be the most satisfactory, according to the following criteria. This resolution most nearly satisfied the criteria of simple structure as set forth by Thurstone (1947), and it was the most interpretable in terms

TABLE V
Unrotated Factor Structure

Item	Factor Loadings							h ²
	I	II	III	IV	V	VI	VII	
1	280	-485	-260	-096	-137	027	-320	513
2	521	-421	100	-197	004	000	-169	526
3	204	082	269	004	194	-330	-222	317
4	553	-066	033	-140	190	-345	-197	524
5	329	071	-093	-089	463	-139	-064	367
6	105	284	487	-311	-059	093	-251	501
7	350	287	-034	055	184	-168	-038	272
8	-004	205	442	-315	169	304	215	505
9	306	206	-077	267	-022	-011	-431	400
10	301	-250	283	-086	237	091	252	368
11	299	-258	-133	-070	-291	-096	-242	331
12	504	-244	070	289	-114	169	-051	446
13	497	-296	-151	125	068	-035	086	386
14	-100	051	-083	-046	-377	-454	182	403
15	397	-325	-075	195	-355	103	-249	505
16	407	-044	286	-380	-214	176	-114	483
17	230	158	-279	-182	160	118	-074	233
18	501	257	-083	128	-049	202	-276	460
19	306	-393	030	-340	106	-155	149	422
20	058	253	193	-359	-114	-084	-015	254
21	372	-266	396	024	-337	-200	337	633
22	-038	-045	484	046	-186	-184	-047	310
23	507	172	294	-059	246	121	313	550
24	-125	162	218	-063	-075	-257	035	166
25	-020	061	202	137	042	075	-065	075
26	356	359	-199	234	-063	014	193	391
27	270	-456	248	046	186	063	-152	407
28	060	-373	-169	-317	-160	234	-131	369
29	422	-146	270	-004	-151	-279	104	383
30	225	257	437	439	-055	102	007	514
31	050	309	010	-431	-271	-062	-046	364
32	536	179	007	184	-081	-371	-048	499
33	246	-110	-206	075	240	224	269	301
34	486	000	-336	-038	-134	175	214	445
35	384	-041	045	079	-097	295	513	517
36	293	037	229	274	-029	479	-115	458
37	388	379	-221	-405	119	187	014	556
38	472	278	123	086	-118	310	-097	443
39	629	-102	-100	-201	135	-268	090	554
40	347	392	-158	-356	-099	140	055	459
41	407	129	-220	096	137	-247	171	349
42	309	180	-129	240	490	-073	051	450
43	321	339	020	288	-282	029	-155	405
44	276	081	-120	014	-038	-292	-087	192
45	103	-367	-237	-137	-154	158	060	273
46	132	472	-283	-069	-414	078	236	559
47	109	-136	-035	201	-330	-225	464	447
48	077	630	-048	-076	-127	-182	-128	477

TABLE VI
Rotated Factor Structure

Item	Factor Loadings							h ²
	I	II	III	IV	V	VI	VII	
1	-030	-689	-079	109	071	075	-088	513
2	047	-602	064	-035	240	029	312	526
3	053	018	357	-052	416	084	058	317
4	007	-294	103	-105	631	039	130	524
5	-061	013	-115	012	508	254	166	367
6	212	034	356	-510	-010	194	171	501
7	164	115	-074	-102	464	030	016	272
8	040	261	068	-344	-176	153	507	505
9	445	-114	029	009	302	160	-267	400
10	-010	-099	016	071	110	-031	583	368
11	065	-527	016	-058	116	-117	-137	331
12	435	-371	-066	197	129	-134	204	446
13	098	-349	-214	216	317	-140	205	386
14	-226	031	102	-131	057	-495	-275	403
15	352	-580	-019	118	023	-153	-076	505
16	186	-372	093	-455	005	002	306	483
17	015	-063	-330	-172	202	223	-014	233
18	530	-159	-186	-160	268	136	-056	460
19	-310	-367	-016	-046	213	-092	367	422
20	-045	059	132	-474	048	-022	056	254
21	098	-233	224	-046	075	-601	388	633
22	093	010	495	-066	-051	-196	101	310
23	236	135	-120	-166	300	-058	584	550
24	-084	193	272	-157	045	-139	-047	166
25	178	099	147	049	-040	063	063	075
26	329	170	-352	-060	275	-218	-053	391
27	076	-376	206	245	105	136	358	407
28	-142	-505	-142	-092	-224	111	045	369
29	092	-223	210	-071	295	-359	244	383
30	597	234	221	062	072	-132	166	514
31	-059	-013	-001	-586	000	-062	-113	364
32	271	-078	042	-070	576	-278	-060	499
33	031	-027	-418	192	094	027	279	301
34	164	-245	-524	-100	158	-193	106	445
35	232	-018	-371	-002	-049	-337	456	517
36	598	-086	-045	063	-116	129	237	458
37	067	-006	-426	-501	256	205	108	556
38	571	-069	-139	-242	111	030	143	443
39	-066	-299	-156	-127	583	-133	251	554
40	119	-010	-348	-544	162	018	038	459
41	036	033	-253	031	500	-176	030	349
42	132	216	-212	219	497	171	127	450
43	543	010	-025	-134	163	-159	-201	405
44	031	-103	-007	-071	376	-120	-138	192
45	-122	-406	-241	057	-151	-071	057	273
46	182	152	-410	-412	-037	-329	-236	559
47	-031	-010	-089	134	006	-646	048	447
48	176	294	-005	-443	247	-021	-318	477

of psychological meaning. The mathematical intent of rotating to simple structure is to pass planes (or hyperplanes) through clusters of item vectors in order to maximize the number of near zero loadings (Fruchter, 1954). This manipulation maximizes the loading of a given item on a given factor and therefore reduces its loading on the other factors. The net effect of this procedure then is to produce a factor resolution which is relatively well-defined in that each factor contains a small number of high-loading items, and no item loads highly on more than one factor. One of the chief virtues of this method is the ease in interpretation which it provides.

The five factors which were most clearly defined were chosen to be used in scoring. These factors will be discussed in more detail in the Discussion section; however, the names given to the factors convey their psychological meaning as interpreted by the author. They are:

- Factor I: Consideration for Subordinates
- Factor II: Concern for Authority
- Factor III: Regard for Self
- Factor IV: Distribution of Reward
- Factor V: General Organization Concern

Analyses of Variance*

Size of Department and Organization (items i and iii).

The analysis of variance between the different sizes of departments and organizations yielded no statistically significant differences in the subscale means or factor scores.

*The mean squares and the degrees of freedom for all of the analyses presented in the following tables may be seen in Appendix C.

Length of Time Subject Has Directed His Department (item ii). Although there were no statistically significant differences related to this question, the means do show some trends worth reporting, as can be seen in Table VII. For example, the less seniority as head of a department, the greater concern was shown for subordinates on the part of those who have directed their departments less than 2 years as opposed to those who have been in charge for up to 10 years. The F value in this case is very close to the 5 percent level of significance. The trends for Factors IV and V reveal that the longer one had directed his department, the less he was concerned about the distribution of rewards and the more he was concerned with relevant organizational matters and persons affecting them. This is reflected also in the means of subscales five and six which indicate an increase with time in planning and innovating, but a decrease in concern with distribution of reward.

Length of Time in Organization (item iv). The scores on Factors IV and V and on subscales five and six confirm the patterns described above with the length of time which the S had directed his department. Table VIII shows the means and F values. Also, the scores on Factor III approach the 5 percent level of significance with short-termers indicating a much greater regard for self than those who have been in the organization for several years. The mean scores on the participation subscale yielded significant differences ($p = .05$), with those in the organization less than 12 months showing the greatest concern about their personal participation in organizational affairs. To complete this picture, the same group of

TABLE VII

Partial Summary of Means and F Values for Analyses
of Variance of Time as Head of Department

	(N)	Group Means				F
		less than 12 mos.	12-23 mos.	2-5 yrs.	6-10 yrs.	
		(48)	(20)	(24)	(13)	
<u>Factor</u>						
I. Con. for Subor.		17.2	17.5	15.5	15.9	2.561
IV. Dist. of Rew.		7.0	6.5	6.6	5.7	1.142
V. Gen. Org. Con.		18.0	18.0	18.8	19.7	1.636
<u>Subscale</u>						
5. Plan. & Innov.		28.0	28.2	29.4	29.5	1.668
6. Dist. of Rew.		24.5	24.5	23.7	22.8	.827

TABLE VIII

Partial Summary of Means and F Values for Analyses
of Variance of Time in Organization

		Group Means					
		less than 12 mos.	12-23 mos.	2-5 yrs.	6-10 yrs.	over 10 yrs.	F
	(N)	(8)	(16)	(30)	(45)	(9)	
<u>Factor</u>							
III.	Reg. for Self	2.5	2.3	1.1	1.8	.8	2.124
IV.	Dist. of Rew.	7.8	6.9	6.1	7.0	5.6	1.862
V.	Gen. Org. Con.	18.0	18.4	18.3	18.4	19.2	.246
<u>Subscale</u>							
2.	Participation	25.8	23.6	22.1	23.8	23.0	2.519*
5.	Plan. & Innov.	27.9	28.1	28.2	29.0	28.3	.574
6.	Dist. of Rew.	26.4	23.9	23.3	24.3	23.2	1.272
12.	Self	21.9	20.1	19.7	20.9	20.1	1.292
13.	Persons above	21.8	18.9	19.0	19.8	19.9	1.594

*p = .05

short-termers professed a greater regard for self and a greater tendency to consult with other persons above them in the organization as seen in subscales 12 and 13.

White vs. Blue-Collar (item v). Table IX shows the results of the comparisons among types of subordinates. This breakdown was one of the most discriminating of all those used in the analyses. Those Ss whose departments were composed of white-collar workers professed to consult more with subordinates (Factor I) than those with blue-collar or mixed departments ($p = .01$). On the other hand, those with blue-collar departments reported a greater concern for authority (Factor II) than either of the other two groups ($p = .01$).

Those in both white and blue-collar departments showed more concern for general organizational phenomena (Factor V) than those in mixed departments ($p = .05$). This latter difference is supported by scores on five of the six problem area subscales, white and blue-collar departments registering greater concern in each case. With regard to participation, this difference was quite substantial ($p = .01$).

It is interesting to note that those in blue-collar departments registered a greater concern with conflict (subscale three) than either of the other two groups ($p = .05$).

The scores on subscales seven (Boss) and ten (Rulebook) add support to the differences found between the factor scores on concern for authority, the differences here being statistically significant at the 5 and 1 percent levels, respectively.

Similarly, the mean differences in scores on subscales nine (subordinates) and fourteen (others below) are in the same

TABLE IX

Partial Summary of Means and F Values for Analyses
of Variance of Type of Subordinate

		Group Means			
	(N)	White- Collar (42)	Blue- Collar (21)	Mixed white and blue (17)	F
<u>Factor</u>					
I.	Con. for Subor.	17.3	16.6	14.6	5.311**
II.	Con. for Author.	16.0	18.6	16.4	5.186**
V.	Gen. Org. Con.	19.0	19.2	16.9	4.295*
<u>Subscale</u>					
1.	Intraorg. Dec.	29.5	30.0	27.2	6.004**
2.	Participation	24.0	23.1	22.3	2.026
3.	Conflict	28.0	30.0	27.8	3.077*
4.	Coor. & Main.	26.5	26.7	24.6	2.226
6.	Dist. of Rew.	24.7	25.1	22.8	2.564
7.	Boss	20.9	23.3	20.4	4.537*
9.	Subordinates	23.4	23.2	21.1	5.150**
10.	Rulebook	20.3	23.3	20.2	6.529**
14.	Persons below	17.4	16.0	15.0	3.308*

*p = .05

**p = .01

direction as those on Factor I (consideration for subordinates) and are significant at the 1 and 5 percent levels, respectively.

Skill Level of Department (item vi). This question attempts a finer breakdown than the preceding one but, in general, the results are the same, as can be seen in Table X.

Although the mean differences did not quite reach the 5 percent level of significance, those with semi-professional subordinates registered more consideration for subordinates than any of the other three groups. However, they reported less concern with authority ($p = .05$).

On the subscale scores the same group showed less concern with conflict, less concern with boss, less concern with the rulebook ($p = .05$) and more concern with persons below them in the organization other than their own subordinates.

Line or Production vs. Staff or Service (item vii). The only finding of interest with this breakdown was the difference ($p = .05$) on the subordinate subscale. Although the difference was small, the line or production Ss ($\bar{X}$ score = 23.6) reported a greater concern for subordinates than the staff or service Ss ($\bar{X}$ score = 22.3).

Boss--Intraorganizational Decisions (item 49). The factor scores which approached significance on this question were those on concern for authority. Table XI displays the results. Those persons who said they would merely "state their opinion" when disagreeing with the boss had a considerably lower mean score on Factor II, as they well should have.

The subscale scores on this item seem to indicate that these persons not only describe themselves as being relatively

TABLE X

Partial Summary of Means and F Values for Analyses
of Variance of Skill Level of Department

		<u>Group Means</u>				
	(N)	semi- prof. (44)	skilled (31)	semi- skilled (7)	un- skilled (5)	F
<u>Factor</u>						
I.	Con. for Subor.	17.2	15.5	16.9	16.2	2.139
II.	Con. for Author.	15.8	18.4	17.1	16.5	3.840*
<u>Subscale</u>						
3.	Conflict	27.7	29.4	29.1	29.2	2.012
7.	Boss	20.6	22.7	22.3	20.8	2.456
10.	Rulebook	19.6	22.6	21.4	21.8	5.118**
14.	Persons below	17.5	15.5	15.6	15.6	2.316

*p = .05

**p = .01

TABLE XI

Partial Summary of Means and F Values for Analyses
of Variance of Responses to Disagreement with Boss
about Intraorganizational Decisions

<u>Factor</u>	(N)	<u>Group Means</u>			F
		state my opinion (8)	state my opinion, do what the boss says (27)	seek a mutually accept- able solution (74)	
II. Con. for Author.		14.0	16.9	16.7	2.604
<u>Subscale</u>					
2. Participation		21.5	22.9	23.8	2.200
3. Conflict		26.0	28.3	28.6	2.341
4. Coord. & Main.		24.8	25.9	26.3	.868
5. Plan. & Innov.		26.5	29.4	28.5	2.762
6. Dist. of Rew.		22.3	23.2	24.6	2.462
7. Boss		19.4	21.7	21.4	1.459
8. Peers		18.8	18.2	19.8	3.181*
9. Subordinates		21.4	22.6	23.0	1.424
10. Rulebook		17.0	21.1	20.9	4.699*
13. Persons above		18.1	19.8	19.7	1.066
14. Persons below		15.6	16.2	16.8	.617

*p = .05

independent of authority, but they also express a general "don't care" attitude. On 11 of the 14 subscales, their scores are consistently lower than the other two groups. The greatest mean differences occurred on the subscales concerning conflict, planning and innovation, and the rulebook ($p = .05$).

Peers--Participation (item 50). Those people who indicated that they would follow their own dictates regarding participation (see Table XII) had significantly lower scores on conflict ($p = .05$), boss ($p = .05$) and persons above ($p = .05$). They also showed a lack of concern about intraorganizational decisions and participation in organizational affairs. Although the N of this group is sufficiently small so that the results probably should not be overdrawn, these seem to be a group of individualists who will go their own way regardless of other pressures and influences within the organization.

Rulebook--Coordination and Maintenance of Departmental Activities (item 51). Three very different groups emerged from the responses to this item, as can be seen in Table XIII. Those who proposed to work around inflexible organizational policies showed a disregard for authority as evidenced by their low scores on Factor II, subscale seven and subscale ten ($p = .01$).

Those who professed to stick with the status-quo and to hope indicated a significantly lower concern with the distribution of rewards ($p = .05$) and with other persons below them in the organization ($p = .05$).

Those who would initiate remedial action reported a greater consideration of their subordinates (Factor I - $p = .01$) and a greater interest in general organizational matters (Factor V).

TABLE XII

Partial Summary of Means and F Values for Analyses
of Variance of Responses to Disagreement
with Peers about Participation

	(N)	Group Means				F
		listen to them, but follow my own dictates	consult with my boss, then decide	re-exam- ine the facts, then decide	try to con- vince them	
<u>Subscale</u>		(4)	(26)	(67)	(5)	
1. Intraorg. Dec.		25.8	29.5	29.3	29.2	2.035
2. Participation		20.3	23.2	23.8	23.0	1.677
3. Conflict		24.0	28.9	28.5	27.8	3.253*
7. Boss		18.0	22.7	21.4	20.0	3.185*
8. Peers		16.8	20.0	19.4	17.2	2.612
13. Persons above		15.5	20.3	19.7	20.0	2.949*

*p = .05

TABLE XIII

Partial Summary of Means and F Values for Analyses
of Variance of Reactions to Rulebook
Interfering with Departmental Activities

	(N)	Group Means			F
		work around them	accept the sit- uation	initiate remedial action	
<u>Factor</u>		(9)	(35)	(50)	
I. Con. for Subor.		15.1	15.8	17.6	5.649**
II. Con. for Author.		14.2	16.8	16.9	2.619
IV. Dist. of Rew.		7.3	5.9	7.0	3.430*
V. Gen. Org. Con.		16.9	17.9	19.0	2.726
<u>Subscale</u>					
1. Intraorg. Dec.		27.6	28.5	30.4	8.425**
2. Participation		22.3	22.3	24.4	5.036**
3. Conflict		25.2	27.3	29.4	9.480**
4. Coord. & Main.		24.1	25.4	26.8	3.606*
8. Peers		18.6	18.4	20.2	4.383*
9. Subordinates		21.3	22.2	23.5	4.520*
10. Rulebook		17.3	20.5	21.5	5.285**
13. Persons above		18.3	18.8	20.3	3.755*
14. Persons below		16.4	15.5	17.5	3.369*

*p = .05

**p = .01

They showed a greater concern in all of the problem areas on the first six subscales, the mean differences being significant at the 1 percent level on the first three and at the 5 percent level on the fourth. On subscales 8, 9 and 13, they reported greater concern for their peers ($p = .05$), their subordinates ($p = .05$) and those above them in the organization ($p = .05$).

Outsiders--Planning and Innovation (item 53). Table XIV displays the results for this item. Subjects who object to the intrusion of outsiders show less concern about their own participation in organizational affairs and about the coordination and maintenance of their departmental program. Although the difference is small, they profess to consult less with outsiders.

Those persons who claim to follow the suggestions of outsiders when they have the authority register a greater degree of consulting with persons in the organization above them other than their boss ($p = .05$).

Boss and Subordinates--Conflict (item 55). Table XV shows that Ss who profess to support their boss when a conflict exists between boss and subordinates score significantly higher than the other three groups on the self regard factor ($p = .01$). They also register a greater concern for the distribution of rewards.

Boss--Conflict (item 56). Subjects who say the boss "pulls rank" on them or is completely unpredictable show a consistently different pattern of responses than those who hold a more favorable attitude towards their boss (see Table XVI). The former group is less considerate of subordinates and boss and is less concerned, in general, about organizational matters

TABLE XIV

Partial Summary of Means and F Values for Analyses
of Variance of Reactions to Outsiders
Attempting to Influence Planning

	(N)	Group Means			F
		object to their intrusion	listen, tell them what they might do to help	follow their sugges- tions	
<u>Subscale</u>		(17)	(73)	(9)	
2. Participation		21.8	23.7	23.6	2.221
4. Coord. & Main.		24.9	26.2	26.9	1.276
11. Outsiders		18.2	19.1	19.1	.570
13. Persons above		18.1	19.8	21.4	3.940*

*p = .05

TABLE XV

Partial Summary of Means and F Values for Analyses
of Variance of Reactions to Boss--Subordinate Conflict

		Group Means				F
		act as a me- diator	stay out of the argument	support my boss' position	support whoever I think is right	
	(N)	(24)	(7)	(6)	(58)	
<u>Factor</u>						
III. Reg. for Self		.9	.4	4.2	2.0	4.958**
IV. Dist. of Rew.		6.0	6.0	8.0	7.0	1.980
<u>Subscale</u>						
8. Peers		18.4	18.0	20.8	20.0	2.947*

*p = .05

**p = .01

TABLE XVI

Partial Summary of Means and F Values for Analyses of
Variance of Descriptions of Boss' Behavior in Conflict

		Group Means				F
		pulls rank on me	tries to convince me	seeks a mutually satisfactory decision	is com- pletely unpre- dict- able	
	(N)	(8)	(23)	(66)	(6)	
<u>Factor</u>						
I. Con. for Subor.		15.3	17.3	16.9	15.3	1.009
II. Con. for Author.		15.3	17.1	16.8	14.5	1.133
V. Gen. Org. Con.		16.3	18.4	18.8	17.5	2.527
<u>Subscale</u>						
1. Intraorg. Dec.		27.0	29.8	29.6	27.5	3.062*
4. Coord. & Main.		23.8	26.7	26.3	24.8	1.854
7. Boss		19.1	22.0	21.6	19.5	2.143
8. Peers		16.1	19.6	19.8	18.2	4.820**

*p = .05

**p = .01

($p = .05$). They consult less with boss and peers ($p = .01$) about the coordination and maintenance of their department.

Satisfaction of Subordinates (item 57). Those Ss who reported their subordinates to be moderately dissatisfied scored the highest of all four groups on Factor V, general organizational concern, as can be seen in Table XVII. They also indicated a greater concern for the coordination and maintenance of their departmental program and for planning and innovation ($p = .01$). They professed to consult more with their boss and other persons above them in the organization although these differences were not statistically significant.

The group which claimed that their subordinates were completely satisfied with their jobs showed the greatest concern of any group for organizational policy ($p = .05$).

Productivity of Department (item 58). The analysis based on this item yielded no statistically significant differences.

Levels in the Organization. Table XIII shows that there was a highly significant difference among the three levels regarding concern for authority. The highest level group showed the least regard for authority and the lowest level group showed the most ($p = .01$). The same differences existed on the boss subscale ($p = .01$) and with regard to rulebook. The highest level also showed less concern with the distribution of rewards.

Departments in the Organization. Table XIX displays the results of the analysis among the five departments. The Ss from Engineering departments registered a high degree of

TABLE XVII

Partial Summary of Means and F Values for Analyses
of Variance of Satisfaction of Subordinates

	(N)	Group Means				F
		com- pletely satis- fied	moder- ately satis- fied	neither satis- fied nor dissat.	moder- ately dissat.	
<u>Factor</u>		(23)	(63)	(9)	(6)	
V. Gen. Org. Con.		18.5	18.1	18.4	19.7	.655
<u>Subscale</u>						
4. Coord. & Main.		26.9	25.6	25.2	28.3	1.878
5. Plan. & Innov.		29.7	27.6	28.8	32.3	7.186**
7. Boss		21.8	21.1	19.8	23.3	1.504
10. Rulebook		22.7	20.3	19.2	21.5	3.178*
13. Persons above		20.3	19.4	18.1	21.7	2.235

*p = .05

**p = .01

TABLE XVIII

Partial Summary of Means and F Values for Analyses
of Variance of Levels in Organization

<hr/> <hr/>					
	(N)	<u>Group Means</u>			F
		Upper (14)	Middle (45)	Lower (48)	
<u>Factor</u>					
II. Con. for Author.		13.0	16.6	17.6	11.810**
<u>Subscale</u>					
6. Dist. of Rew.		22.4	24.0	24.5	1.824
7. Boss		17.7	21.6	22.0	9.841**
10. Rulebook		19.4	20.9	20.8	.943

**p = .01

TABLE XIX

Partial Summary of Means and F Values for Analyses
of Variance of Departments in the Organization

Factor	(N)	Group Means					F
		R & D (17)	Eng. (27)	Adm. Serv- ices (25)	Eng. Serv- ices (16)	Opera- tions (17)	
I. Con. for Subor.		16.5	18.0	15.5	16.5	16.3	2.404*
II. Con. for Author.		18.2	16.3	16.6	16.0	16.6	1.139
V. Gen. Org. Dec.		19.9	18.7	18.3	16.9	17.4	3.065**
<u>Subscales</u>							
1. Intraorg. Dec.		29.9	30.1	28.0	28.7	29.8	2.481*
2. Participation		23.3	25.0	22.6	21.9	22.5	3.435*
4. Coord. & Main.		25.9	27.6	25.5	24.4	25.7	2.738*
7. Boss		23.3	21.1	21.2	19.9	21.9	2.336
9. Subordinates		24.0	23.7	21.3	22.4	22.2	4.090**
10. Rulebook		22.1	20.7	20.2	20.2	19.9	.949
14. Persons below		16.0	17.6	15.7	15.8	16.3	1.252

*p = .05

**p = .01

consideration for subordinates (Factor I, $p = .05$, subscale 9, $p = .01$). They also showed marked concern for intraorganizational decisions ($p = .05$), their own participation in organizational matters ($p = .05$) and the coordination and maintenance of their departmental activities ($p = .05$). Consistent with their tendency to consult their own subordinates was their more frequent reported consultation with other persons below them in the organization.

In every instance cited above, the Ss from administrative service departments were on the opposite end of the continuum.

The Ss from R & D departments reported a significant amount of consultation with their subordinates as measured by the subscale score ($p = .01$). However, they also showed a consistent concern for Authority as measured by Factor II and subscales seven and ten. Theirs was the highest score on Factor V, general organizational concern ($p = .01$).

DISCUSSION

Self-Descriptive Technique

Before proceeding with the discussion of the results, an additional word about the nature and limitations of the self-descriptive technique is in order. As a group, self-descriptive instruments are typically lower in reliability than other measuring devices, and PAR is no exception. Language difficulties, small numbers of items and the problem of internal consistency are three of the chief factors contributing to this low reliability.

The question of validity also presents special problems with the self-descriptive questionnaire. Face validity is most often claimed for these instruments; however, face validity is a problem in itself in that the subject can and often does direct his responses towards his own ends when the intent of the questionnaire is obvious.

Nunnally (1959) points out that the most effective use of self-descriptive techniques is in research studies and not as instruments to evaluate people. It should be made clear that the author would in no sense defend the reliability or validity of the present questionnaire as an individual assessment tool. It is specifically intended to be a large-scale survey instrument, and as such, probably has adequate reliability and validity. It has considerable construct validity

on the basis of the relationships between these results and previous findings, and the probability that it will prove to have significant factorial validity is very high, considering the nature of the factors extracted.

In view of the above limitations then, the author would caution the reader against attaching too much importance to specific, individual results and suggests instead that he focus on the consistent group differences and trends.

Consideration for Subordinates

Factor I is very clearly defined as consideration for one's own subordinates and others below him in the organization by the following items.

<u>Item</u>	<u>Factor I: Consideration for Subordinates</u>	<u>Loading</u>
*30	Subordinates--Coord. & Main.	60
*36	Subordinates--Intraorg. Dec.	60
*38	Persons Above--Intraorg. Dec.	57
*43	Persons Below--Participation	54
*18	Persons Below--Coord. & Main.	53
9	Persons Below--Conflict	45
12	Subordinates--Participation	44

*Indicates items used in scoring

All but one of the seven highest loadings are on items belonging to this group, and all but one of the problem areas are represented. This factor is probably closely related to the same dimension as the consideration factor found in the Ohio State Leadership studies (Stogdill & Coons, 1957). The individual who scores high on this factor professes to consult with his subordinates and others below him on virtually all matters of importance.

Stogdill & Coons (1957) found a negative relationship

between effectiveness ratings by superiors and consideration scores of air crew commanders. Crew satisfaction, however, was highly related to the consideration index. They conclude that consideration seems to be a form of behavior which contributes toward crew morale rather than making a direct contribution to effectiveness.

In other studies, consideration of subordinates has been found to bear a significant positive relationship to high producing departments (Katz, et al., 1951; Kahn, 1956).

A study by Mann & Dent (1954b) reports that supervisors rated "immediately promotable" by their superiors were seen by their subordinates as members of their own work group. These supervisors had apparently created atmospheres of free discussion with their men. They let them know where they stood and frequently discussed problems with the entire group.

Concern for Authority

The dominant appearance of boss and rulebook items on Factor II indicates a marked concern for authority.

<u>Item</u>	<u>Factor II: Concern for Authority</u>	<u>Loading</u>
* 1	Boss--Plan. & Innov.	69
* 2	Rulebook--Participation	60
*15	Rulebook--Intraorg. Dec.	58
*11	Boss--Coord. & Main.	53
*28	Boss--Dist. of Rew.	51
45	Rulebook--Plan. & Innov.	41
19	Boss--Intraorg. Dec.	37

*Indicates items used in scoring

Again, the concern is a very general one, as all but one of the problem areas are represented. The individual who scores high on this factor consults some higher authority when making

virtually all decisions.

According to a study by Morse (1953), traditional management would look favorably on a high score on this factor. He found that in describing what they wished their supervisors to do, higher levels of management placed even less emphasis than supervisors on "pulling for the men or both the men and the company" and more emphasis on "pulling for the company."

Moreover, this factor reflects the classical task-oriented and authority-oriented conception of management expounded in the 1920's and practiced in most companies and governmental agencies today. This is the tradition stemming from F. W. Taylor and others and described by McGregor (1960) as Theory X. In brief, it is a philosophy of management by direction and control. The assumptions on which it is based are static and fail to take adequate account of the rich motivational properties and basic capabilities of the individual.

Regard for Self

While the loadings are not as high on Factor III as might be desired, the pattern is still clear as can be seen below in the reflected loadings.

<u>Item</u>	<u>Factor III: Regard for Self</u>	<u>Loading</u>
*22	Self--Dist. of Rew.	+50
*34	Boss--Participation	-52
*37	Persons Below--Dist. of Rew.	-43
33	Peers--Intraorg. Dec.	-42
46	Outsiders--Coord. & Main.	-41

*Indicates items used in scoring

It is, quite simply, selfishness; i.e., regard for self and rejection of all others. The high scorer on this factor

considers only himself when making decisions that affect all of those who work with him.

Distribution of Reward

The dominant theme for Factor IV is distribution of reward. The following loadings have been reflected.

<u>Item</u>	<u>Factor IV: Distribution of Reward</u>	<u>Loading</u>
*31	Persons Above--Dist. of Rew.	59
*40	Peers--Dist. of Rew.	54
*37	Persons Below--Dist. of Rew.	50

*Indicates items used in scoring

All three levels within the organization are represented with the problem area remaining the same. This is the first factor in which the problem area assumes more importance than the locus of concern.

General Organizational Concern

Factor V represents a general organizational concern as shown by the following items.

<u>Item</u>	<u>Factor V: General Organizational Concern</u>	<u>Loading</u>
* 4	Peers--Coord. & Main.	63
*39	Boss--Conflict	58
*32	Persons Below--Plan. & Innov.	58
5	Outsiders--Intraorg. Dec.	51
*41	Outsiders--Conflict	50
*42	Subordinates--Plan. & Innov.	50

*Indicates items used in scoring

In the six highest loadings, one finds all classes of loci of concern with the exception of the rulebook and all problem areas, save the distribution of reward. This is probably the most desirable factor pattern of all from the standpoint of current

thinking about good management. A high score on this factor represents: a willingness to consult with and learn from peers when coordinating and maintaining one's own departmental activities; a tendency to bring conflict situations out into the open with the boss rather than attempt to hide them; a consideration for outsiders when they might be affected by intraorganizational matters; and finally, the inclusion of immediate subordinates and others below oneself in the organization in making plans and changes which are likely to affect all.

Factor V represents a rational approach to the problems of supervision in that there is a pattern of open communication with the appropriate locus of concern when dealing with different problems in the organization. This is in sharp contrast with Factors I, II and III in which attention was directed upward, downward or at oneself, respectively, regardless of the nature of the problem under consideration.

Factors VI and VII were not as clearly defined as the above, and therefore, were not used in further analysis.

Time With the Organization and Distribution of Rewards

Psychologists have made much of the finding that wages and monetary rewards do not play as important a role in worker satisfaction as many believed. Herzberg, et al., (1957) reviewed 150 studies and reported that several factors, including job security, intrinsic interest, opportunity for advancement, appreciation from supervisors, and company and management, ranked ahead of wages. However, Stuhr (1962) reports that

starting salary, not the company's reputation or opportunity, was the deciding factor in determining whether or not professional and technical job candidates accepted appointments with one large company.

While this study did not investigate this question directly, the following findings do seem to be relevant. The analyses of items ii and iv indicate that wages assume considerable importance in one's early years on a job, but as time passes they decrease in importance. Bass' (1960) distinction between job attraction and job satisfaction is probably relevant here. One's attraction to a job is defined by the rewards he expects to receive from it, while job satisfaction is determined by the degree to which the job actually is rewarding to the individual. It may be then that monetary rewards are extremely important in determining job attractiveness prior to and in the early stages of the job, but that in the long run they play a lesser role in determining job satisfaction.

White vs. Blue-Collar Subordinates

The differences found between those Ss with white-collar departments and those with blue can be explained in part by the trends described in the Introduction. The former group reported significantly more consulting with subordinates while the latter paid more attention to the rulebook and their boss. One might speculate that the Ss from white-collar departments probably have been "enlightened" by management training programs more than those in blue-collar departments so that they have a greater appreciation of the importance of frequent, open communication with subordinates about matters which concern them. While

this may be the case, the author submits that a part of the difference is attributable to the very nature of the subordinates. The relatively young professionals and semi-professionals in the white-collar departments represent the group on which the rapid progress in education and technology described earlier has had the greatest impact. As individuals and as a group, they expect and demand more than a mere slot in the organization. They possess important knowledge and ideas which they worked hard to acquire, and they want to be able to communicate them to their superiors at will. Moreover, the complex nature of their jobs requires a greater degree of interpersonal interaction, upward, downward and with peers.

Those Ss with blue-collar departments, on the other hand, have yet to break away from the traditional philosophy of management. They are still under the influence of the thinking characterized by Haire (1956) in the following quote: "The men in the work force don't ever give a thought to ways to do their jobs better." The human relations problems generated by this approach are reflected in the significantly greater concern for conflict reported by these Ss.

These results also relate to what Etzioni (1961) refers to as the compliance system. By this he means the "relationship consisting of the power employed by superiors to control subordinates and the orientation of the subordinates to this power." The blue-collar worker is still controlled to a great degree by remuneration, hence the greater concern reported by Ss with blue-collar departments for distribution of rewards and the authority structure. In a very real sense the

supervisors in these departments are forced to pay more attention to their boss and formal organizational sanctions than to the problems of their subordinates. The white-collar worker, on the other hand, is influenced to a much greater extent by normative controls such as status and esteem. He is less threatened by authority, has more control over his own remuneration, and consequently is freer to gain satisfaction from other aspects of his job, e.g., being considerate of his subordinates.

Research relating effective interpersonal relationships with productivity has produced both positive and negative results. It is well established that good interpersonal relationships and happy subordinates by no means guarantee high productivity or the most effective organization. On the positive side of the ledger, however, Likert (1961) summarizes a number of studies which support the theory that better interpersonal relationships, developed by effective leadership, are positively associated with more effective, high-producing work groups. A prime means of achieving this effectiveness has been for the supervisor to demonstrate to his subordinates that their opinions are valued by consulting frequently with them on matters that affect their welfare and acting on their recommendations (Mann & Dent, 1954a; Katz & Kahn, 1951; Coch & French, 1958). In the light of these findings then, the present data quite clearly favor those persons with white collar departments.

Hypothesis two was confirmed on the basis of the results from both items v and vi. The prediction was that the tendency to consult with subordinates would be greater in departments

that were essentially semi-professional or skilled rather than semi-skilled or unskilled.

Concern for Authority and the Linking Pin Function

Much of the discussion to this point has emphasized the importance of consideration for subordinates. However, if one views the levels in the organization as a continuum from subordinates through superiors, then to swing too far towards the lower end of the continuum at the neglect of the higher can be just as damaging as the opposite pattern. Likert (1961) summarizes evidence by Pelz (1952) and others, showing that the amount of influence which a supervisor feels he has with his own superiors affects his ability to supervise his own subordinates effectively. When a supervisor is unable to exert sufficient influence upward in the hierarchy he is likely to experience an unfavorable reaction from his subordinates against him and the organization in general.

Likert describes this capacity to exert influence upward as the linking pin function and makes it the cornerstone of his theory of management. The linking pin function provides a means of interaction between levels in the organization via overlapping groups. Likert holds this to be the key to effective organizations.

The analysis of items 49 to 56 uncovered several groups of Ss who seem to have a very low concern for the hierarchy above them which, to Likert's way of thinking, is a dangerous situation for the organization. For example those Ss who said they would merely "state their opinion" when disagreeing with

the boss about interdepartmental matters scored the lowest of all groups on the authority factor. Moreover, they express a general lack of concern on virtually all of the subscale scores. This pattern is consistent to the degree that it is likely to be unhealthy for the organization.

Again, those Ss who indicated they would "follow their own dictates" concerning their personal participation in organizational affairs showed a similar pattern to that described above. It is extremely unlikely that Ss showing this kind of pattern could serve Likert's linking pin function in their organization.

Initiation

Those Ss who claimed that they would initiate remedial action when faced with constraining organizational policies in the running of their departments show a pattern of responses which is literally at the opposite end of the continuum from those described immediately above. The other two groups on this item would "work around the policies" or "stick with the status quo." On 11 of the 19 sets of scores evaluated, the initiators showed statistically significant, greater concern or consultation than the other two groups. From an enlightened management's point of view this pattern of responses is probably the most desirable of any shown in all of the analyses. There is a somewhat equitable balance struck between concern for persons at all levels of the organization and emphasis on organizational phenomena.

Conflict

Those Ss who claim to support their boss whenever he is in conflict with their subordinates score significantly higher on the self regard factor than those who would "act as a mediator" or "support whoever they think is right." These results confirm the laboratory findings from a simulation of the man-in-the-middle by Bass and Vaughan (1962). When caught in a conflict between boss and subordinates, self-oriented Ss, as measured by Bass' Orientation Inventory, focused significantly more communication upward, while task-oriented subjects focused more messages downward.

When in direct conflict with their boss those Ss who reported that the boss often "pulled rank" on them or was completely unpredictable reported less concern for authority and peers than those who reported the boss to be more reasonable in the situation. They also had lower scores on consideration for subordinates and less concern for general organizational matters. These data provide partial support for hypothesis three which stated that the tendency to consult with one's boss will correlate positively with tendency to consult with peers but negatively with tendency to consult with subordinates. In this particular instance the tendency was for those who held a favorable attitude towards their boss to consult with all three levels. This same pattern was reported with the initiators (item 51); however, the predominant pattern was one of either high concern for boss and low for subordinates or vice versa.

On the basis of these same data hypothesis five must be

rejected. It stated that those who felt their boss to be coercive would consult more with peers and persons above them in the organization other than the boss. The above results show just the opposite of this prediction.

Estimation of Subordinate Satisfaction

The only result of note in regard to the Ss' estimate of their subordinates' satisfaction is the pattern shown by those who reported their subordinates to be moderately dissatisfied (the lowest estimate made). They had the highest scores on the general organization factor and the related subscales. One might speculate that theirs is the most accurate estimate of all.

Hypothesis four, positing a positive relationship between degree of consultation with subordinates and estimation of their satisfaction was not confirmed.

Levels in the Organization

The analysis of scores by levels in the organization produced a highly significant trend on the authority factor and on the boss and rulebook subscales. Those Ss in the upper level scored the lowest while those in the lower levels scored the highest. These results add support to those found with white vs. blue-collar departments.

The above discrepancy between the upper and lower levels gives evidence of a basic communication problem between the two. Those at the lower level often have too much respect for authority and even are awed by it to the extent that they are

unable to communicate effectively with those above them. Those at the upper levels, on the other hand, because of their relatively stable and secure positions towards the top of the hierarchy often fail to take adequate account of this barrier to effective communication.

Departmental Differences

Some interesting differences emerged from this analysis. The Ss in the engineering departments scored significantly higher on consideration for subordinates than those in other departments. In the light of the other findings in this study this is not a surprising result, but it would have been, as little as ten years ago. Engineers typically have been thought of as non-"human relations" types. In recent years, however, they have been moving more and more into managerial levels and have been gradually losing some of their past reputation. These data indicate that they now represent a new breed of managers who are especially sensitive to the need for effective interpersonal relations with their subordinates.

The Ss in research and development showed a pattern of responses fairly similar to engineering, while the Ss in administrative services were at the opposite end of the continuum.

Implications for Future Research

The next step in the study of the man-in-the-middle indicated by the present investigation ought to be to test the stability of the factors and patterns which emerged.

This is a two-fold proposition. The first part asks the question, "will the same patterns emerge when the same instrument is administered to a totally different population?". The second part concerns the question, "will the same pattern emerge when a totally different instrument is administered to the same population?".

A second direction for future study might be the comparison of the man-in-the-middle's description of his actual behavior to his preferred behavior and/or to the description of his actual behavior by other persons in the organization.

SUMMARY AND CONCLUSIONS

The purpose of the study was to seek patterns in the way in which the men-in-the-middle in a particular organization describe with whom they consult when faced with different organizational problems.

The Pittsburgh Administrative Review, a self-descriptive questionnaire, was administered to 109 supervisors from a large industrial organization involved in the manufacture of liquid rockets. Fourteen subscale scores on specific problem areas and loci of concern were computed and subsequently submitted to a series of analyses of variance, grouped on the basis of the Ss' responses to eight objective and ten subjective questions on PAR. A factor analysis was performed on the 48 items used in obtaining subscale scores, and factor scores were computed for each S. These scores were also submitted to an analyses of variance, grouped as described above.

Five well-defined factors resulted from the factor analysis. The first was Consideration of Subordinates which appears to be very similar to the consideration factor on the Ohio State Leader Behavior Description Questionnaire. The second was a Concern for Authority which, in the main, was negatively related to the first. The third, Regard for Self, and the fourth, Distribution of Reward, represent concern for one's own welfare. The fifth, General Organizational Concern, is

seen as the most rational of all the factor patterns.

Supervisors with white-collar subordinates reported a significantly higher degree of consulting with subordinates, while those with blue-collar workers claimed to consult more with the boss.

In general, the higher the supervisory level of the Ss, the less concern for authority they reported.

Supervisors who reported an extremely low concern for authority also showed a general lack of concern for most other organizational matters.

Engineering supervisors showed a significantly greater degree of consideration for subordinates than those in other departments.

The patterns of behavior described in the present study offer evidence of significant changes in supervisory behavior in certain areas, but at the same time, they indicate that the classical philosophy of management expounded by Taylor and others is still very much with us.

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APPENDICES

APPENDIX A**P. A. R.****THE PITTSBURGH ADMINISTRATIVE REVIEW**

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INTRODUCTION

This is a survey designed to study how persons actually handle various kinds of administrative situations, how they think they ought to handle them and how they would prefer to handle them.

YOUR DEPARTMENT:

The words, your department, in the following statements should be interpreted to mean "your immediate subordinates, those persons you directly supervise, those persons who report directly to you, those persons who are one step directly beneath you in your organization's structure."

YOUR ORGANIZATION:

Your organization refers to "the single, largest, most important division, firm, plant, or institution of which your department is immediately a part." The organization is relatively free of any still larger unit, but it has no subunits within it which are as free.

GENERAL DIRECTIONS:

DO NOT SIGN YOUR NAME TO ANY OF THESE FORMS.

You are asked to indicate on the white answer sheet what you actually do, on the yellow answer sheet what you ought to do, and on the green answer sheet what you prefer to do. Be sure to read the specific directions on top of each sheet before proceeding to fill it in.

MARK ALL ANSWERS ON THE ANSWER SHEETS AS DIRECTED ON THE SHEETS

1. How large is your department?
A. 5 or less B. 6-10 C. 11-20 D. 21-30
E. Over 30 persons
- ii. How long have you directed this department?
A. less than 12 months B. 12-23 months C. 2-5 years
D. 6-10 years E. over 10 years
- iii. How large is your organization?
A. under 100 persons B. 100-249 C. 250-499 D. 500-9999
E. 10,000 and up
- iv. How long have you been in your organization?
A. less than 12 months B. 12-23 months C. 2-5 years
D. 6-10 years E. over 10 years
- v. My department subordinates are mainly:
A. sales, clerical (white collar) B. manual, technical
(blue collar) C. mixed white and blue D. can't say
- vi. My department subordinates are mainly:
A. semi-professional B. skilled C. semi-skilled
D. unskilled E. can't say
- vii. My department is:
A. line or production B. staff or service C. can't say
- viii. My organization mainly: (mark more than one if necessary)
A. produces units to customer's orders
B. produces in batches
C. mass produces in assembly lines
D. produces in batch flow processes
E. produces in continuous flow of liquids or solids
1. Before I institute any new plans in my department, I _____
clear them with the boss.
A. always B. often C. occasionally D. seldom E. never
2. Before I take part in an activity within the organization,
I _____ find out what the rule book has to say on the
subject.
A. always B. fairly often C. occasionally D. once in a
while E. very seldom

3. When a conflict arises among those with whom I work, my concern _____ is for my immediate subordinates and how they feel about the matter.
A. always B. often C. occasionally D. seldom E. never
4. Coordination and maintenance of departmental activities are issues which I _____ seek the benefit of the thinking and experience of others at my same level in the organization.
A. always B. often C. occasionally D. seldom E. never
5. When involved in matters of concern to the whole organization, I _____ consider the effects on persons or groups outside the organization.
A. always B. often C. occasionally D. seldom E. never
6. When faced with a decision concerning my participation in an organizational matter, I _____ consult those above my boss or others at his level in the organization.
A. always B. often C. occasionally D. seldom E. never
7. I _____ consider the opinions of persons or agencies outside my organization when making plans or innovations.
A. always B. often C. occasionally D. seldom E. never
8. I _____ must be satisfied with the progress made by my department.
A. always B. often C. occasionally D. seldom E. never
9. Whenever a conflict arises, I _____ pay attention to the position taken by those below me in other departments in the organization.
A. always B. often C. occasionally D. seldom E. never
10. In recommending members of my department for pay raises, I _____ use the company manual or policy statements as a guide.
A. always B. often C. occasionally D. seldom E. never
11. In coordinating the jobs within my department, I _____ maintain complete independence from my boss.
A. always B. often C. occasionally D. seldom E. never
12. I _____ discount the opinions of my immediate subordinates when I am deciding whether to participate in a given activity in the organization.
A. always B. often C. occasionally D. seldom E. never

13. When a conflict situation arises in my department, I _____ disregard the feelings of those above my boss or at his level in the organization.
A. always B. often C. occasionally D. seldom E. never
14. In planning any change in the operation of my department, I _____ give low priority to considering how the change will affect me personally.
A. always B. often C. occasionally D. seldom E. never
15. In reaching decisions concerning how I work with other departments of the organization, I _____ ignore the rule-books.
A. always B. often C. occasionally D. seldom E. never
16. In a conflict situation, I _____ ignore how others at my level would handle it.
A. always B. often C. occasionally D. seldom E. never
17. What I know about persons or groups outside the organization is _____ irrelevant when recommending rewards in my department.
A. always B. often C. occasionally D. seldom E. never
18. When seeking ways to maintain my departmental program I am _____ indifferent to the attitudes of persons below me in the organization in other departments.
A. always B. often C. occasionally D. seldom E. never
19. Before discussing organization matters with anyone outside out department, I _____ consider what my boss is likely to think about the question.
A. always B. often C. occasionally D. seldom E. never
20. Whether I participate in a particular activity is _____ likely to be determined by what I see other men at my level doing.
A. always B. often C. occasionally D. seldom E. never
21. I _____ consult whatever written guides or rule books are available to help me make judgments concerning the maintenance of my department's program.
A. always B. often C. occasionally D. seldom E. never
22. Most important to me is _____ whether I personally feel that I have done a job well, rather than what others think.
A. always B. often C. occasionally D. seldom E. never

23. I _____ consider the opinions of those above my boss or at his level in the organization in order to maintain my departmental program.
- A. always B. often C. occasionally D. seldom E. never
24. My own feelings _____ dictate whether I will participate in a given activity.
- A. always B. often C. occasionally D. seldom E. never
25. It is _____ unimportant whether I personally am satisfied with a decision involving my own and other departments in the organization.
- A. always B. often C. occasionally D. seldom E. never
26. The opinions of persons or groups outside the organization are _____ irrelevant in determining whether I participate in an activity.
- A. always B. often C. occasionally D. seldom E. never
27. I try to see that any conflict in my department or organization _____ is resolved according to who the parties involved are, rather than what the rulebook says.
- A. always B. often C. occasionally D. seldom E. never
28. I _____ feel free to recommend changes in pay for those who work under me without consulting my boss.
- A. always B. often C. occasionally D. seldom E. never
29. I _____ find it useless to consult with other persons on my same level when planning some innovation in my department.
- A. always B. often C. occasionally D. seldom E. never
30. My immediate subordinates _____ have only a minor voice in the coordination of departmental activities.
- A. always B. often C. occasionally D. seldom E. never
31. When making recommendations for salary or other schedules of reward in my department, I _____ consult with persons above my boss or at his level in the organization.
- A. always B. often C. occasionally D. seldom E. never
32. I _____ value the thinking of persons below me in the organization in other departments when making plans for innovations in my own department.
- A. always B. often C. occasionally D. seldom E. never

33. When decisions I make will affect other departments I _____ avoid asking persons at my level in those departments for their opinions.
A. always B. often C. occasionally D. seldom E. never
34. My participation in an activity is _____ independent of what my boss thinks about it.
A. always B. often C. occasionally D. seldom E. never
35. I _____ ignore the suggestions of those above my boss or at his level in the organization, when I am planning some innovation in my department.
A. always B. often C. occasionally D. seldom E. never
36. I am _____ indifferent to my immediate subordinates' opinions when I deal with other departments.
A. always B. often C. occasionally D. seldom E. never
37. I _____ ignore the situation of persons below me in the organization in other departments when making recommendations for salary or other schedules of reward in my own department.
A. always B. often C. occasionally D. seldom E. never
38. The opinions of persons above my boss or others at his level in the organization are _____ irrelevant when I am making an intra-organizational decision.
A. always B. often C. occasionally D. seldom E. never
39. When faced with a conflict involving my department, I _____ try to look at it from my boss's point of view.
A. always B. often C. occasionally D. seldom E. never
40. In establishing salary or other schedules of reward in my department, I _____ find out what my peers are doing in their departments.
A. always B. often C. occasionally D. seldom E. never
41. In dealing with a conflict in my organization, I _____ consider the effects of possible resolutions on persons or groups outside the organization.
A. always B. often C. occasionally D. seldom E. never
42. I _____ ask for suggestions or comments from those working directly under me concerning plans or innovations in my department.
A. always B. often C. occasionally D. seldom E. never

43. In deciding whether or not to participate in a given activity I _____ discount the opinions of those persons below me in other departments in the organization.
- A. always B. often C. occasionally D. seldom E. never
44. I _____ avoid asking those persons working for me to participate in a periodic review of their salary schedules.
- A. always B. often C. occasionally D. seldom E. never
45. In any change which I contemplate for my department, I _____ consider the progress involved in the change as more important than company rules and regulations.
- A. always B. often C. occasionally D. seldom E. never
46. Persons outside the organization _____ fail to influence my judgment in any effort to coordinate and maintain the present level of activities in my department.
- A. always B. often C. occasionally D. seldom E. never
47. When I am involved in a conflict, I _____ am indifferent to how the outcome will affect me.
- A. always B. often C. occasionally D. seldom E. never
48. I _____ seek the counsel of persons below me in the organization in other departments when faced with an intra-organizational decision.
- A. always B. often C. occasionally D. seldom E. never
49. When I disagree with my boss about how my department should deal with other departments, I usually...
- A. keep my real thoughts to myself
B. state my opinion
C. state my opinion and do what the boss says
D. discuss the matter with the boss to reach a mutually acceptable solution
E. pursue the course of action I believe to be right regardless of his opinion
50. When the majority opinion of those persons at my level in the organization is opposed to what I think about how I should participate in the organization, I usually...
- A. follow their advice
B. listen to them, but do what I thought right originally
C. consult with my boss, then decide
D. re-examine the facts, then decide
E. try to convince them why I'm right and they are wrong

51. When stated organizational policies are not flexible or broad enough to permit me sufficient freedom in running my department, I usually...
- A. work around them, doing pretty much what I want to do anyhow
 - B. accept the situation with the hope of eventually changing it
 - C. initiate action to remedy the situation
 - D. withdraw from further concern about the problem
 - E. start a fight to win quick resolution of my difficulties
52. When my subordinates and I disagree about something within the department, I usually...
- A. seek outside advice
 - B. listen and then hold to my own view
 - C. make it clear that I have the responsibility and authority for the decision
 - D. listen, evaluate and decide
 - E. evade the question and direct attention to other matters
53. When I object to outsiders attempting to influence planning and innovation within my department, I usually...
- A. object to their intrusion
 - B. ignore them
 - C. listen and tell them what they might do to help
 - D. follow their suggestions, if they have authority to make them
 - E. complain to my boss or higher authority
54. When revisions in salary structure to increase fairness to all would be of no personal benefit to me, I usually...
- A. work for the greatest equity for company and employees
 - B. make sure the company's position is fully protected
 - C. find some excuse to satisfy myself
 - D. do nothing
 - E. fight for benefits for my employees
55. When my boss and my subordinates disagree seriously, I usually...
- A. act as a mediator
 - B. stay out of the argument and let them fight it out without me getting involved
 - C. support the position of my boss
 - D. support the position of my subordinates
 - E. support whoever I think is right
56. When we disagree about what I should do, my boss most often:

- A. settles the issue by "pulling his rank" on me
 - B. tries to persuade or convince me as to why he is right and I am wrong
 - C. provides me an opportunity to share with him the responsibility for developing a mutually satisfactory decision
 - D. lets me do what I please
 - E. is completely unpredictable
57. Compared to most departments I have known, I would say that my subordinates are:
- A. completely satisfied with their jobs in general
 - B. moderately satisfied
 - C. neither satisfied nor dissatisfied
 - D. moderately dissatisfied
 - E. completely dissatisfied
58. Compared to most departments I have known, I would say that my current department is:
- A. producing at a maximum of demand and capability
 - B. moderately productive
 - C. neither high nor low in productivity
 - D. moderately unproductive
 - E. producing at a minimum of demand and capability

ANSWER SHEET
A DESCRIPTION OF WHAT I ACTUALLY DO

Directions:

Please indicate your answers to each question or statement by circling the appropriate letter. For example, if your answer to question number i is 11-20, then mark your answer below as follows:

i. A B **(C)** D E

When a question does not apply to you, leave it unmarked. Leave it unmarked also, when you are unsure or don't know the answer.

Fill in this description sheet indicating what you actually do, how often you act in the way described by the statements in the PAR booklet.

1. A B C D E	15. A B C D E	37. A B C D E
ii. A B C D E	16. A B C D E	38. A B C D E
iii. A B C D E	17. A B C D E	39. A B C D E
iv. A B C D E	18. A B C D E	40. A B C D E
v. A B C D E	19. A B C D E	41. A B C D E
vi. A B C D E	20. A B C D E	42. A B C D E
vii. A B C D E	21. A B C D E	43. A B C D E
viii. A B C D E	22. A B C D E	44. A B C D E
1. A B C D E	23. A B C D E	45. A B C D E
2. A B C D E	24. A B C D E	46. A B C D E
3. A B C D E	25. A B C D E	47. A B C D E
4. A B C D E	26. A B C D E	48. A B C D E
5. A B C D E	27. A B C D E	49. A B C D E
6. A B C D E	28. A B C D E	50. A B C D E
7. A B C D E	29. A B C D E	51. A B C D E
8. A B C D E	30. A B C D E	52. A B C D E
9. A B C D E	31. A B C D E	53. A B C D E
10. A B C D E	32. A B C D E	54. A B C D E
11. A B C D E	33. A B C D E	55. A B C D E
12. A B C D E	34. A B C D E	56. A B C D E
13. A B C D E	35. A B C D E	57. A B C D E
14. A B C D E	36. A B C D E	58. A B C D E

APPENDIX B
Intercorrelation Matrix for Items 1 to 48

Item	1	2	3	4	5	6
1. Boss - Plan. and Innov.		39	-04	18	06	00
2. Rulebook - Participation	39		07	39	06	10
3. Subordinate - Conflict	-04	07		24	28	05
4. Peers - Coord. & Maint.	18	39	24		24	09
5. Outsiders - Intraorgan. Dec.	06	06	28	24		03
6. Persons above - Participation	00	10	05	09	03	
7. Outsiders - Plan. and Innov.	04	10	15	18	12	17
8. Self - Coord. & Maint.	-18	-08	14	-05	04	28
9. Persons below - Conflict	13	13	08	23	11	04
10. Rulebook - Dist. of Rew.	02	24	01	13	15	01
11. Boss - Coord. & Maint.	32	18	21	16	00	-10
12. Subordinates - Participation	21	30	05	21	14	-06
13. Persons above - Conflict	25	24	10	22	21	-10
14. Self - Plan. and Innov.	-07	-03	-04	02	-08	-06
15. Rulebook - Intraorgan. Dec.	24	37	05	18	-05	-12
16. Peers - Conflict	12	25	08	24	01	20
17. Outsiders - Dist. of Rew.	02	10	03	06	21	03
18. Persons below - Coord. & Maint.	06	09	09	25	07	10
19. Boss - Intraorgan. Dec.	26	36	08	16	04	-01
20. Peers - Participation	-15	04	-04	13	12	19
21. Rulebook - Coord. & Maint.	06	36	03	17	-07	08
22. Self - Dist. of Rew.	-06	01	26	-09	-18	07
23. Persons above - Coord. & Maint.	-13	22	07	26	16	14
24. Self - Participation	-20	-08	11	00	-12	02
25. Self - Intraorgan. Dec.	-13	10	01	-11	-03	09
26. Outsiders - Participation	-08	-02	-05	16	08	-11
27. Rulebook - Conflict	15	38	04	13	17	10
28. Boss - Dist. of Rew.	32	17	-16	06	-06	01
29. Peers - Plan. and Innov.	09	14	10	39	08	13
30. Subordinates - Coord. & Maint.	-09	-07	20	03	07	16
31. Persons above - Dist. of Rew.	-04	-03	03	15	09	32
32. Persons below - Plan. and Innov.	-05	09	15	34	09	08
33. Peers - Intraorgan. Dec.	05	10	-03	13	14	-15
34. Boss - Participation	19	18	-03	15	08	-08
35. Persons above - Plan. and Innov.	-03	04	06	-03	04	00
36. Subordinates - Intraorgan. Dec.	06	11	02	00	00	13
37. Persons below - Dist. of Rew.	-05	13	01	16	13	07
38. Persons above - Intraorgan. Dec.	04	15	-02	10	08	17
39. Boss - Conflict	26	32	12	33	29	-02
40. Peers - Dist. of Rew.	-10	13	01	04	10	10
41. Outsiders - Conflict	08	18	09	19	16	-15
42. Subordinates - Plan. and Innov.	-05	00	01	35	22	-03
43. Persons below - Participation	-02	04	00	-04	02	16
44. Subordinates - Dist. of Rew.	05	-03	17	15	24	-09
45. Rulebook - Plan. and Innov.	28	13	-10	00	02	-16
46. Outsiders - Coord. & Maint.	-11	-17	-06	-09	-02	-01
47. Self - Conflict	09	04	-13	-01	-05	-10
48. Persons below - Intraorgan. Dec.	-10	-23	14	02	01	31

Intercorrelation Matrix for Items 1 to 48 (cont.)

Item	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1.	04	-18	13	02	32	21	25	-07	24	12	02	06	26	-15
2.	20	-08	13	24	18	30	24	-03	37	25	10	09	36	04
3.	15	14	08	01	21	05	10	-04	05	08	03	09	08	-04
4.	18	-05	23	13	16	21	22	02	18	24	06	25	16	13
5.	12	04	11	15	00	14	21	-08	-05	01	21	07	04	12
6.	17	28	04	01	-10	-06	-10	-06	-12	20	03	11	-01	19
7.		08	24	-01	-09	-04	15	12	01	05	09	24	11	-18
8.	08		-04	19	-20	-03	-06	-14	-16	24	-04	02	07	02
9.	24	-04		-02	-07	22	13	02	23	01	18	33	-12	10
10.	-01	19	-02		-02	23	18	-09	08	14	04	02	18	05
11.	-09	-20	-07	-02		32	24	-10	21	16	-03	14	13	-07
12.	-04	-03	22	23	32		30	-09	32	16	16	20	06	03
13.	15	-06	13	18	24	30		-03	24	07	01	13	22	-23
14.	12	-14	02	-09	-10	-09	-03		05	02	-01	-15	08	06
15.	01	-16	23	08	21	32	24	05		21	-06	28	09	-10
16.	05	24	01	14	16	16	07	02	21		09	20	14	21
17.	09	-04	18	04	-03	16	01	-01	-06	09		12	02	04
18.	24	02	33	02	14	20	13	-15	28	20	12		01	-08
19.	11	07	-12	18	13	06	22	08	09	14	02	01		06
20.	-18	02	10	05	-07	03	-23	06	-10	22	04	-08	06	
21.	05	03	-08	35	10	18	22	13	25	17	-07	03	24	04
22.	01	-02	-15	02	08	01	-08	09	-05	09	-15	-03	02	04
23.	20	18	02	24	-03	15	20	-21	-06	20	04	22	14	09
24.	-01	16	-04	-12	07	-07	-17	12	-09	00	-10	04	-06	06
25.	05	02	02	-07	-18	-04	-11	06	13	10	00	-08	-06	-07
26.	22	04	14	-03	00	15	11	05	04	06	26	27	-19	-09
27.	-02	-09	-03	16	10	26	20	-13	22	06	09	-04	19	-15
28.	-12	-07	-15	04	12	04	09	-05	13	17	02	05	14	-19
29.	02	04	07	18	15	23	11	06	18	35	-02	12	06	04
30.	05	11	17	01	-08	23	-04	-12	-03	03	01	15	-11	11
31.	06	14	00	-19	09	-15	-05	12	-08	12	10	02	-15	08
32.	26	-21	22	-02	15	12	11	08	16	11	-01	31	12	-01
33.	03	-05	-16	-02	-06	15	14	-13	02	06	01	16	10	-06
34.	10	-12	03	-09	20	17	20	-02	20	21	19	19	20	00
35.	10	21	-02	24	04	19	28	-03	17	06	02	13	09	-20
36.	05	11	06	10	15	30	04	-25	14	20	-03	32	-05	02
37.	19	09	08	08	02	-03	00	-04	00	27	42	28	08	21
38.	12	09	27	03	06	23	15	-17	16	24	00	18	00	15
39.	17	-04	07	23	23	21	42	-07	08	24	12	13	40	14
40.	12	16	08	05	11	03	09	-03	03	09	08	26	06	23
41.	27	-12	00	14	03	06	13	-07	09	-08	08	13	08	-11
42.	27	-03	14	11	-06	14	14	-06	-05	-08	09	19	00	-03
43.	17	-18	24	04	00	12	19	07	19	08	05	29	-13	00
44.	-03	-13	07	06	15	04	11	01	13	07	08	10	07	10
45.	-11	-01	02	03	10	11	12	-06	18	05	11	06	07	01
46.	15	01	04	-08	-01	01	-08	20	04	03	12	12	-11	15
47.	-04	-10	-02	-07	08	25	13	24	-01	-07	-07	-14	06	10
48.	18	07	06	-25	05	-08	-11	01	-19	-07	03	21	-20	15

Intercorrelation Matrix for Items 1 to 48 (cont.)

Item	21	22	23	24	25	26	27	28	29	30	31	32	33	34
1.	06	-06	-13	-20	-13	-08	15	32	09	-09	-04	-05	05	19
2.	36	01	22	-08	10	-02	38	17	14	-07	-03	09	10	18
3.	03	26	07	11	01	-05	04	-16	10	20	03	15	-03	-03
4.	17	-09	26	00	-11	16	13	06	39	03	15	34	13	15
5.	-07	-18	16	-12	-03	08	17	-06	08	07	09	09	14	08
6.	08	07	14	02	09	-11	10	01	13	16	32	08	-15	-08
7.	05	01	20	-01	05	22	-02	-12	02	05	06	26	03	10
8.	03	-02	18	16	02	04	-09	-07	04	11	14	-21	-05	-12
9.	-08	-15	02	-04	02	14	-03	-15	07	17	00	22	-16	03
10.	35	02	24	-12	-07	-03	16	04	18	01	-19	-02	-02	-09
11.	10	08	-03	07	-18	00	10	12	05	-08	09	15	-06	20
12.	18	01	15	-07	-04	15	26	04	23	23	-15	12	15	17
13.	22	-08	20	-17	-11	11	20	09	11	-04	-05	11	14	20
14.	13	09	-21	12	06	05	-13	-05	06	-12	12	08	-13	-02
15.	25	-05	-07	-09	13	04	22	13	18	-03	-08	16	02	20
16.	17	09	20	00	10	06	06	17	35	03	12	11	06	21
17.	-07	-15	04	-10	00	26	09	02	-02	01	10	-01	01	19
18.	03	-03	22	04	-08	27	-04	05	12	15	02	31	16	19
19.	24	02	14	-06	-06	-19	19	14	06	-11	-15	12	10	20
20.	04	04	09	06	-07	-09	-15	-19	04	11	08	-01	-06	00
21.		22	21	00	-07	00	17	-08	34	19	02	22	-07	09
22.	22		05	09	22	-01	17	03	06	11	05	-02	-11	-15
23.	21	05		06	02	21	19	-08	16	29	07	22	19	24
24.	00	09	06		05	-06	-10	-10	06	-04	07	-01	-09	-17
25.	-07	22	02	05		05	15	04	-02	01	-05	01	11	08
26.	00	-01	21	-06	05		-11	-06	17	21	10	23	10	21
27.	17	17	19	-10	15	-11		11	15	03	-07	15	02	05
28.	-08	03	-08	-10	04	-06	11		16	-20	11	-06	10	07
29.	34	06	16	06	-02	17	15	16		19	01	37	15	08
30.	19	11	29	-04	01	21	03	-20	19		-06	17	-03	-02
31.	02	05	07	07	-05	10	-07	11	01	-06		03	-10	07
32.	22	-02	22	-01	01	23	15	-06	37	17	03		01	21
33.	-07	-11	19	-09	11	10	02	10	15	-03	-10	01		27
34.	09	-15	24	-17	08	21	05	07	08	-02	07	21	27	
35.	29	-07	33	-10	-10	16	12	06	13	13	01	14	10	31
36.	07	06	06	-04	-02	05	11	-06	-01	34	-13	03	22	16
37.	-10	-06	27	-03	06	27	-01	06	-03	-12	10	13	11	20
38.	07	02	31	-13	11	15	01	-05	03	27	13	24	06	26
39.	17	-01	28	-07	-11	18	08	04	32	-03	00	39	14	24
40.	00	-11	20	04	00	05	-09	00	-09	-10	21	17	03	26
41.	14	11	14	04	02	22	-06	-10	00	-04	01	30	13	25
42.	-14	-19	21	03	07	16	06	-12	08	10	-11	23	20	14
43.	11	09	13	03	13	20	-03	-08	00	21	-02	28	-06	03
44.	10	-08	01	-03	-12	08	06	-10	22	14	-07	18	-02	06
45.	08	-12	-08	-04	-26	-07	16	22	10	-05	00	-04	13	05
46.	02	-15	03	-04	-14	27	-33	-04	00	10	24	06	01	20
47.	28	03	03	08	08	13	-04	-09	22	06	03	07	13	19
48.	-12	03	01	09	-08	18	-28	-16	02	13	22	19	-09	02

Intercorrelation Matrix for Items 1 to 48 (cont.)

Item	35	36	37	38	39	40	41	42	43	44	45	46	47	48
1.	-.03	.06	-.05	.04	.26	-.10	.08	-.05	-.02	.05	.28	-.11	.09	-.10
2.	.04	.11	.13	.15	.32	.13	.18	.00	.04	-.03	.13	-.17	.04	-.23
3.	.06	.02	.01	-.02	.12	.01	.09	.01	.00	.17	-.10	-.06	-.13	.14
4.	-.03	.00	.16	.10	.33	.04	.19	.35	-.04	.15	.00	-.09	.01	.02
5.	.04	.00	.13	.08	.29	.10	.16	.22	.02	.24	.02	-.02	-.05	.01
6.	.00	.13	.07	.17	-.02	.10	-.15	-.03	.16	-.09	-.16	-.01	-.10	.31
7.	.10	.05	.19	.12	.17	.12	.27	.27	.17	-.03	-.11	.15	-.04	.18
8.	.21	.11	.09	.09	-.04	.16	-.12	-.03	-.18	-.13	-.01	.01	-.10	.07
9.	-.02	.06	.08	.27	.07	.08	.00	.14	.24	.07	.02	.04	-.02	.06
10.	.24	.10	.08	.03	.23	.05	.14	.11	.04	.06	.03	-.08	-.07	-.25
11.	.04	.15	.02	.06	.23	.11	.03	-.06	.00	.15	.10	-.01	.08	.05
12.	.19	.30	-.03	.23	.21	.03	.06	.14	.12	.04	.11	.01	.25	-.08
13.	.28	.04	.00	.15	.42	.09	.13	.15	.19	.11	.12	-.08	.13	-.11
14.	-.03	-.25	-.04	-.17	-.07	-.03	-.07	-.06	.07	.01	-.06	.20	.24	.01
15.	.17	.14	.00	.16	.08	.03	.09	-.05	.19	.13	.18	.04	.00	-.19
16.	.06	.20	.27	.24	.24	.09	-.08	-.08	.08	.07	.05	.03	-.07	-.07
17.	.02	-.03	.42	.00	.12	.08	.08	.09	.05	.08	.11	.12	-.07	.03
18.	.13	.32	.28	.18	.13	.26	.13	.19	.29	.10	.06	.12	-.14	.21
19.	.09	-.05	.08	.00	.40	.06	.08	.00	-.13	.07	.07	-.11	.06	-.20
20.	-.20	.02	.21	.15	.14	.23	-.11	-.03	.00	.10	.01	.15	.10	.15
21.	.29	.07	-.10	.07	.17	.00	.14	-.14	.11	.10	.08	.02	.28	-.12
22.	-.07	.06	-.06	.02	-.01	-.11	.11	-.19	.09	-.08	-.12	-.15	.03	.03
23.	.33	.06	.27	.31	.28	.21	.14	.21	.13	.01	-.08	.03	.03	.01
24.	-.10	-.04	-.03	-.13	-.07	.04	.04	.03	.03	-.03	-.04	-.04	.08	.09
25.	-.11	-.02	.06	.11	-.11	.00	.02	.07	.13	-.12	-.26	-.14	.08	-.08
26.	.16	.05	.27	.15	.18	.05	.22	.16	.20	.08	-.06	.27	.13	.18
27.	.12	.11	-.01	.01	.08	-.09	-.06	.06	-.03	.06	.16	-.33	-.04	-.28
28.	.06	-.06	.06	-.05	.04	.00	-.10	-.12	-.08	-.10	.22	-.04	-.09	-.16
29.	.13	-.01	-.03	.03	.32	-.09	.00	.08	.00	.22	.10	.00	.22	.02
30.	.13	.34	-.12	.27	-.03	-.10	-.04	.10	.21	.14	-.05	.10	.06	.13
31.	.01	-.13	.10	.13	.00	.21	.01	-.11	-.02	.07	.00	.24	.03	.22
32.	.14	.03	.13	.24	.39	.17	.30	.23	.28	.18	-.04	.06	.07	.19
33.	.10	.22	.11	.06	.14	.03	.13	.20	-.06	-.02	.13	.01	.13	.09
34.	.31	.16	.20	.26	.24	.26	.25	.14	.03	.06	.05	.20	.19	.02
35.		.14	.14	.23	.11	.15	.13	.04	.02	.00	.15	.18	.17	-.07
36.	.14		.10	.28	.06	-.01	.07	.09	.12	-.08	-.04	-.02	.00	.04
37.	.14	.10		.13	.23	.44	.17	.19	.16	.11	.02	.27	-.14	.23
38.	.23	.28	.13		.17	.34	.16	.15	.30	.20	-.07	.15	-.09	.11
39.	.11	.06	.23	.17		.18	.40	.13	.12	.16	.04	.01	.08	.06
40.	.15	-.01	.44	.34	.18		.23	.04	.26	.13	-.02	.24	-.04	.28
41.	.13	.07	.17	.16	.40	.23		.17	.18	.20	-.04	.08	.04	.16
42.	.04	.09	.19	.15	.13	.04	.17		.04	-.01	-.09	-.06	.07	.08
43.	.02	.12	.16	.30	.12	.26	.18	.04		.06	-.18	.29	.01	.14
44.	.00	-.08	.11	.20	.16	.13	.20	-.01	.06		.06	.13	-.04	.18
45.	.15	-.04	.02	-.07	.04	-.02	-.04	-.09	-.18	.06		-.01	.14	-.16
46.	.18	-.02	.27	.15	.01	.24	.08	-.06	.29	.13	-.01		.04	.25
47.	.17	.00	-.14	-.09	.08	-.04	.04	.07	.01	-.04	.14	.04		.01
48.	-.07	.04	.23	.11	.06	.28	.16	.08	.14	.18	-.16	.24	.01	

APPENDIX C

Partial Summary of Analyses of Variance
of Factor and Subscale Scores

<u>Item</u>	<u>Factor</u>	<u>Subscale</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
ii	I		3/101	22.49/ 8.78	2.561	
	IV		3/101	5.86/ 5.13	1.142	
	V		3/101	12.88/ 7.88	1.636	
		5	3/101	15.87/ 9.51	1.668	
		6	3/101	12.01/14.52	.827	
iv	III		4/103	7.71/ 3.63	2.124	
	IV		4/103	9.05/ 4.86	1.862	
	V		4/103	1.99/ 8.08	.246	
		2	4/103	25.86/10.27	2.519	.05
		5	4/103	5.51/ 9.60	.574	
		6	4/103	17.53/13.77	1.272	
		12	4/103	10.55/ 8.16	1.292	
		13	4/103	14.39/ 9.03	1.594	
v	I		2/77	42.90/ 8.08	5.311	.01
	II		2/77	51.37/ 9.91	5.186	.01
	V		2/77	30.27/ 7.07	4.295	.05
		1	2/77	42.41/ 7.07	6.004	.01
		2	2/77	19.84/ 9.79	2.026	
		3	2/77	32.41/10.53	3.077	.05
		4	2/77	27.37/12.30	2.226	
		6	2/77	30.20/11.78	2.564	
		7	2/77	51.83/11.42	4.537	.05
		9	2/77	33.00/ 6.41	5.150	.01
		10	2/77	73.42/11.24	6.529	.01
		14	2/77	40.36/12.20	3.308	.05
vi	I		3/83	19.08/ 8.92	2.139	
	II		3/83	41.97/10.93	3.840	.05
		3	3/83	20.33/10.11	2.012	
		7	3/83	30.10/12.26	2.456	
		10	3/83	56.51/11.04	5.118	.01
		14	3/83	27.34/11.80	2.316	

**Partial Summary of Analyses of Variance
of Factor and Subscale Scores (cont.)**

<u>Item</u>	<u>Factor</u>	<u>Subscale</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
49	II		2/106	28.78/11.05	2.604	
		2	2/106	23.15/10.52	2.200	
		3	2/106	23.80/10.17	2.341	
		4	2/106	10.23/11.79	.868	
		5	2/106	27.39/ 9.92	2.762	
		6	2/106	33.13/13.45	2.462	
		7	2/106	17.65/12.10	1.459	
		8	2/106	25.99/ 8.17	3.181	.05
		9	2/106	10.16/ 7.14	1.424	
		10	2/106	57.87/12.31	4.699	.05
		13	2/106	9.79/ 9.19	1.066	
		14	2/106	7.72/12.50	.617	
50		1	3/98	16.97/ 8.43	2.035	
		2	3/98	17.61/10.50	1.677	
		3	3/98	29.19/ 8.97	3.253	.05
		7	3/98	32.85/10.32	3.185	.05
		8	3/98	20.40/ 7.81	2.612	
		13	3/98	26.88/ 9.12	2.949	.05
51	I II IV V		2/91	47.61/ 8.43	5.649	.01
			2/91	28.10/10.73	2.619	
			2/91	14.99/ 4.37	3.430	.05
			2/91	22.34/ 8.20	2.726	
		1	2/91	54.87/ 6.51	8.425	.01
		2	2/91	50.86/10.10	5.036	.01
		3	2/91	88.43/ 9.33	9.480	.01
		4	2/91	38.33/10.63	3.606	.05
		8	2/91	35.04/ 7.99	4.383	.05
		9	2/91	30.27/ 6.70	4.520	.05
		10	2/91	66.04/12.50	5.285	.01
		13	2/91	29.09/ 7.75	3.755	.05
		14	2/91	41.36/12.28	3.369	.05
53		2	2/96	22.21/10.58	2.221	
		4	2/96	12.76/12.21	1.276	
		11	2/96	5.70/10.01	.570	
		13	2/96	34.79/ 8.83	3.940	.05

Partial Summary of Analyses of Variance
of Factor and Subscale Scores (cont.)

<u>Item</u>	<u>Factor</u>	<u>Subscale</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
55	III		3/91	17.30/ 3.49	4.958	.01
	IV		3/91	10.10/ 5.10	1.980	
		8	3/91	23.57/ 8.00	2.947	.05
56	I		3/99	9.25/ 9.17	1.009	
	II		3/99	12.65/11.16	1.133	
	V		3/99	18.85/ 7.46	2.527	
		1	3/99	23.64/ 7.72	3.062	.05
		4	3/99	22.06/11.90	1.854	
		7	3/99	24.64/11.50	2.143	
		8	3/99	35.72/ 7.41	4.820	.01
57	V		3/97	5.20/ 7.94	.655	
		4	3/97	22.36/11.91	1.878	
		5	3/97	58.26/ 8.11	7.186	.01
		7	3/97	18.09/12.03	1.504	
		10	3/97	40.18/12.64	3.178	.05
<u>Levels</u>		13	3/97	20.47/ 9.16	2.235	
	II		2/104	112.94/ 9.56	11.810	.01
		6	2/104	24.40/13.38	1.824	
		7	2/104	103.72/10.54	9.841	.01
		10	2/104	12.58/13.35	.943	
<u>Depart- ments</u>	I		4/97	20.89/ 8.69	2.404	.05
	II		4/97	12.68/11.13	1.139	
	V		4/97	22.98/ 7.50	3.065	.01
		1	4/97	18.76/ 7.56	2.481	.05
		2	4/97	32.77/ 9.54	3.435	.05
		4	4/97	29.81/10.89	2.738	.05
		7	4/97	26.86/11.50	2.336	
		9	4/97	27.56/ 6.74	4.090	.01
		10	4/97	12.64/13.32	.949	
		14	4/97	15.53/12.41	1.252	

VITA

James Agnew Vaughan, Jr. was born in Shannon, Mississippi, on February 21, 1936. He was graduated from Amory High School in Amory, Mississippi, in 1954. He received a Bachelor of Arts degree in philosophy from Millsaps College in Jackson, Mississippi, in 1958 and a Master of Arts degree in psychology from Wesleyan University in Middletown, Connecticut, in 1960. In the same year he enrolled in the graduate school at Louisiana State University.

EXAMINATION AND THESIS REPORT

Candidate: James Agnew Vaughan, Jr.

Major Field: Psychology

Title of Thesis: Surveying the Man-in-the-Middle of an Industrial Organization

Approved:

Major Professor and Chairman

Dean of the Graduate School

EXAMINING COMMITTEE:

Date of Examination:

July 29, 1963