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PRL-TDR-62-16

Feasibility of Identifying Predictors

of Success in Officer Jobs from

Personnel Records and the Word Picture

Section of Effectiveness Reports

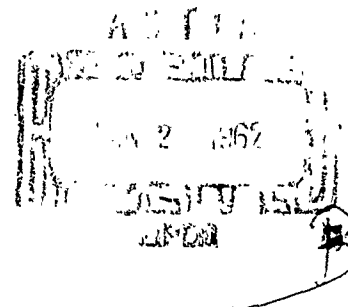Technical Documentary Report PRL-TDR-62-16

August 1962

6570TH PERSONNEL RESEARCH LABORATORY
AEROSPACE MEDICAL DIVISION
AIR FORCE SYSTEMS COMMAND
Lackland Air Force Base, Texas

Project 7734, Task 773404

(Prepared by
STANLEY LICHTENSTEIN and CLIFFORD P. HAHN
American Institute for Research
Washington, D.C.
Contract AF (41(657)-352)

N O T I C E

6570th Personnel Research Laboratory (AMD),
Lackland AFB, Tex.
Rpt No. PRL-TDR-62-16.   FEASIBILITY OF IDENTI-
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FROM PERSONNEL RECORDS AND THE WORD PIC-
TURE SECTION OF EFFECTIVENESS REPORTS.
Final report, Aug 62, 62 + v, incl tables.
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Individual data records, score distributions, and inter-
correlations of 165 variables for the two samples are
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2   Statistical analysis
3   Mathematical prediction
4   Communications personnel
5   Engineering personnel
6   Scientific personnel
7   Effectiveness
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FOREWORD

We are indebted to Dr. James S. Roach for the pilot study which suggested the possibility of applying content analysis to Section V of officer effectiveness reports. Working with instructor OERs at Air University, he found qualitative differences in a sample of only 14 reports.

After deciding upon the research, the team of Contractor and monitoring personnel encountered problems which could be solved only by the introduction of novel methods. One of these was the substitution of group-mean criterion values for every level of a predictor sequence; where the levels contained extremely different frequencies, and where one of the levels contained all cases not falling into the established categories of the sequence. The method itself was suggested by Dr. Robert Bottenberg and Dr. Raymond Christal of Personnel Research Laboratory, and the cross-validation test of its effect was suggested by Mr. Wallace Knetz of the American Institute for Research.

Initially, the study was limited to a regression program for slower computers, but was extended by Dr. Joe H. Ward's Fortran program adapted to the IBM 7090. Linear regression problems involving 165 variables had not previously been attempted.

The study also grew in number of officer records involved. It represents almost the entire population of Communications Officers on active duty in the 3034 Specialty in late 1958, and most of the R & D officers in grades of first lieutenant and captain. Acquisition of these records involved the patient cooperation of HQ USAF (AFCAS) who searched out the files and provided space; the Air Reserve Records Center, Denver, and the Federal Personnel Record Center, St. Louis, who searched the files and provided microfilms of records for officers not on active duty. We are deeply grateful to these groups.

LLEWELLYN N. WILEY
Contract Monitor

ABSTRACT

To increase the amount of information that can be used in determining desirable job requirements and in evaluating officer performance, two sources were examined for pertinent and scalable variables. From personnel records of officers in the Communications Specialty and the Research & Development career area, 76 variables were identified and scaled. By developing a method for content analysis, information from the Word Picture section of the Officer Effectiveness Reports for the same officers was quantified on 89 scales. Individual data records, score distributions, and intercorrelations of 165 variables for the two samples are available for use in developing qualifications and criteria for jobs in these areas.

This report has been reviewed and is approved.

Fred E. Holdrege, Col USAF   A. Carp
Commander   Technical Director

Hq 6570th Personnel Research Laboratory

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1. INTRODUCTION

The primary purpose of this study was to determine the feasibility of using information in Officer Personnel Folders for identifying variables relevant to success in selected Air Force Officer specialties. Accordingly, the bulk of the research effort was devoted to the development of methods for quantifying and statistically analyzing the large variety of material which offered promise of being predictive of officer effectiveness. The purpose of this report is to describe the methods developed and to summarize the chief results of the quantitative data analysis, which was performed on a high-speed computer (the IBM 7090). The results of the computer runs, together with the input data, constitute a rather extensive and unique data bank which has not been previously available. It is anticipated that these data will be utilized in performing more detailed and more extensive analyses, depending upon the specific research questions of interest to the Air Force in its personnel operations.

2. SAMPLE AND CRITERIA

Two specialties were selected for study: Communications Officers, constituting a relatively homogeneous group, and Research and Development Officers, constituting a group of relatively diverse occupations. The two groups were also selected to maximize differences in education and experience factors. The specific officers to be included were selected from the OER data bank (Vanasek, 1960).

For Communications Officers, the selected sample consisted of all men serving as lieutenants to majors with a duty AFSC of 3034 as indicated in their last OER in 1958. For R & D Officers, the selected sample consisted of all men serving as first lieutenants and captains with a duty AFSC in the R & D field as indicated in their last OER in 1958.

The chief criterion of success as an officer was the rating of "Overall Evaluation" contained in Section IV of the USAF Officer Effectiveness Report. The particular OER chosen was the last one completed in 1959. If an officer's folder did not contain an OER completed in 1959, the earliest one for 1960 was selected. If there was no OER completed in 1959 or in 1960, the latest in 1958 was used.

By late 1960 and early 1961, when the data were collected, many of the selected officers were no longer on active duty. The proportion of men no longer on active duty was considerably higher in the R & D sample than in the Communications Officer sample, as shown below:

	R & D Officers		Communications Officers	
	N	%	N	%
On active duty	1284	70.9	1121	93.0
Not on active duty	528	29.1	84	7.0
Total	1812	100.0	1205	100.0

Inasmuch as this finding was anticipated, the dichotomous measure "on active duty/ not on active duty" was included in the study as a second criterion measure.

3. PREDICTORS

Predictors were derived from two sources, the OER itself and USAF Form 11, "Officer Military Record." Table 1 lists the predictor variables derived from the information contained in Form 11. The scoring codes for these variables are shown in Appendix I.

TABLE 1. Predictor Variables Derived from Form 11

Variable Number	Name of Variable	Variable Number	Name of Variable
Experience		Education (Cont.)	
1	Months in active commissioned service	20	Level of education
2	Break in active commissioned service	21	Major academic field
3	Source of commission	Flying	
4	Relative speed of promotion	Experience	
5	Months in grade	22	Rating/flying status/jet qualification
6	Months overseas as an officer	23	Total flying hours
7	Overseas service as officer	Personal	
8	Months in field	Character-	
9	Duty not in primary field	istics	
10	Number of AFSCs held	24	Age in years
11	Number of assignments in field	25	Grade
12	Average responsibility level	26	Security clearance level
13	Combat experience	27	Marital status
14	Highest enlisted rank	28	Religion
15	No enlisted service	29	Race
16	Component — Regular Officer	30	Career preference
17	Component — Reserve Officer	31	Command preference
Education		32	School preference
18	Number of service school courses	33	Next assignment preference
19	Highest career school	34	Awards (dated 1952 and later)

The predictor variables derived from the OER consisted of factual items, subscale ratings, and variables generated through content analysis of Section V, the so-called "word-picture." The non-content OER variables are shown in Table 2. Scoring codes are shown in Appendix I. The content-analysis variables are listed in Appendix II.

TABLE 2. Non-Content OER Variables

Variable Number	Name of Variable	Variable Number	Name of Variable
35	Coded duty AFSC	48	Number of additional factors rated
36	Command (OER)	49	Unique factor rated (factor other than
37	Civilian rater		those contained in variables 50-54)
38	Rater grade	50	Responsibility score
39	Relative level of rater	51	Initiative score
40	Overall effectiveness, OER (criterion	52	Adaptability score
	score)	53	Creativity score
41	Subscale 1 — Job knowledge	54	Reaction to stress score
42	Subscale 2 — Cooperation	55	Responsibility not rated
43	Subscale 3 — Judgment	56	Initiative not rated
44	Subscale 4 — Management qualities	57	Adaptability not rated
45	Subscale 5 — Leadership	58	Creativity not rated
46	Subscale 6 — Communication facility	59	Reaction to stress not rated
47	Subscale 7 — Promotion potential		

4. PROCEDURES

DATA ACQUISITION

From the Officer Personnel Folders, the Form 11 and all OERs and Training Reports from the most recent found to the earliest in 1957 were photographed, using a flat-bed microfilm camera. Although only one OER per officer would be used for analysis, the others were photographed since with no appreciable increase in effort a comprehensive set of data for possible future analysis could be developed.[1] In addition, the Commendations section of each folder was searched and a list was compiled, by officer, of all awards and other commendations and the date each was received.

Information needed for Form 11 variables was tabulated directly from the microfilm and coded later. A microfilm reader-printer was used and a print of the OER selected for analysis was made at the same time as the Form 11 information was tabulated. Content analysis and tabulation of other OER data was done from prints.

DATA SELECTION

The Form 11 variables and the non-content OER variables were selected through conferences between the research staff and Air Force representatives. Wherever possible, codes were chosen for compatability with Air Force codes. Several of the variables were generated from the raw data contained in Form 11. These are shown and defined in Table 3.

TABLE 3. Variables Generated from Form 11 Data

Variable Number	Name of Variable	Definition
1	Months in active commissioned service	OER date minus Total Active Federal Commissioned Service Date (TAFCSD).
2	Break in active commissioned service	Date of Extended Active Duty (EAD) minus TAFCSD.
4	Relative speed of promotion	Date of highest temporary grade minus TAFCSD.
5	Months in grade	OER date minus date of highest temporary grade.
8	Months in field	OER date minus earliest date of AFSC with same first 2 digits as Duty AFSC on OER.
9	Duty not in primary field	Comparison between Duty AFSC on OER and Primary AFSC, using first 3 digits of each.
12	Average responsibility level	Mean responsibility score for assignments in field as recorded in Item 19 of Form 11. Responsibility scale is shown in Appendix III.
24	Age in years	OER date minus date of birth.

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[1] Microfilm data are available on loan to qualified requesters from 6750th Personnel Research Laboratory (PRB), Lackland AFB, Tex.

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The OER date referred to in Table 3 is the date of the close of the period covered by the OER selected for study. This date was used as the cutoff point for all Form 11 variables which were dated. For example, in tabulating months overseas, an officer was not credited with overseas time beyond the OER date, and in counting the number of AFSCs held, no AFSC was counted if it was dated beyond the OER date.

CONTENT ANALYSIS

The development of categories for classifying the information in Section V of the OER was accomplished on a logical-empirical basis. As the first step, a sample of 20 records was screened for all "bits" of information. A "bit" was defined as a word or phrase which tells something about the performance of the ratee. It may have been a trait or other attribute, such as "good judgment" or "pleasing personality", or a description of an accomplishment, such as "briefed the commanding officer," or "developed a plan for gathering information systematically." Specifically excluded from consideration were phrases which duplicated or expanded upon the job description contained in Section II of the OER with no further indication of the ratee's performance, and phrases which described the task or mission of the rater's organization. The 20 records yielded approximately 500 bits of information.

It was recognized that there were two chief dangers inherent in any content-analysis system. On the one hand, one can use relatively few categories, defined in relatively abstract terms, and force the analyst to "read in" meanings in order to decide on the appropriate category. On the other hand, one may reduce the "read in" or second-guess danger by having many categories, each of which is fairly concrete or explicit. This approach runs the risk of developing so large a set of "objective" categories that there will be few entries in each and statistical analysis would be very cumbersome or in some cases even impossible. It was decided that in the initial stages of category development, many highly-specific categories would be preferable to few abstract categories, and that adjustments in the number of categories could be made at a subsequent stage.

Each bit was put on a separate slip of paper and the slips were sorted first into two gross categories: ratee acts, and rater judgments. The bits within each category were then sorted for similarity, primarily on a semantic basis. Two bits were considered different if their words were not clearly synonomous, even though the two bits were cited together and are frequently found together. For example, "mature" and "works well under stress" were considered to be different at this stage of the analysis, while "hard-working" and "industrious" were considered to be synonymous. In searching for similarities, and in all subsequent content analysis, classifications were decided using a "usage" frame of reference rather than a "dictionary" point of view. Doubtful cases were decided by asking, "What is the rater most likely *trying to say* with this phrase or word?" rather than by asking, "What does this word actually mean?"

The first set of categories developed for rater judgments was tested by having three judges independently sort approximately 400 of the information bits. For 45 percent of the bits, there was unanimous agreement on the appropriate category. For another 40 percent of the bits there was agreement by two out of the three judges. While these results were encouraging, of greater importance at this stage of the study was the opportunity to identify ambiguities, overlaps, and inconsistencies in the category system by analyzing the disagreements and by discussing the problem with the participating judges. Revisions could then be made in the system and the statements were re-sorted. A new sample of bits was then drawn from the records of 20 more officers and these bits were sorted into the existing categories, with new categories added as needed. In this revision, an attempt was made to group several specific categories into somewhat larger categories in anticipation of a future need to reduce the total number of distinct categories.

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Approximately 525 statements from the second sample were sorted by two judges independently using the second set of categories. The two judges agreed on 82 percent of the statements, and for an additional 7 percent there was agreement with respect to the next larger category. Again, analysis and discussion identified sources of disagreement and a third revision was made.

Concurrent with the above efforts, attention was given to the problem of specificity of the citation, the problem of "frequency-of-mention" of a category, and the problem of scaling within a category.

The specificity problem refers to the fact that a citation of given attribute, e.g., "judgment," can refer to one of three degrees of specificity, as follows:

    a) concrete example: "Captain X showed good judgment in modifying the lighting system in the teletype area."
    b) general statement: "Captain X has good judgment."
    c) statement of consistency: "Captain X always shows good judgment."

An attempt was made early in the study to preserve these distinctions. However, since the number of categories was quite large, and since the "always" type of statement was relatively rare, it was decided that only the distinction between concrete example and general statement would be kept, with the "always" statement absorbed in the general statement. Categories were reduced further by eliminating the concrete example rubric for categories in which examples were rarely cited, such as "dependable" or "mature."

The "frequency-of-mention" problem refers to the fact that in many cases an attribute is cited several times in one OER. This may mean either that the rater is more impressed with this attribute than one citation would indicate, or that the rater writes in a careless or repetitious fashion. Early in the study, an attempt was made to preserve frequency-of-mention of a category as a separate variable. When the need arose to curtail the number of variables, the frequency-of-mention concept was absorbed in the scaling system, as explained below.

The first attempt at scaling within a category allowed for four degrees of quality for positive or favorable mentions, and two degrees for negative or unfavorable mentions.

The six-point scale used was as follows:
    0 — a strong negative statement
    1 — a mildly negative statement
    4 — an unelaborated statement, e.g., "showed logical thinking"
    5 — a mildly elaborated statement, e.g., "very logical thinking," "analytical thinking is his strong point"
    8 — a strongly elaborated statement, e.g., "one of the most logical thinkers I know"
    9 — very strongly elaborated statement, e.g., "undoubtedly the best logical thinker I've ever known"

It was subsequently found necessary to add another step between the mildly elaborated statement and the strongly elaborated statement, since many statements were found which did not belong in step 5 and were not strong enough for step 8. It was also decided that frequency-of-mention would be absorbed in the qualitative scale since the total number of variables had to be reduced and frequency was not showing sufficient variance to be of value as a separate variable. The 9-step scale developed to combine quality and frequency of mention is shown below:

1 — strong negative

    mild negative twice (2 and 2)

2 — mild negative

3 — no mention

4 — unelaborated mention

5 — slightly elaborated mention; e.g., "very . . ."

    two or more unelaborated mentions (4 and 4)

6 — strongly elaborated mention; e.g., "outstanding in . . .,"

    "extremely good at . . ."

    two or more slightly elaborated mentions (5 and 5)

    one slightly elaborated and two or more unelaborated

        mentions (5 and 4 and 4)

7 — two or more strongly elaborated mentions (6 and 6)

    one strongly elaborated mention and two or more other lower

        positive mentions (6 and 5 and 5) (6 and 5 and 4) (6 and 4 and 4)

8 — very strongly elaborated mention; e.g., "one of the best

    I've seen in . . ."

9 — superlative mention; e.g., "undoubtedly the very finest in . . ."

    two or more very strongly elaborated mentions (8 and 8)

It will be noted that frequency can boost a score only one step above the qualitative score, and that frequency cannot help to achieve a score of 8. The 9-step scale was used for all content categories shown in Appendix II except where different scales are indicated.

The third revision contained 102 categories, not counting the distinction between concrete examples and general statements. This was reduced to 70 by combining categories which had low frequencies as indicated by analysis of the content data for several hundred officers, both Communications and R & D. It was also found that the distinction between ratee acts and rater judgments resulted in a duplication of the ratee-act categories in the rater-judgment categories. Since almost every time an act was cited there was also an indication of the rater's judgment as to the value or the effectiveness of the act, the distinction was dropped and the categories were combined where possible. The distinction between concrete example and general statement was preserved for 19 of the categories, and the total number of content categories was frozen at 89. A low level of abstraction was maintained in the scoring procedure by rationally grouping similar concrete terms together in single categories without assigning a single name or label to the category. Thus the analyst was able to compare a bit with relatively concrete items in the category outline rather than with abstract terms.

The several hundred records that had been scored using one of the three earlier content analysis systems were then re-scored using the fourth and final set of categories. Any statements which could not be readily categorized using the final set of categories were ignored under the assumption that their total frequencies would be very small.

Five different content analysts were used during the course of the study. Most of the records were scored by research assistants who had approximately one year of graduate study in psychology. The first step in training consisted of categorizing approximately 200 bits of information, on separate slips of paper. The sort was then discussed and clarifications were made as needed. The next step consisted of independently scoring 10 new records which were also scored by the staff member who developed the categories. The two scorings were then compared and differences were discussed. It was found that the principal differences lay in determining what constituted a scorable "bit," as opposed to job or mission description. Agreement as to category averaged 90 percent for agreed-upon bits. Agreement as to qualitative level averaged 85 percent for agreed-upon bits. Agreement as to "bits" ranged from 60 to 80 percent. Since category agreement was

high, the general rule adopted was to treat something as a "bit" if in doubt. The analyst then proceeded to score more records, conferring on questionable cases. His results were then spot-checked and any consistent errors were corrected.

Several content totals were generated during content analysis and were included as predictor variables. These are shown in Table 4.

TABLE 4. Predictors Derived from Content Totals

Variable Number	Name of Variable
60	Length of Section V (number of lines of text)
61	Number of scorable units of information
62	Number of examples of effective performance
63	Number of examples of ineffective performance
64	Number of information units involving ineffectiveness
65	Analyst's rating of ratee (based on Sec. V)

DATA ANALYSIS METHODS

Since the chief purpose of the study was to determine the feasibility of using certain information to identify variables relevant to success as an officer, which is essentially a prediction problem the chief method of analysis involved multiple correlation. The model used was the "general multiple linear regression model," described in detail by Bottenberg (1960). In this model, criterion scores are predicted using those weights for predictor variables which minimize the sum of the squared differences between the predicted and observed criterion scores. The computing procedure is an iterative one, with each iteration selecting a variable and a correction for the weight of that variable which maximally increases the squared multiple correlation coefficient if weights for all other variables are unchanged from what they were prior to the given iteration. As iterations continue, increases in the resulting squared multiple correlation coefficient tend to get smaller. An "iteration-stop criterion" is used as a control to terminate the computations. In this study, computation was terminated when the increase in the squared multiple from one iteration to the next fell below .0005.

The computer used was the IBM 7090, since this was the only computer available with a sufficiently large memory to handle 165 variables. With this many variables, however, the number of observations in each variable had to be constant. This precluded certain types of analysis, for example, intercorrelations of content variables and correlations between content variables and the criteria based only on cases of mention of an attribute.

The requirement for equal Ns in each variable also necessitated special treatment of missing observations. Officers for whom any pages of the Form 11 were missing were dropped from the sample.[2] Where occasional data were missing, a mean score for the variable was computed for a sample of 200 officers and this value was substituted for the missing data. Where appropriate, the sample used to determine the mean was made up of comparable officers. For example, if a man's year of birth was missing, the mean was based on a sample of officers in the same grade as the one whose year of birth was missing; if level of education was missing, the sample consisted of officers with similar AFSCs.

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[2] This accounts for a loss of 14 Communication Officers appearing in Table 6 and not in later analyses.

To keep within the memory capacity of the computer and still retain the large number of variables selected for study, it was necessary to devise a method for scaling not only the content variables but several qualitative background and experience variables as well. The scaling method chosen involved the use of mean criterion scores. In this method, each preselected score or step in a variable is assigned the mean value of the criterion scores for all cases receiving the given score. Thus the scale values and the distances between steps are determined on an empirical rather than on an arbitrary basis. Predictor variables for which mean criterion score transformations were made are shown in Table 5.

TABLE 5. Variables with Mean Criterion Score Transformation

Variable Number	Name of Variable	Variable Number	Name of Variable
3	Source of Commission	35	Coded duty AFSC
4	Relative speed of promotion	36	Command (OER)
14	Highest enlisted rank	38	Rater grade
19	Highest career school	39	Relative level of rater
20	Level of education	41	Subscale 1 — Job knowledge
21	Major academic field	42	Subscale 2 — Cooperation
22	Rating/flying status/jet qualification	43	Subscale 3 — Judgment
25	Grade	44	Subscale 4 — Management qualities
26	Security clearance level	45	Subscale 5 — Leadership
27	Marital status	46	Subscale 6 — Communication facility
28	Religion	47	Subscale 7 — Promotion potential
29	Race	50	Responsibility score
30	Career preference	51	Initiative score
31	Command preference	52	Adaptability score
32	School preference	53	Creativity score
33	Next assignment preference	54	Reaction to stress score
34	Awards (dated 1952 and later)	66-154	Content analysis categories

CROSS VALIDATION

Two cross-validation analyses were done to compare shrinkage in the multiple correlation using mean criterion scores for qualitative variables with shrinkage resulting with the use of *a priori* values. The overall rating, Section IV of the OER, was the criterion in both analyses.

The 49 predictor variables selected consisted of the 7 OER subscales and 42 content variables. The latter were chosen so as to be representative of all the major categories contained in the category system. The Communications Officers (N = 1219) were split into an odd and even group based on roster numbers assigned alphabetically. Two sets of six prediction problems each were computed for the odd sample, with one set based on *a priori* scores, and the other on mean criterion scores. The six problems were as follows:

    1 — all 49 variables

    2 — 42 content variables only

    3 — 7 subscale variables only

    4 — 10 content variables only, randomly selected from the pool of 42

    5 — 20 content variables only, randomly selected from the pool of 42

    6 — 30 content variables only, randomly selected from the pool of 42

Weights obtained in each problem were applied to the even sample and correlations were computed between predicted and actual criterion scores. In applying the weights obtained in problems using mean criterion scores, the mean criterion scores computed for the odd sample were also applied to the even sample. The results of the cross validation are shown in Table 6.

TABLE 6. Results of Cross-Validation Analysis

Problem Number	Prediction Variables	Mean Criterion Scores			A Priori Scores		
		R^{2*}	r^{2**}	$(R^2 \text{-} r^2)$	R^{2*}	r^{2**}	$(R^2 \text{-} r^2)$
1	7 subscales & 42 content	.8857	.8828	.0029	.8631	.8801	- -
2	42 content	.4877	.4393	.0484	.3694	.3727	- -
3	7 subscales	.8719	.8799	- -	.8555	.8829	- -
4	10 content	.2922	.2473	.0449	.2011	.1940	.0071
5	20 content	.3818	.3692	.0126	.2712	.2734	- -
6	30 content	.4524	.4526	- -	.3368	.3919	- -

** Squared multiple correlation coefficient with OER Section IV as criterion; odd sample; N = 612.

** Squared Pearson r between predicted and actual criterion score; even sample; N = 607.

While the shrinkage is somewhat greater using the mean criterion scores, the resulting shrunken R^2s are nevertheless higher in all instances except one. This finding, coupled with the fact that the mean-criterion-score method provides an objective means of scaling, was sufficient advantage to use it in place of a priori arbitrary scores. The technique has general application wherever there is a problem of assigning values to categories which are to be grouped together for use as a single predictor. In this study it made possible the combination of such items as major academic fields into one predictor, religion into another, and flying status into still another. Its use was required in determination of the most appropriate values for the no-mention category of content analysis variables.

5. RESULTS

The chief quantitative results of this study are contained in the unpublished intercorrelation matrices, the regression analyses, and the frequency distributions.[3]

Three intercorrelation matrices, with 165 variables in each, were computed, as follows:

Matrix	Sample	N	Criterion used for Mean Criterion Scores
1	1 — Communications Officers	1205	OER Section IV (var. 40)
2	9 — R & D Officers	1812	OER Section IV (var. 40)
3	9 — R & D Officers	1812	Active duty status (var. 155)

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[3] Available on loan to qualified requesters from 6570th Personnel Research Laboratory, Lackland AFB, Texas.

Each regression problem was run four times: once for each of the two samples and once for each of the two criteria. The four "types" of each regression problem and the input matrix for each were as follows:

Regression Type	Sample	Criterion	Input Matrix
11XX	1 — Communications Officers	OER, Section IV (var. 40)	1
12XX	1 — Communications Officers	Active duty status (var. 155)	1
91XX	9 — R & D Officers	OER, Section IV (var. 40)	2
92XX	9 — R & D Officers	Active duty status (var. 155)	3

Twelve different types of regression problems were computed, for a total of 48 problems. The variables included in each problem are indicated below:

OER Section IV as criterion (var. 40)

1101: *All variables* minus active duty status (155); 1-39, 41-154, 156-165

9101: *All variables* minus active duty status (155); 1-39, 41-154, 156-165

1102: *Subscales;* 41-47

9102: *Subscales:* 41-47

1103: *Form 11 variables;* 1-34

9103: *Form 11 variables;* 1-34

1104: *Content analysis variables;* except "global evaluation" (138) and "should be promoted" (141), which were eliminated on the basis of high validities; 66-137, 139-140, 142-154

9104: *Content analysis variables;* same as 1104 except "taking courses for credit" (148) and "job-related hobbies" (152), which were eliminated because of extremely small variances which produced spuriously high intercorrelations; 66-137, 139-140, 142-147, 149-151, 153-154

1105: *Content and Form 11;* same as 1103 and 1104; 1-34, 66-137, 139-140, 142-154

9105: *Content and Form 11;* same as 9103 and 9104; 1-34, 66-137, 139-140, 142-147, 149-151, 153-154

1106: *Content and subscales;* same as 1102 and 1104; 41-47, 66-137, 139-140, 142-154

9106: *Content and subscales;* same as 9102 and 9104; 41-47, 66-137, 139-140, 142-147, 149-151, 153-154

1107: *Form 11 and subscales;* same as 1102 and 1103; 41-47, 1-34

9107: *Form 11 and subscales;* same as 9102 and 9103; 41-47, 1-34

1108: *Non-content OER;* 35-39, 48-59

9108: *Non-content OER;* 35-39, 48-59

1109: *Content totals;* 60-65

9109: *Content totals;* 60-65

1110: *Content, grade, and command;* 36, 66-137, 139-140, 142-154, 156-160

9110: *Content, grade, and command;* 36, 66-137, 139-140, 142-147, 149-151, 153-154, 156-160

1111: *Content and command;* same as 1110/minus 156-160; 36, 66-137, 139-140, 142-154

9111: *Content and command;* same as 9110 minus 156-160; 36, 66-137, 139-140, 142-147, 149-151, 153-154

1112: *Content and grade;* same as 1110 minus 36; 66-137, 139-140, 142-154, 156-160

9112: *Content and grade;* same as 9110 minus 36; 66-137, 139-140, 142-147, 149-151, 153-154, 156-160

Active duty status as criterion (var. 155)

1201: *All variables;* same as 1101 plus OER Section IV (40) and minus "Awards" (34), eliminated because of spuriously high validity resulting from data-collection artifact; 1-33, 35-154, 156-165

9201: *All variables;* same as 1201; 1-33, 35-154, 156-165

1202: *Subscales;* same as 1102; 41-47

9202: *Subscales;* same as 1202; 41-47

1203: *Form 11 variables;* same as 1103; minus "Awards" (34); 1-33

9203: *Form 11 variables;* same as 1203; 1-33

1204: *Content analysis variables;* same as 1104; 66-137, 139-140, 142-154

9204: *Content analysis variables;* same as 1204; 66-137, 139-140, 142-154

1205: *Content and Form 11;* same as 1105 minus "Awards" (34); 1-33, 66-137, 139-140, 142-154

9205: *Content and Form 11;* same as 1205; 1-33, 66-137, 139-140, 142-154

1206: *Content and subscales;* same as 1106; 41-47, 66-137, 139-140, 142-154

9206: *Content and subscales;* same as 1206; 41-47, 66-137, 139-140, 142-154

1207: *Form 11 and subscales;* same as 1107 minus "Awards" (34); 1-33, 41-47

9207: *Form 11 and subscales;* same as 1207; 1-33, 41-47

1208: *Non-content OER;* same as 1108; 35-39, 48-59

9208: *Non-content OER;* same as 1208; 35-39, 48-59

1209: *Content totals;* same as 1109; 60-65

9209: *Content totals;* same as 1209; 60-65

1210: *Content, grade, and command;* same as 1110; 36, 66-137, 139-140, 142-154, 156-160

9210: *Content, grade, and command;* same as 1210; 36, 66-137, 139-140, 142-154, 156-160

1211: *Content and grade;* same as 1111; 36, 66-137, 139-140, 142-154

9211: *Content and grade;* same as 1211; 36, 66-137, 139-140, 142-154

1212: *Content and grade;* same as 1112; 66-137, 139-140, 142-154, 156-160

9212: *Content and grade;* same as 1212; 66-137, 139-140, 142-154, 156-160

The squared multiple correlation coefficients obtained in these problems are shown in Table 7 together with the number of variables included in each problem and the number of variables whose weights were corrected from zero. Table 10 Appendix ιV, shows the OER problems entered by each variable and the direction of corrected weight, if any. It also contains the correlation of each variable with the OER rating.

Inspection of Table 7 indicates that the order of magnitude for the 12 R^2s using the OER criterion is almost exactly the same for the two samples, with a rank-order correlation between them of .984. In both samples, the second highest R^2 was obtained using a combination of the content variables and the subscales. For both samples, the next highest R^2 was achieved by the subscales alone, with the addition of Form 11 variables to the subscales adding nothing to the R^2. In both cases, the eight variables with corrected weights for the problem combining Form 11 variables and subscales (07) consist of the seven subscales and one Form 11 variable. Table 7 also indicates that the Form 11 variables alone (problem 03) are relatively poor predictors, yielding the lowest R^2 for Communications Officers and the next-to-the-lowest R^2 for R & D Officers.

These findings are not matched by the R^2s using active duty status as the criterion, except that here too the order of magnitude is the same for the two samples (rho -.976). Inspection of these R^2s indicates that the Form 11 variables are relatively good predictors of this criterion. This may be attributed to the fact that Form 11 variables such as grade and age are highly correlated with active duty status, with the younger officers constituting a large proportion of those who were released from active duty. Neither the subscales nor the content variables predicted active duty status as well as they predicted the OER criterion, but the content variables combined with Form 11 somewhat improved the R^2 for Communications Officers compared with Form 11 alone.

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TABLE 7. Results of Regression Analyses

Prob-lem	Predictor Variables	Criterion: OER Section IV						Criterion: Active Duty Status					
		Communications Officers			R & D Officers			Communications Officers			R & D Officers		
		Number of Variables	Variables with Corrected Wts	R^2	Number of Variables	Variables with Corrected Wts	R^2	Number of Variables	Variables with Corrected Wts	R^2	Number of Variables	Variables with Corrected Wts	R^2
01	All	163	14	.908	163	13	.870	163	65	.487	163	35	.753
02	OER subscales	7	7	.896	7	7	.860	7	4	.060	7	7	.199
03	Form 11	34	20	.154	34	14	.182	33	24	.349	33	20	.724
04	Content	87	45	.522	85	52	.476	87	48	.198	87	40	.362
05	Content & Form 11	121	60	.563	119	55	.511	120	60	.450	120	33	.744
06	Content & subscales	94	11	.901	94	13	.865	94	50	.212	94	40	.420
07	Form 11 & subscales	41	8	.896	41	8	.861	40	25	.360	40	21	.730
08	Non-content OER	17	10	.247	17	11	.178	18	13	.155	18	9	.393
09	Content totals	6	4	.617	6	5	.596	6	6	.055	6	6	.122
10	Content, grade, command	93	45	.540	91	54	.502	93	46	.306	93	23	.628
11	Content & command	88	43	.538	86	55	.487	88	49	.198	88	42	.373
12	Content & grade	92	47	.525	90	53	.493	92	46	.306	92	22	.626

Comparison between the order of magnitude of the R^2s for the OER criterion and those for the active duty status criterion shows that there is little similarity in the relative effectiveness of groups of variables as predictors. For Communications Officers rho = .201 while for R & D Officers rho — .173. It is apparent from the data shown in Table 7 that the two samples of officers are highly similar to each other, whether one is predicting the OER rating or active duty status, and that predicting active duty status is a considerably different problem than predicting the OER rating. Further analysis of the weights obtained would offer considerably more detail on both of these findings.

Table 7 also indicates that, while the rank order of the R^2s is the same for the two samples, there is a consistent difference between them with regard to the value of R^2. For the OER criterion, all R^2s are slightly higher for the Communications Officers, with the exception of the Form 11 problem (03). For the active duty status criterion, all R^2s are considerably higher for the R & D Officers. This is due jointly to the difference in p/q split between R & D Officers and Communications Officers on active duty and to the way the inter-correlation matrices were formulated. The R^2s for R & D Officers were based on raw data transformed to mean criterion scores based on active duty status, while the corresponding R^2s for Communications Officers were based on raw data transformed to mean criterion scores based on OER rating.

The F test for the significance of a difference between multiple R^2s (Guilford, 1956, p. 400) was applied to several pairs of multiple correlations (using the OER criterion) in which one is based on variables forming a subset of the variables included in the other. The obtained values of F are shown in Table 8.

The validities for all variables are shown in Table 11, Appendix IV. The preponderance of negative correlations with active duty status reflects the coding scheme for the criterion, in which "not on active duty" received the higher score. In Table 9 the variables are broken out according to the significance of their validities (with the OER criterion) in the two samples. Most of the variables with significant validity for the R & D sample only are Form 11 variables which generally reflect the fewer years of military service of this group as compared with Communications Officers.[4]

Again, the general impression is that the two samples are more alike than different. With regard to the content analysis variables, it was found that 76 out of the 89 variables were significant (against OER rating) for the R & D Officers and 76 were significant for the Communications Officers. Five content variables were significant for R & D only and five were significant for Communications Officers only. Eight content variables were not significant for either sample, and 71 were significant for both.

Similarity between the two groups is also shown by several other findings. For example, correlations were computed between the percentage of cases with "no-mention" and the validity (with OER) for all 89 content categories. For Communications Officers the obtained r was -.614, and for R & D Officers r —.360. This would indicate that the more frequently used content categories tended to have the higher validities in both samples. In addition, the mean percentage of no-mention for Communications Officers was 78.2 and the corresponding mean for R & D Officers was 78.5. The correlation between percentage of no-mention for the two groups was .829. The

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[4] Form 11's of the R & D Officers who were not on active duty, constituting 30% of the group, were quite different from the records of the others. Relatively more of these records had no entries for such data as overseas experience, career schools, and Item 19, Assignments. It is not known whether this reflects a true difference between those released from and those remaining on active duty, or whether the Form itself undergoes a misleading clerical change when an officer's records are transferred to the Denver Record Center. The answer to this question would be of great value in interpreting all the findings for R & D Officers, and particularly the frequency distributions and validities for active duty status.

TABLE 8. Statistical Evaluation of Diff: rences Between R^2s
(OER criterion)

Problem Pairs	Communications Officers				R & D Officers			
	R^2	df_1	df_2	F	R^2	df_1	df_2	F
01-all variables	.908				.870			
vs.		156	1041	.87		156	1648	.81
02-OER subscales	.896				.860			
05-content & Form 11	.563				.511			
vs.		34	1083	2.99*		34	1692	3.56*
04-content only	.522				.476			
06-content & subscales	.901				.865			
vs.		87	1110	.64		87	1717	.73
02-subscales only	.896				.860			
10-content, grade & command	.540				.502			
vs.		6	1111	7.25*		6	1720	14.97*
04-content only	.522				.476			
11-content & command	.538				.487			
vs.		1	1116	38.65*		1	1725	36.99*
04-content only	.522				.476			
12-content & grade	.525				.493			
vs.		5	1112	1.41		5	1721	11.54*
04-content only	.522				.476			
10-content, grade & command	.540				.502			
vs.		5	1111	.97		5	1720	10.36*
11-content & command	.538				.487			
10-content, grade & command	.540				.502			
vs.		1	1111	36.23*		1	1720	31.08*
12-content & grade	.525				.493			

*Significant beyond the 1% level of confidence.

correlation between content validities was .776; the mean content validity for Communications Officers was .174 and for R & D it was .149. Finally, the correlation between all OER validities was .890, with a mean validity of .183 for Communications Officers and a mean validity of .190 for R & D Officers.

DISCUSSION

This research was a feasibility study to identify variables relating to success in the Communications Officer Specialty and in the Research and Development Engineering and Scientific Career Area. The study involved a content analysis of Section V, the word picture, of the

TABLE 9. Significance of Validities by Sample

Significant Validity for Both Samples

1 Months in active comm serv	73 Judgment
3 Source of commission	74 Keen
8 Months in field	76 Apply knowledge
12 Average responsibility level	77 Decisive
16 Component — Regular Officer	78 Meets req X
17 Component — Reserve Officer	79 Meets req
20 Level of education	80 Sound X
21 Major academic field	81 Sound
24 Age in years	83 Creative
25 Grade	84 Drive X
27 Marital status	85 Drive
30 Career preference	87 Determination
32 School preference	89 Task oriented
34 Awards	91 Accepts resp
35 Coded Duty AFSC	92 Cooperative X
36 Coded Duty AFSC	93 Cooperative
38 Rater grade	94 Plans X
39 Relative level of rater	95 Plans
40 Overall effectiveness, OER (criterion score)	96 Written comm X
41 Subscale 1 — Job Knowledge	97 Written comm
42 scale 2 — Cooperation	98 Oral Comm X
43 Subscale 3 — Judgment	99 Oral Comm
44 Subscale 4 — Mgmt qual	100 Management X
45 Subscale 5 — Leadership	101 Management
46 Subscale 6 — Communication facility	102 Coordination X
47 Subscale 7 — Promotion potential	103 Coordination
48 No. of addit factors rated	104 Analysis X
50 Responsibility score	105 Analysis
51 Initiative score	106 Leadership X
52 Adaptability score	107 Leadership
53 Creativity score	110 Trustworthy
56 Initiative not rated	111 Dependable
60 Length of Section V	112 Ambition
61 No. of scorable units of information	113 Loyal
62 No. of ex of effective performance	114 Conscientious
63 No. of ex of ineffective performance	115 Career minded
64 No. of inf units involving ineffectiveness	117 Positive effect
65 Analyst's rating of ratee	118 Mature
66 Analytical	119 Conforms to AF
67 Direct X*	122 Considerate
68 Direct	123 Understanding
69 Methodical X	124 Strong
70 Methodical	125 Effective prog
71 Initiative X	126 Impr tech ops
72 Initiative	127 Monetary savings

*X indicates score for concrete example of the attribute.

Table 9 (*Continued*)

Significant validity for both samples (*Continued*)

128	Personnel util	140	Incr resp
129	Attitude of unit	141	Promoted
130	Unit commend	142	Remain
131	Unspec results	143	Staff
132	Tech knowl	144	Command/teaching
133	Experience	146	Prof school
134	Well-qual	151	Studies
135	Related areas	153	Civic resp
136	Interest in field	155	Active duty status
137	Supervision required	157	1st Lieutenant
138	Global evaluation	163	ROTC graduate

Significant Validity for Communications Officer Only

29	Race	82	Creative X
54	Reaction to stress score	108	Personal interest
57	Adaptability not rated	121	Friendly
75	Applying knowledge X	147	Tech school

Significant Validity for R & D Officer Only

2	Break in act comm serv	26	Security clearance level
4	Relative speed of promotion	28	Religion
5	Months in grade	31	Command pref
6	Mos overseas as an officer	33	Next assign preference
7	Overseas serv as an officer	37	Civilian rater
10	No. of AFSCs held	49	Unique factor rated
11	No. of assignments in field	58	Creativity not rated
13	Combat exper	86	Determination X
14	Highest enl rank	88	Task oriented X
15	No enlisted service	120	Sense of humor
18	No. of serv school courses	145	Other
19	Highest career school	154	Int flying
22	Rating/flying status/jet qualif	158	Captain
23	Total flying hours	159	Major

Validity not Significant for Either Sample

9	Duty not in primary field	150	Plans for education
55	Responsibility not rated	152	Hobbies
59	Reaction to stress not rated	156	2nd Lt
90	Accepts responsibility	160	Lt Col
109	Instructions	161	Maj acad field in engr, science, & math
116	Quiet		
139	Temp duty	162	More than 2 yrs of college
148	Courses for credit	164	Maj acad field in bus admin & management
149	Mil courses		
		165	Maj acad field in lib arts

effectiveness report as a major portion of the effort. Bearing in mind the feasibility aspect of the research, it is seen that the effort met its goals. Consistent categories of description were found which have an appreciable relation to the criterion of overall effectiveness rating. In arriving at these results new ground was broken and a great deal of data were compiled for future analyses. A major innovation was the test and exploitation of a technique for combining an array of categories into a single predictor variable so as to maximize its validity with the criterion. This technique replaced an arbitrary predictor weight for each category by the mean criterion value observed for the cases in that category. Another pioneering effort was the application of the multiple linear regression model to problems containing 165 predictors. The resulting printouts of intercorrelation matrices and the data tapes provide a reservoir for future analyses. Other lesser results of the study are refinements of coding objective data from the officer record, among which are better coding of educational history and a weighting scheme for recording responsibility levels of previous duty assignments. It is hoped that the extensive data from this study will provide leads for determination of the most important factors in officer effectiveness which differentiate among officers within and between specialties.

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APPENDIX I: DATA CODES AND CARD LOCATIONS

Data Codes: Card 1

Variable Number	Name of Variable	Card Column
1	Months in active commissioned service	1-3
	Continuous variable; OER date minus TAFCSD	
2	Break in active commissioned service	4
	Dichotomy	
	1 - more than 3 months difference between EAD and TAFCSD	
	0 - no difference, or less than 3 months between EAD and TAFCSD	
3	Source of Commission	5-6 (MCS-11)*
	11 - USMA graduate (A)	
	12 - USNA graduate (B)	
	13 - Distinguished grad of ROTC (RDMG) (C)	
	14 - Distinguished grad of OCS (SDMG) (D)	
	15 - Distinguished grad of Flying Trng. Sch. (FDMG) (E)	
	16 - Miscellaneous (H)((K) (N) (O)	
	17 - ROTC graduate (J)	
	19 - OCS graduate (SSCH) (L)	
	21 - Flying Training Graduate (AC) (AVN) (M)	
	24 - Direct appointment from civil life (DPCiv) (P)	
	25 - Unknown (Z)	
4	Relative speed of promotion	7 (MCS-3)
	1 - Slower than average	
	2 - Average	
	3 - Faster than average	

	Communications Off.			R & D Off.		
	1st Lt	Capt	Major	1st Lt	Capt	Major
1	3 years or more	7 years or more	14 years or more	3 years or more	7 years or more	15 years or more
2	less than 2 years	5-6 years	9-13 years	less than 2 years	5-6 years	11-14 years
3	--	less than 4 years	less than 8 years	--	less than 4 years	less than 10 years

5	Months in grade	8-10
	Continuous; OER date minus date of highest temporary grade	

*MCS signifies that the levels were converted to Mean Criterion Scores. The number indicates the number of levels involved.

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Variable Number	Name of Variable	Card Column
6	Months overseas as an officer	11
	Continuous variable	
	0 - No O/S service as officer	
	1 - 1-5 months	
	2 - 6-18 months	
	3 - 19-30 months	
	4 - 31-42 months	
	5 - 43-54 months	
	6 - 55-66 months	
	7 - 67-78 months	
	8 - 79-90 months	
	9 - 91 and higher:	
7	Overseas service as officer	12
	Dichotomy	
	1 - Any O/S service as officer	
	0 - None	
8	Months in field	13-14
	Continuous variable; OER date minus date entered field (earliest date of AFSC with same first 2 digits as DAFSC).	
9	Duty not in primary field	15
	Dichotomy	
	1 - DAFSC is not the same as PAFSC (3 digits)	
	0 - DAFSC is the same as PAFSC (3 digits)	
	(if no PAFSC, treat as 0)	
10	Number of AFSC's held	16
	Continuous variable, limit of 9	
11	Number of assignments in field	17-18
	Continuous variable; C-E: 30xx	
	R & D: 84xx, 85xx, 86xx, 87xx, 88xx	
12	Average responsibility level	19-20
	Continuous variable; assignments in field only. (See Appendix III)	
13	Combat experience	21
	Dichotomy	
	1 - In combat at some time	
	0 - Never in combat	
14	Highest enlisted rank	22 (MCS-7)
	0 - No enlisted service (or A/C only)	
	2 - Private	
	3 - Corporal; T/5; S 1/C	
	4 - Sergeant; P.O. 3; T/4	
	5 - Staff Sergeant; P.O. 2; T/3	
	6 - Technical Sergeant; P.O. 1	
	7 - Master Sergeant; C.P.O.	
15	No enlisted service	23
	Dichotomy	
	1 - No enlisted service	
	0 - Any enlisted service other than A/C	

Variable Number	Name of Variable	Card Column
16	Component-Regular Officer Dichotomy 1 - Regular officer 0 - Reserve officer	24
17	Component - Reserve Officer Dichotomy 1 - Reserve officer 0 - Regular officer	25
18	Number of service school courses Continuous variable; limit of 9, includes correspondence courses	26
19	Highest career school 0 - None 1 - Squadron Officer's course 2 - Command and Staff College	27 (MCS-3)
20	Level of education 0 - Unknown 1 - High school, non-grad. 2 - High school grad. 3 - College, 1 yr. (less than 2); 30-59 sem. hrs.; 45-89 quarter hrs. 4 - College, 3 yrs. (less than 4); 60 or more sem. hrs.; 90 or more quarter hrs. 5 - College graduate 6 - Post-grad. study, no degree 7 - Master's degree or 2 bachelors' degrees 8 - 2 masters' degrees or masters in field other than bachelor's degree 9 - Ph. D, M.D. or both	28 (MCS-10)
21	Major academic field 01 - Engineering, weapons system; general 02 - Engineering, aeronautical 03 - Engineering, electrical; electronics 04 - Engineering, mechanical 05 - Engineering, nuclear 06 - Engineering, chemical; petroleum 07 - Engineering, civil; hydraulic 08 - Engineering, safety 09 - Engineering, industrial & production; textile 10 - Physics, general; nuclear; geo-; biological 11 - Chemistry, general; nuclear, biological 12 - Biology; bio-radiology; bacteriology 13 - Meteorology 14 - Geology 15 - Metallurgy 16 - Ceramics; ceramic engineering 17 - General science 18 - Nuclear science 19 - Electricity; electronics 20 - Mathematics, general	29-30 (MCS-56)

Variable Number	Name of Variable	Card Column
21 (*Cont'd*)	Major academic field (*Continued*)	29-30 (MCS-56)
	21 - Math, digital computation	
	22 - Math, linear programming	
	23 - Math, statistical	
	25 - Chemistry, solid state	
	26 - Engineering, architectural (naval)	
	27 - Engineering, astronautical	
	28 - Physiology	
	29 - Botany; plant pathology; horticulture	
	30 - Business admin., general	
	31 - Management (includes industrial relations, marketing, sales mgmt., public relations, advertising)	
	32 - Accounting	
	33 - Personnel management	
	34 - Transportation	
	35 - Engineering mgmt. (includes industrial admin.)	
	36 - Research & development mgmt.	
	37 - Public Admin.	
	40 - Economics	
	41 - International relations	
	42 - Political science (includes geo-politics)	
	43 - Law	
	44 - Psychology	
	45 - Sociology or social science	
	46 - Education	
	47 - Criminology (includes police admin.)	
	48 - Liberal arts; humanities	
	49 - History	
	50 - Geography	
	51 - Photography; photogrammetry; cartography	
	52 - Foreign languages	
	53 - Journalism	
	54 - English	
	55 - Theology	
	60 - Military science	
	61 - Military engineering	
	62 - All other	
	63 - Unknown or none	
22	Rating/flying status/jet qualification	31 (MCS-7)
	1 - Suspended	
	2 - non-pilot/not on flying status/not jet qual. (includes unrated officers)	
	3 - non-pilot/on fly status	
	4 - pilot/not on fly status/not jet qual.	
	5 - pilot/not on fly status/jet qual.	
	6 - Pilot/on fly status/not jet qual.	
	7 - Pilot/on fly status/jet qual.	

Variable Number	Name of Variable	Card Column
23	Total flying hours Continuous variable 0 - None 1 - 1-500 hours 2 - 501-1000 3 - 1001-1500 4 - 1501-2000 5 - 2001-2500 6 - 2501-3000 7 - 3001-3500 8 - 3501-4000 9 - Over 4000	32
24	Age in years Continuous variable; date of OER minus date of birth (years only)	33-34
25	Grade 1 - 2nd Lt 2 - 1st Lt 3 - Captain 4 - Major 5 - Lt Col	35 (MCS-4)
26	Security clearance level 0 - None 1 - Through secret 2 - Top secret 3 - Crypto 4 - Q	36 (MCS-5)
27	Marital status 1 - Single 2 - Married, one dependent 3 - Married, two or more dependents 4 - Widowed 5 - Divorced	37 (MCS-5)
28	Religion 1 - Baptist, Congregational, Episcopalian, Lutheran, Methodist, Presbyterian, Reformed 2 - Other Protestant 3 - Catholic, all 4 - Jewish, all 5 - Other than Protestant, Catholic, or Jewish 6 - Protestant, unspecified 7 - No preference 8 - Unknown	38 (MCS-8)
29	Race 1 - Negro 2 - White; Caucasian 3 - Mongolian 4 - American Indian 5 - Malayan	39 (MCS-5)

Variable Number	Name of Variable	Card Column
30	Career preference	40 (MCS-3)
	1 - Same as duty field (OER)	
	2 - Different from duty field (OER)	
	3 - No preference	
31	Command preference	41 (MCS-3)
	1 - Same command as OER	
	2 - Different command from OER	
	3 - No preference	
32	School preference	42 (MCS-4)
	1 - Schooling in same field as OER	
	2 - Schooling in field different from OER	
	3 - No preference	
	4 - Career school only (Sq. O., AC &SS)	
33	Next assignment preference	43 (MCS-3)
	1 - Assignment in same field as OER	
	2 - Assignment in field different from OER	
	3 - No preference	
34	Awards (dated 1952 and later)	44 (MCS-5)
	0 - No letter of appreciation and no medal (Unit citation is not a medal)	
	1 - Letter but no medal	
	2 - Medal but no letter	
	3 - Letter and medal	
	4 - No information	
35	Coded Duty AFSC	45 (MCS-5) (MCS-7)

Comm. officers	R & D officers (see below)
1 - 3034	1 - Management
2 - 3011	2 - Scientific
3 - 3016	3 - Engineering
4 - 30xx	4 - Psychology
5 - All others	5 - Flight Test
	6 - Education & training
	7 - All others

R & D Officers

1 - 8416 R&D Director		3 - 8616 Aero Eng	
8446 R&D Admin.		8626 Electr Eng	
8464 R&D Staff Asst.		8636 Mech Eng	
8696 R&D Off. Special		8646 Computer Prog &Sys Des Eng	
2 - 8516 Nuclear Res Off		4 - 8596 Res Psychologist	
8526 Mathematician		5 - 8744 Exper Flt Test Off	
8556 Physicist		6 - 75xx Education & Trng Off	
8566 Chemist		7 - All others	
8576 Metallurgist			
8586 Res Biologist			

24

Variable Number	Name of Variable	Card Column
36	Command (OER)	46-47 (MCS-20)

11 - Air Force Academy   22 - USAF Hq
12 - Air Defense Com   23 - Hq Com, USAF
13 - Air Materiel Com   24 - Mil Air Transp Serv
14 - Air Res & Dev Com   25 - Strategic Air Com
15 - Air Trng Com   26 - Tactical Air Com
16 - Air Univ   27 - US Air Forces in Europe
17 - Alaskan Air Com   28 - USAF Security Service
18 - Caribbean Air Com   29 - AF Accounting Finance Div
19 - Continental Air Com   30 - Other (SHAFE, MAP, etc.)
21 - Pacific Air Force   31 - Unknown

37   Civilian rater   48
Dichotomy
   1 - rater is a civilian
   0 - rater is not a civilian

38   Rater grade   49 (MCS-10)
   0 - 1st Lt
   1 - Captain
   2 - Major
   3 - Lt Col
   4 - Col
   5 - General Officer
   6 - Civilian up to GS-13
   7 - GS-13
   8 - GS-14
   9 - GS-15 and higher

39   Relative level of rater   50 (MCS-4)
   0 - Same level as ratee
   1 - One grade higher
   2 - Two grades higher
   3 - Three or more grades higher
Equivalents of civilian grades
   GS-9   - 1st Lt
   GS-11   = Captain
   GS-12   Major
   GS-13   · Lt Col
   GS-14   = Lt Col
   GS-15   = Col
   GS-16 & up = General Officer

40   Overall effectiveness, OER (criterion score)   51
   0 - Unsatisfactory
   1 - Marginal
   2 - Acceptable
   3 - Dependable$_1$
   4 - Dependable$_2$

0	1	2	2	2	3	4	5	6	7	8	9	9	9

Variable Number	Name of Variable	Card Column
40 (*Cont'd*)	Overall effectiveness, OER (criterion score) (*Continued*) 5 - Dependable$_3$ 6 - Very fine$_1$ 7 - Very fine$_2$ 8 - Very fine$_3$ 9 - Outstanding	51
41	Subscale 1 - Job knowledge	52 -53 (MCS-11)

11	0	0	0	1	1	1	2	2	3	4	5	6	7	8	9		

Variable Number	Name of Variable	Card Column
42	Subscale 2 — Cooperation See variable 41	54-55 (MCS-11)
43	Subscale 3 - Judgment See variable 41	56-57 (MCS-11)
44	Subscale 4 - Management qualities See variable 41	58-59 (MCS-11)
45	Subscale 5 - Leadership See variable 41	60-61 (MCS-11)
46	Subscale 6 - Communication facility See variable 41	62-63 (MCS-11)
47	Subscale 7 - Promotion Potential See variable 41	64-65 (MCS-11)
48	Number of additional factors rated Continuous variable; limit of 3	66
49	Unique factor rated (factor other than those contained in variables 50-54) Dichotomy 1 - At least one unique factor is rated 0 - No unique factor is rated	67
50	Responsibility score 0 - Not rated 1 - Inadequate 2 - Satisfactory 3 - Competent & efficient 4 - Excellent 5 - Outstanding	68 (MCS-6)
51	Initiative Score See variable 50	69 (MCS-6)
52	Adaptability score See variable 50	70 (MCS-6)
53	Creativity score See variable 50	71 (MCS-6)
54	Reaction to stress score See variable 50	72 (MCS-6)

Variable Number	Name of Variable	Card Column
--	Overall effectiveness, OER	73
	See variable 40	
--	Active duty status	74
	0 - On active duty (in)	
	1 - Not on active duty (out)	
--	Sample number	75
	1 - Communications Officers	
	9 - R & D Officers	
--	Deck No. 1	76
--	Roster Number	77-80
	Numerical Code	

Data Codes: Card 2

55	Responsibility not rated	1
	Dichotomy	
	1 - not rated	
	0 - rated	
56	Initiative not rated	2
	Dichotomy	
	1 - not rated	
	0 - rated	
57	Adaptability not rated	3
	Dichotomy	
	1 - not rated	
	0 - rated	
58	Creativity not rated	4
	Dichotomy	
	1 - not rated	
	0 - rated	
59	Reaction to stress not rated	5
	Dichotomy	
	1 - not rated	
	0 - rated	
60	Length of Section V	6-8
	Continuous variable; numerical code; lines of text	
61	Number of scorable units of information	9-10
	Continuous variable; numerical code	
62	Number of examples of effective performance	11-12
	Continuous variable; numerical code	
63	Number of examples of ineffective performance	13
	Continuous variable; numerical code, limit of 9	
64	Number of information units involving ineffectiveness	14
	Continuous variable; numerical code; limit of 9	

Variable Number	Name of Variable	Card Column
65	Analyst's rating of ratee (based on Sec. V) 0 - Unsatisfactory 1 - Marginal 2 - Acceptable 3 - Dependable$_1$ 4 - Dependable$_2$ 5 - Dependable$_3$ 6 - Very fine$_1$ 7 - Very fine$_2$ 8 - Very fine$_3$ 9 - Outstanding	15
66-121	Content analysis categories (56) See Appendix II	16-71 (MCS-504)
--	Analyst 1 - KR 2 - JM 3 - AJF 4 - DSE 5 - SL	72
--	Overall effectiveness, OER See variable 40	73
--	Active duty status Dichotomy 1 - Not on active duty (out) 0 - On active duty (in)	74
--	Sample Number 1 - Communications Officer 9 - R & D Officer	75
--	Deck No. 2	76
--	Roster Number	77-80

Boxes (across from variable 65): | 0 | .1 | 2 | 2 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 9 | 9 |

28

Data Codes: Card 3

Variable Number	Name of Variable	Card Column
122-154	Content analysis categories (33) See Appendix II	1-33 (MCS-216)
155	Active duty status (criterion) Dichotomy 1 - Not on active duty (out) 0 - On active duty (in)	34
156	2nd Lieutenant Dichotomy 1 - 2nd Lieutenant 0 - Not a 2nd Lieutenant	35
157	1st Lieutenant Dichotomy 1 - 1st Lieutenant 0 - Not a 1st Lieutenant	36
158	Captain Dichotomy 1 - Captain 0 - Not a captain	37
159	Major Dichotomy 1 - Major 0 - Not a Major	38
160	Lt. Colonel Dichotomy 1 - Lt Colonel 0 - Not a Lt Colonel	39
161	Major academic field in engineering, science, or math Dichotomy 1 - Yes (Var. 21, codes 01-29, 60 and 61) 0 - No	40
162	More than 2 years of college 1 - Yes (Var. 20, codes 4-9) 0 - No	41
163	ROTC graduate 1 - Yes (Var. 3, codes 13 and 17) 0 - No	42
164	Major academic field in business administration or management Dichotomy 1 - Yes (Var. 21, codes 30-37) 0 - No	43
165	Major academic field in liberal arts Dichotomy 1 - Yes (Var. 21, codes 40-55) 0 - No	44
- -	Primary AFSC Numerical code	47-50

Variable Number	Name of Variable	Card Column
--	Date of EAD Month and year	51-54
--	TAFCSD Month and year	55-58
--	Analyst's rating of rater 1 - Poor 2 - Satisfactory 3 - Competent and efficient 4 - Outstanding	59
--	Name Alpha code; first 3 letters of last name and 2 initials	60-64
--	Serial number Numerical code; regular officers have X in 65 & 66	65-71
--	Analyst 1 - DSE 2 - SL 3 - JM 4 - KR 5 - AJF	72
--	Overall effectiveness, OER See variable 40	73
--	Active duty status Dichotomy 1 - Not on active duty (out) 0 - On active duty (in)	74
--	Sample number 1 - Communications officer 9 - R & D Officer	75
--	Deck No. 3	76
--	Roster number	77-80

Data Codes: Card 4

Variable Number	Name of Variable	Card Column
--	Date of highest temporary grade Month and year	1-4
--	Ending date of OER Month and year	5-8
--	Year of birth Last 2 digits of year	9-10
--	Aeronautical rating 1 - Pilot, Senior Pilot, Command Pilot 2 - Non-pilot 3 - Non-rated 4 - Suspended	13

--	Flying status
	Dichotomy
	   1 - On flying status
	   0 - Not on flying status
		14

--	Endorser's score for subscale 1 See variable 41	15
--	Endorser's score for subscale 2 See variable 41	16
--	Endorser's score for subscale 3 See variable 41	17
--	Endorser's score for subscale 4 See variable 41	18
--	Endorser's score for subscale 5 See variable 41	19
--	Endorser's score for subscale 6 See variable 41	20
--	Endorser's score for subscale 7 See variable 41	21
--	Endorser's score for overall effectiveness See variable 40	22
--	Duty AFSC Numerical code	23-26
--	Overall effectiveness, OER See variable 40	73
--	Active duty status 1 - Not on active duty (out) 0 - On active duty (in)	74
--	Sample number 1 - Communications Officer 9 - R & D Officer	75
--	Deck Number 4	76
--	Roster number	77-80

Variable Number		Category	Card Column
			(Card 2)
	1.	**Approach to job problems**	
66	a.	analytical; logical or orderly thinking	16
67, 68*	b.	direct; objective; clear-thinking; absence of irrelevancies; quick to grasp situation; correctly evaluates facts; sees the big picture	17, 18
69, 70	c.	methodical; thorough; accurate; attention to detail; keeps accurate records; follows through; collects all facts	19, 20
71, 72	d.	initiative; seeks out problems; discovers or recognizes problems or inadequacies	21, 22
73	e.	good judgment; common sense	23
74	f.	keen; alert; intelligent; quick to learn	24
75, 76	g.	applying knowledge; understanding of technical material; other mental abilities	25, 26
77	h.	decisive; takes quick or aggressive action; doesn't delay decisions; effective in emergencies	27
78, 79	i.	meets requirements; completes assignments; prompt	28, 29
	2.	**Solutions, Decisions, Recommendations, or Plans**	
80, 81	a.	sound; accurate; correct; logical; appropriate; practical; constructive	30, 31
82, 83	b.	creative; original; resourceful; ingenious; imaginative	32, 33
	3.	**Efforts at getting the job done**	
84, 85*	a.	drive; energetic; hard-working; industrious; rapid; intense; enthusiastic	34, 35
86, 87	b.	determination; perservering; tenacious; eager to get the job done; concentration	36, 37
88, 89	c.	task or goal oriented; professional manner or attitude; sub-ordinates personal convenience or desires; gives extra effort	38, 39
90, 91	d.	accepts responsibility; welcomes increased responsibility	40, 41
92, 93	e.	cooperative; provides assistance; works as member of team; harmonious working relations; keeps others informed	42, 43
	4.	**Specific job capabilities**	
94, 95	a.	develops effective plans, policies, or estimates	44, 45
96, 97	b.	effective written communications (including correspondence, studies, and reports): factual; concise; clear; well-written	46, 47
98, 99	c.	effective oral communications (including conferences and briefings): convincing; clear; factual	48, 49
100, 101	d.	effective management or administration	50, 51
102, 103	e.	effective in dealing with other agencies or organizations: coordination; liaison; good working relations; negotiating ability	52, 53

*Where two numbers are indicated, the first number refers to concrete examples of the attribute, as distinct from more general statements.

Content Analysis Categories (*Continued*)

Variable Number			Category	Card Column
				(Card 2)
	4.		Specific job capabilities (*Continued*)	
104, 105*		f.	effective analysis, review, or special studies	54, 55
	5.		Directing others	
106, 107		a.	effective leadership, supervision, or management of subordinates; utilizes personnel properly; delegates authority	56, 57
108		b.	shows personal interest in others; loyal to subordinates; fair; impartial	58
109		c.	gives effective instructions	59
	6.		Personal conduct	
110		a.	trustworthy; personal integrity; high morals; conduct above reproach	60
111		b.	dependable; reliable; has high standards	61
112		c.	ambition; motivated to get ahead	62
113		d.	loyal; supports superiors' goals	63
114		e.	conscientious; dedicated; serious-minded	64
115		f.	career-minded; devoted to AF	65
	7.		Personality attributes	
116		a.	quiet; mild-mannered; unassuming; modest	66
117		b.	has positive effect on others (including subordinates): inspires confidence; obtains respect, support, cooperation; is liked or admired; creates favorable impression of self and AF	67
118		c.	mature; emotionally stable; self-confident; works well under stress; self-discipline; adaptable	68
119		d.	conforms to AF mores; military bearing, appearance or manner; maintains physical condition	69
120		e.	sense of humor	70
121		f.	friendly; cheerful; agreeable; pleasant or pleasing personality; likes people; gregarious; congenial; generally gets along well with others	71
				(Card 3)
122		g.	considerate of others; tactful and courteous; respectful; exemplary social conduct; "gentleman"; dignified	1
123		h.	understanding of others; patient; tolerant	2
124		i.	strong; outspoken; aggressive, courage of convictions	3
	8.		Results or anticipated results of efforts	
125		a.	effective or improved unit or program (not specified further)	4
126		b.	improved technical operations	5
127		c.	monetary savings	6
128		d.	improved personnel utilization or training efficiency	7
129		e.	improved attitude or appearance of unit; morale; esprit de corps	8
130		f.	unit or personal commendation; has favorable reputation	9
131		g.	unspecified effective results	10

*Where two numbers are indicated, the first number refers to concrete examples of the attribute, as distinct from more general statements.

33

Variable Number	Category	Card Column
		(Card 3)
	9. **Knowledge and experience**	
132	a. technical knowledge of field	11
133	b. experience or background in field	12
134	c. "well-qualified" for job; versatile; shows improvement	13
135	d. knowledge of related areas (e.g., management)	14
136	e. interest in field	15
	10. **Performance evaluation**	
137	a. supervision required	16
	1 - extensive; a great deal	
	2 - moderate amount; "some"	
	3 - no mention	
	4 - little; occasional; minimal; limited	
	5 - none	
138	b. global evaluation (of man or job done)	17
	1 - satisfactory in routine aspects	
	2 - satisfactory; competent; capable; efficient; effective; fine	
	3 - very satisfactory; very competent; very capable; very efficient; very effective; very fine	
	4 - no mention	
	5 - outstanding; superior; excellent	
	6 - very outstanding; very superior; most excellent; would continue to serve with him	
	7 - most outstanding officer seen in 10 years, etc.	
139	c. global evaluation of temporary higher duty	18
	1 - no mention	
	2 - satisfactory in routine aspects	
	3 - satisfactory; competent; capable; efficient; effective; fine	
	4 - very satisfactory; very competent; very capable; very efficient; very effective; very fine	
	5 - outstanding; superior; excellent	
	6 - very outstanding; very superior; most excellent; would continue to serve with him	
	7 - most outstanding officer seen in 10 years, etc.	
	11. **Potential**	
140	a. capable of increased responsibility; has potential	19
141	b. should be promoted	20
	1 - negative statement	
	2 - no mention	
	3 - with contemporaries; qualified for higher grade; promote at next cycle	
	4 - ahead of contemporaries; exceptionally well qualified for higher grade; promote immediately	

Variable Number	Category	Card Column
		(Card 3)

12. Suggested assignments

142   a. remain in same or similar specialty   21

1 - negative statement
2 - no mention
3 - on the same level: mild recommendation
4 - on the same level: strong recommendation
5 - on a somewhat higher level: mild recommendation
6 - on a somewhat higher level: strong recommendation
7 - on a much higher level: mild recommendation
8 - on a much higher level: strong recommendation

143   b. staff position   22

C-E	R & D
1 - no mention	1 - no mention
2 - wing or division level: mild recommendation	2 - below division level: mild recommendation
3 - wing or division level: strong recommendation	3 - below division level: strong recommendation
4 - numbered AF, major air command or higher level: mild recomm.	4 - division level: mild recomm.
5 - numbered AF, major air command or higher level: strong recomm.	5 - division level: strong recomm.
	6 - ARDC Center or Hqs.: mild recommendation
	7 - ARDC Center or Hqs.: strong recommendation
	8 - Hq USAF or DOD: mild recomm.
	9 - Hq USAF or DOD: strong recomm.

C-E	R & D	
144 c. command position	teaching or specific research	23
1 - no mention	1 - no mention	
2 - detachment level: mild recommendation	2 - mild recommendation	
3 - detachment level: strong recommendation	3 - strong recommendation	
4 - squadron level: mild recomm.		
5 - squadron level: strong recomm.		
6 - higher than squadron level: mild recommendation		
7 - higher than squadron level: strong recommendation		

145   d. other assignments (outside of career field)   24

1 - no mention
2 - mild recommendation
3 - strong recommendation

146   e. professional schooling   25

1 - no mention
2 - squadron officer course
3 - command and staff school; staff officer course
4 - higher than staff officer level

35

Variable Number		Category	Card Column
			(Card 3)
147		f. technical schooling	26
		1 - for remedial purposes	
		2 - no mention	
		3 - for other purposes	
	13.	**Formal educational improvement acts**	
148		a. taking courses for credit	27
		1 - no mention	
		2 - positive statement	
149		b. taking military duty courses	28
		1 - no mention	
		2 - positive statement	
150		c. potential or plans for educational improvement	29
		1 - negative statement	
		2 - no mention	
		3 - positive statement	
	14.	**Informal improvements acts**	
151		a. studies; participates in professional organizations; attends training sessions	30
		1 - negative statement	
		2 - no mention	
		3 - positive statement	
152		b. job-related hobbies	31
		1 - no mention	
		2 - positive statement	
153	15.	**Civic responsibility activities**	32
		1 - no mention	
		2 - routine activities	
		3 - outstanding activities or accomplishments	
154	16.	**Interest in flying**	33
		1 - negative statement	
		2 - no mention	
		3 - positive statement concerning interest	
		4 - positive statement concerning proficiency	

Codes for Communications Officers, Assignments in 30XX

1 - Asst Message Center Off   Asst Radio Off
    Asst Comm Center Off, Sqd

2 - Asst S-4 Off, Sqd   Message Center Off, Sqd
    Asst Comm Off, Sqd   Comm Center Off, Sqd
    Asst Ops Off, Sqd   Comm Off, below Sqd level,
    Radio Off, Sqd   except USAFSS Det
    Asst Electronics Off, Sqd   Base Telephone Off
    OIC, Vault Section

3 - Comm Off, Sqd or Branch   Wea & P/P Duty Off, Sqd
    Electronics Off, Sqd (ECM Off)   Ops Off, Sqd
    Radar Off (Sage), Div   Stratcom Center, AACS Sqd
    Maintenance Off, Sqd   Comm Off, USAFSS Det
    Comm Center Off, Grp or Wg   Radio Off, Grp, Wg, or Base
    Crypto Off, Sqd   Asst Base Comm Off, Grp or Wg
    C O, Det, Comm Sqd   Tel & Tel Off, TT Wg or Grp
    C O, Det, I & M Sqd   Maint & Sup Off, Sqd
    Advisor, Comm Sqd (ANG)   Asst O/C AC & W Site
       (OIC Comm & Elect, Sqd)   Tng Off, Sqd
    Acft Warning Off, AC & W Sqd   Msg Cent Off, Grp
    Wire Off, Sqd   Conelrad Off, Div
    Controller, Comm Sqd   Special Proj Off, Sqd
    Technical Services Off   Signal Officer, Sqd

4 - Comm Off, Wg (Hq), Grp, or Base   Sqd Cmdr, I & M Sqd
    Crypto Off, Wg or Grp   Chief, Comm Serv Br
    Asst Chief, Div, Area Maint Grp   Grd Elect Off, Grp
    Maint Off, Wg or Grp   Tech Inspector, Grp
    Commanding Off, Comm Sqd   Plans & Pol Off, PCSP Br
    C & E Staff Off, Sqd   OIC or Commander of AC & W Site
    Asst C & E Staff Off, Wg   Special Projects Off, Div
    Branch Chief   Comm Adv to foreign AF
    C & E Trng Off, Wg   Wire Off, Grp

5 - C-E Staff Off, Wg Hq (or Grp)   Chief Tng Div
    Asst Comm Off, Div, Theatre Hqs   Radio Off, Reg Hqs
    Chief, Comm Div, GEEIA Reg Hqs   Wire Off, Reg Hqs
    Inspector Gen, GEEIA Reg Hqs   Chief of Inspection, Wg
    Plans & Prog Off, AACS Reg   Dir of Comm, AACS Reg

6 - Comm Off, Div, Theatre Hqs   Plans & Prog Off, Theatre Hqs

7 - C-E Staff Off, Div, Theatre Hqs

Codes for R & D Officers

1 - Asst Chief, Unit

2 - Asst Proj Engineer
    Asst Proj Officer
    Instructor
    Asst Research Officer
    Asst Section Chief

3 - Project Officer
    Project Engr or Resch Engr
    Aero Engr; mech, elect
    Asst Professor
    Staff Asst or Staff Off
    Resch Off; math, chem, psych
    Flight Test Engr or Off
    R & D Administrator
    Chief of a Test Facility
    Ord Exchange Off
    R & D Off, Div

4 - Chief Field Rep
    Chief Liaison Off
    Asst Chief, Br or Div
    Special Proj Off or Spec Asst
    Assoc Prof or Prof
    Asst Exec Off, DC/Ws
    Senior Proj Engr or Off

5 - Lab Chief
    Plans Off

Asst Chief, Launch Site

Unit Chief
Chief, Admin Office
OIC Research Services
Chief, Launch Site
Chief, Tech Library

Field Rep or Liaison Officer
Section Chief
Analyst
Evaluation Officer
Chief, Plans Office (under a Div)
Duty Classified, Sqd
Computer Prog Off
ATILO
Asst Task Scientist
Asst Prog Director
Computer Operations Supervisor

Chief Test Pilot
R & D Inspector
Program Director
Task Scientist
Chief Analyst
Scientific Advisor
Planner

Br or Div Chief
Chief, Projects Off

APPENDIX IV

VALIDITY TABULATIONS

			Validity (OER) and Direction of Weights – Comm. Off.												Validity (OER) and Direction of Weights – R & D Off.											
Variables	Validity (OER) Val.	Comm. Off. Val.	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	9101	9102	9103	9104	9105	9106	9107	9108	9109	9110	9111	9112
1 – Mos in act comm serv	.2961*	.1177*	0	+	+	+	+	0	.	.	.	.	.	.	0	0	0	0	0	0	0	.	.	.	.	.
2 – Brk in actv comm serv	.1098*	.0224	0	0	0	0	0	0	.	.	.	.	.	.	0	0	0	0	0	0	0	.	.	.	.	.
3 – Source of comm	.2944*	.1373*	0	+	+	+	+	0	.	.	.	.	.	.	0	0	+	0	0	0	0	.	.	.	.	.
4 – Rel spd of prom	.1958*	.0454	0	0	0	0	0	0	.	.	.	.	.	.	0	0	0	0	0	0	0	.	.	.	.	.
5 – Mos in grade	.1648*	.0508	0	0	0	0	0	0	.	.	.	.	.	.	0	0	0	0	0	0	0	.	.	.	.	.
6 – Mos ovrs as off	.1741*	.0542	0	0	0	0	0	0	.	.	.	.	.	.	0	0	0	0	0	0	0	.	.	.	.	.
7 – Ovrs serv as off	.1794*	.0245	0	0	–	0	–	0	.	.	.	.	.	.	0	–	–	0	–	0	0	.	.	.	.	.
8 – Mos in field	.1171*	.1152*	0	0	+	0	0	0	.	.	.	.	.	.	0	0	0	0	0	0	0	.	.	.	.	.
9 – Duty not in primary field	.0728	.0116	0	0	0	0	0	0	.	.	.	.	.	.	0	0	0	0	0	0	0	.	.	.	.	.
10 – No. of AFSC's held	.1979*	.0361*	0	+	+	+	+	0	.	.	.	.	.	.	0	0	0	0	0	0	0	.	.	.	.	.
11 – Mo. assgmts in field	.1761*	.0644	0	0	0	0	0	0	.	.	.	.	.	.	0	0	0	0	0	0	0	.	.	.	.	.
12 – Aver responsblty level	.0910*	.1075*	0	+	+	0	0	0	.	.	.	.	.	.	0	+	+	+	+	0	0	.	.	.	.	.
13 – Combat exper	.1461*	.0236	0	0	0	–	0	0	.	.	.	.	.	.	0	0	0	0	0	0	0	.	.	.	.	.
14 – Hgst enl rank	.1245*	.1016*	0	+	+	+	+	0	.	.	.	.	.	.	0	0	0	0	0	0	0	.	.	.	.	.
15 – No enl serv	-.1105*	-.0410	0	+	+	+	0	0	.	.	.	.	.	.	0	0	+	0	0	0	0	.	.	.	.	.
16 – Comp-Reg Off	.3441*	.1922*	0	0	+	0	0	0	.	.	.	.	.	.	0	+	+	+	+	0	0	.	.	.	.	.
17 – Comp-Res Off	-.3441*	-.1922*	0	0	–	0	–	0	.	.	.	.	.	.	–	0	0	0	0	0	–	.	.	.	.	.
18 – No. serv sch crs	.2292*	.0902*	0	0	0	0	0	0	.	.	.	.	.	.	0	0	0	0	0	0	0	.	.	.	.	.
19 – Hgst career sch	.1617*	.0639	0	+	+	0	0	0	.	.	.	.	.	.	0	0	0	0	0	0	0	.	.	.	.	.
20 – Level of educ	.1521*	.1015*	0	0	0	0	0	0	.	.	.	.	.	.	0	+	+	+	+	0	0	.	.	.	.	.
21 – Maj acad field	.1916*	.1757*	0	+	+	+	0	0	.	.	.	.	.	.	0	+	+	+	+	0	0	.	.	.	.	.
22 – Rating/flying status/ jet qualification	.2128*	.0439	0	0	0	0	0	0	.	.	.	.	.	.	0	+	+	+	+	0	0	.	.	.	.	.

See last page of table for key.

Table 10 (*Continued*)

Validity (OER) and Direction of Weights — Comm. Off.

Val.	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	Variables	Val.	9101	9102	9103	9104	9105	9106	9107	9108	9109	9110	9111	9112
.0251	0	.	.	.	−	.	0	.	.	.	.	.	23 − Total flying hrs	.1815*	0	.	.	.	0	0	.	.	.	.	.	.
.0848*	0	.	0	0	0	.	0	.	.	.	.	.	24 − Age in years	.2209*	0	.	.	.	0	0	.	.	.	.	.	.
.1172*	0	.	0	0	0	.	0	.	.	.	.	.	25 − Grade	.3125*	0	.	.	+	+	0	.	.	.	.	.	.
.0945*	0	.	+	+	+	.	0	.	.	.	.	.	26 − Security clrnce level	.2284*	0	.	.	+	+	0	.	.	.	.	.	.
.1462*	0	.	+	+	+	.	+	.	.	.	.	.	27 − Marital status	.1642*	0	.	.	+	+	0	.	.	.	.	.	.
.0404	0	.	0	0	0	.	0	.	.	.	.	.	28 − Religion	.1312*	0	.	.	.	+	0	.	.	.	.	.	.
.1012*	0	.	+	+	+	.	0	.	.	.	.	.	29 − Race	.0407	0	.	.	.	+	0	.	.	.	.	.	.
.0852*	0	.	+	+	+	.	0	.	.	.	.	.	30 − Career pref	.1870*	0	.	.	.	0	0	.	.	.	.	.	.
.0610	0	.	+	0	0	.	0	.	.	.	.	.	31 − Command pref	.1538*	0	.	.	.	0	0	.	.	.	.	.	.
.0916*	0	.	0	0	0	.	0	.	.	.	.	.	32 − School pref	.1913*	0	.	.	.	0	0	.	.	.	.	.	.
.0590	0	.	0	0	−	.	0	.	.	.	.	.	33 − Next assgnt pref	.1749*	0	.	.	.	0	0	.	.	.	.	.	.
.2504*	0	.	+	+	+	.	0	.	.	.	.	.	34 − Awards (1952 cn)	.3260*	0	.	.	+	+	0	.	.	.	.	.	.
.1030*	0	.	.	.	.	.	.	+	.	.	.	.	35 − Coded duty AFSC	.1581*	0	.	.	.	.	.	.	+	.	.	.	.
.2072*	+	.	.	.	.	.	.	+	.	.	+	.	36 − Command (OER)	.1480*	0	.	.	.	.	.	.	+	.	.	+	.
.0067	0	.	.	.	.	.	.	0	.	.	.	.	37 − Civilian rater	−.1653*	0	.	.	.	.	.	.	+	.	.	.	.
.2025*	0	.	.	.	.	.	.	+	.	.	.	.	38 − Rater grade	.2378*	0	.	.	.	.	.	.	+	.	.	.	.
.1318*	0	.	.	.	.	.	.	−	.	.	.	.	39 − Rel lvl of rater	.1536*	0	.	.	.	.	.	.	+	.	.	.	.
1.0000	.	.	.	.	.	.	.	.	.	.	.	.	40 − Overall effectiveness, OER(Crit scre)	1.0000	.	.	.	.	.	.	.	.	.	.	.	.
.7719*	+	+	.	.	+	+	+	.	.	.	.	.	41 − Ss 1−Job Knowlge	.7585*	+	+	.	.	.	+	+	.	.	.	.	.
.7304*	+	+	.	.	+	+	+	.	.	.	.	.	42 − Ss 2−Cooperation	.7072*	+	+	.	.	.	+	+	.	.	.	.	.
.8615*	+	+	.	.	+	+	+	.	.	.	.	.	43 − Ss 3−Judgment	.8105*	+	+	.	.	.	+	+	.	.	.	.	.
.8157*	+	+	.	.	+	+	+	.	.	.	.	.	44 − Ss 4−Mngmnt qual	.7656*	+	+	.	.	.	+	+	.	.	.	.	.
.8556*	+	+	.	.	+	+	+	.	.	.	.	.	45 − Ss 5−Leadership	.8089*	+	+	.	.	.	+	+	.	.	.	.	.

Validity (OER) and Direction of Weights — R. & D. Off.

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Table 10 (Continued)

Left block header: **Validity (OER) and Direction of Weights – Comm. Off.**
Right block header: **Validity (OER) and Direction of Weights – R & D Off.**
Center: **Variables** / **Validity (OER)**

Comm. Off. Val.	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	Variables	Val.	9101	9102	9103	9104	9105	9106	9107	9108	9109	9110	9111	9112
.7453*	+	+	.	.	+	+	+	.	.	.	.	.	46 – Ss 6-Comm facility	.6574*	+	+	.	.	.	+	+	.	+	.	.	.
.9090*	+	+	.	.	+	+	+	.	.	.	.	.	47 – Ss 7-Prom potentl	.8831*	+	+	.	.	.	+	+	.	+	.	.	.
.1521*	0	.	.	.	.	.	0	0	.	.	.	.	48 – No.add.factrs rated	.1643*	0	.	.	.	.	.	.	0	.	.	.	.
.0494	0	.	.	.	.	.	0	0	.	.	.	.	49 – Unique factor rated	.1172*	0	.	.	.	.	.	.	+	.	.	.	.
.2465*	0	.	.	.	.	.	+	+	.	.	.	.	50 – Responsbly score	.1758*	0	.	.	.	.	.	.	+	.	.	.	.
.4092*	+	.	.	.	.	.	+	+	.	.	.	.	51 – Initiative score	.3072*	0	.	.	.	.	.	+	+	.	.	.	.
.3013*	0	.	.	.	.	.	+	+	.	.	.	.	52 – Adaptability scre	.1415*	0	.	.	.	.	.	+	+	.	.	.	.
.0871*	0	.	.	.	.	.	+	+	.	.	.	.	53 – Creativity score	.0921*	0	.	.	.	.	.	.	+	.	.	.	.
.1458*	0	.	.	.	.	.	+	+	+	.	.	.	54 – Reactn to stress sc	.0691	0	.	.	.	.	.	.	0	.	.	.	.
-.0684	0	.	.	.	.	.	+	+	0	.	.	.	55 – Responsbly not rtd	-.0484	0	.	.	.	.	.	.	0	.	.	.	.
-.1490*	0	.	.	.	.	.	0	0	0	.	.	.	56 – Initve not rated	-.1250*	0	.	.	.	.	.	.	+	.	.	.	.
-.1413*	0	.	.	.	.	.	0	0	0	.	.	.	57 – Adaptbly not rtd	-.0585	0	.	.	.	.	.	.	0	.	.	.	.
-.0293	0	.	.	.	.	.	.	0	0	.	.	.	58 – Creavty not rated	-.0828*	0	.	.	.	.	.	.	0	.	.	.	.
.0045	0	.	.	.	.	.	.	0	0	.	.	.	59 – Reactn to strs not rated	-.0479	0	.	.	.	.	.	.	0	.	.	.	.
.3628*	0	.	.	.	.	.	.	.	.	.	.	.	60 – Length of Sec V	.4149*	0	.	.	.	.	.	.	+	.	.	.	.
.3240*	0	.	.	.	.	.	.	.	0	.	.	.	61 – No. scrble unts info	.3755*	0	.	.	.	.	.	.	+	.	.	.	.
.2728*	0	.	.	.	.	.	.	/	0	.	.	.	62 – No.ex effctv perfmc	.2270*	0	.	.	.	.	.	.	-	.	.	.	.
-.2695*	0	.	.	.	.	.	.	.	-	.	.	.	63 – No.ex ineff perf	-.1916*	0	.	.	.	.	.	.	0	.	.	.	.
-.4614*	0	.	.	.	.	.	.	.	-	.	.	.	64 – No.inf unts invlng ineffectiveness	-.4760*	0	.	.	.	.	.	.	-	.	.	.	.
.7739*	+	.	.	.	.	.	.	.	+	.	.	.	65 – Analysts's rating of ratee	.7462*	+	.	.	.	.	.	.	+	.	.	.	.
.1588*	0	.	.	+	0	.	.	.	.	+	+	+	66 – Analytical	.1582*	0	.	.	+	0	.	.	.	.	+	+	+
.1889*	+	.	.	+	+	.	.	.	.	+	+	+	67 – Direct X*	.1705*	0	.	.	+	0	.	.	.	.	+	+	+
.2653*	0	.	.	+	0	.	.	.	.	+	+	+	68 – Direct	.2238*	0	.	0	0	0	.	.	.	.	0	0	0

See last page of table for key.

* X indicates score for concrete examples of the attribute.

Table 10 (Continued)

Validity (OER) and Direction of Weights – Comm. Off.													Variables	Validity (OER)	Validity (OER) and Direction of Weights – R & D Off.											
Val.	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112		Val.	9101	9102	9103	9104	9105	9106	9107	9108	9109	9110	9111	9112
.1897*	0	·	·	0	0	0	·	·	·	0	0	0	69 – Methodical X	.1541*	0	·	·	0	0	0	·	·	·	0	+	0
.2509*	0	·	·	+	+	0	·	·	·	+	+	+	70 – Methodical	.1208*	0	·	·	+	+	0	·	·	·	+	+	+
.1488*	0	·	·	+	+	0	·	·	·	0	0	0	71 – Initiative X	.1382*	0	·	·	+	0	0	·	·	·	0	+	+
.2746*	0	·	·	+	+	0	·	·	·	+	+	+	72 – Initiative	.2536*	0	·	·	+	+	0	·	·	·	+	+	+
.2168*	0	·	·	0	0	0	·	·	·	0	0	0	73 – Judgment	.1582*	0	·	·	0	0	0	·	·	·	+	+	0
.0925*	0	·	·	0	0	0	·	·	·	0	0	0	74 – Keen	.0895*	0	·	·	0	0	0	·	·	·	0	0	0
.1198*	0	·	·	0	0	0	·	·	·	0	0	0	75 – Apply knowl X	.0436	0	·	·	0	0	0	·	·	·	0	0	0
.1803*	0	·	·	0	0	0	·	·	·	0	0	0	76 – Apply knowl	.1242*	0	·	·	+	+	0	·	·	·	+	+	+
.1944*	0	·	·	0	0	0	·	·	·	0	0	0	77 – Decisive	.2193*	0	·	·	+	+	0	·	·	·	+	+	+
.1909*	0	·	·	0	0	0	·	·	·	0	0	0	78 – Meets req X	.1292*	0	·	·	+	+	0	·	·	·	+	+	+
.1978*	0	·	·	+	0	0	·	·	·	+	+	+	79 – Meets req	.1555*	0	·	·	+	+	0	·	·	·	+	+	+
.1079*	0	·	·	0	0	0	·	·	·	0	0	0	80 – Sound X	.1104*	0	·	·	-	0	0	·	·	·	0	-	0
.2049*	0	·	·	-	0	0	·	·	·	-	0	-	81 – Sound	.2225*	0	·	·	+	+	0	·	·	·	+	+	+
.1686*	0	·	·	0	0	0	·	·	·	+	0	0	82 – Creative X	.0741	0	·	·	0	0	0	·	·	·	0	0	0
.1740*	0	·	·	+	+	0	·	·	·	+	+	+	83 – Creative	.1398*	0	·	·	0	0	0	·	·	·	0	0	0
.1184*	0	·	·	+	+	0	·	·	·	+	0	+	84 – Drive X	.1485*	+	·	·	+	+	+	·	·	·	+	+	+
.2342*	0	·	·	0	0	0	·	·	·	0	0	0	85 – Drive	.2471*	+	·	·	+	+	+	·	·	·	+	+	0
.0742	0	·	·	0	0	0	·	·	·	0	0	0	86 – Determination X	.0847	0	·	·	0	0	0	·	·	·	0	0	0
.1453*	0	·	·	0	0	0	·	·	·	0	0	0	87 – Determination	.1728*	0	·	·	0	+	0	·	·	·	+	+	+
.0765	0	·	·	0	0	0	·	·	·	0	0	0	88 – Task oriented X	.0996*	0	·	·	0	0	0	·	·	·	0	0	0
.1734*	0	·	·	+	+	0	·	·	·	+	+	+	89 – Task oriented	.1953*	0	·	·	+	+	0	·	·	·	+	+	+
.0809	0	·	·	0	0	0	·	·	·	0	0	0	90 – Accepts resp X	.0526	0	·	·	-	-	0	·	·	·	-	-	-
.1954*	0	·	·	+	+	0	·	·	·	+	+	+	91 – Accepts resp	.2130*	0	·	·	0	0	0	·	·	·	0	0	0

See last page of table for key.

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Table 10 (Continued)

Validity (OER) and Direction of Weights - Comm. Off.													Variables	Validity (OER) and Direction of Weights - R & D Off.												
Val.	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112		Val.	9101	9102	9103	9104	9105	9106	9107	9108	9109	9110	9111	9112
.1304*	0	.	.	0	0	0	.	.	0	0	0	0	92 – Cooperative X	.0876*	0	.	.	–	0	0	.	.	–	–	–	–
.1622*	0	.	.	0	0	0	.	.	0	0	0	0	93 – Cooperative	.1717*	0	.	.	+	+	0	.	.	+	+	+	+
.2958*	0	.	.	+	+	0	.	.	+	+	+	+	94 – Plans X	.1466*	0	.	.	0	+	0	.	.	+	+	0	+
.1375*	0	.	.	0	0	0	.	.	0	0	0	0	95 – Plans	.1301*	0	.	.	0	0	0	.	.	0	0	0	0
.1342*	0	.	.	0	0	0	.	.	0	0	0	0	96 – Written comm X	.1298*	0	.	.	+	+	0	.	.	+	+	+	+
.1766*	0	.	.	+	+	0	.	.	+	+	+	+	97 – Written comm	.1379*	0	.	.	0	0	0	.	.	0	0	0	0
.2543*	0	.	.	+	+	0	.	.	+	+	+	+	98 – Oral comm X	.1589*	0	.	.	0	0	0	.	.	0	0	0	0
.2013*	0	.	.	0	0	0	.	.	0	0	0	0	99 – Oral comm	.2050*	0	.	.	+	+	0	.	.	+	+	+	+
.1944*	0	.	.	+	+	+	.	.	+	+	+	+	100 – Mgmt X	.1843*	0	.	.	+	+	0	.	.	+	+	+	+
.2465*	–	.	.	0	0	0	.	.	0	0	0	0	101 – Mgmt	.2491*	0	.	.	+	+	0	.	.	+	+	+	+
.2090*	0	.	.	+	+	+	.	.	+	+	+	+	102 – Coordination X	.1203*	0	.	.	+	0	0	.	.	0	0	0	0
.1345*	0	.	.	+	+	0	.	.	+	+	+	+	103 – Coordination	.1364*	0	.	.	0	0	0	.	.	0	0	0	0
.1444*	0	.	.	+	+	0	.	.	+	+	+	+	104 – Analysis X	.1281*	0	.	.	+	+	0	.	.	+	+	+	+
.1447*	0	.	.	0	–	0	.	.	–	0	0	0	105 – Analysis	.1282*	0	.	.	+	+	0	.	.	+	+	+	+
.1152*	0	.	.	+	+	0	.	.	+	+	+	+	106 – Leadership X	.1165*	0	.	.	+	0	0	.	.	0	0	0	0
.1513*	0	.	.	+	+	0	.	.	+	+	+	+	107 – Leadership	.2615*	0	.	.	+	+	0	.	.	+	+	+	+
.2010*	0	.	.	+	+	0	.	.	+	+	+	+	108 – Personal intrst	.0671	0	.	.	0	–	–	.	.	–	–	–	–
.0762	0	.	.	0	0	0	.	.	0	0	0	0	109 – Instructions	.0675	0	.	.	+	+	0	.	.	+	+	+	+
.1838*	+	.	.	+	+	+	.	.	+	+	+	+	110 – Trustworthy	.1426*	0	.	.	+	+	0	.	.	+	+	+	+
.2064*	0	.	.	–	–	0	.	.	–	–	–	–	111 – Dependable	.1138*	0	.	.	+	+	0	.	.	+	+	+	+
.1009*	0	.	.	0	0	0	.	.	0	0	0	0	112 – Ambition	.1147*	0	.	.	0	0	0	.	.	0	0	0	0
.1599*	0	.	.	+	+	0	.	.	+	+	+	+	113 – Loyal	.1861*	+	.	.	+	+	+	.	.	+	+	+	+
.1444*	0	.	.	0	0	0	.	.	0	0	0	0	114 – Conscientious	.0923*	0	.	.	0	0	0	.	.	0	0	0	0
.1376*	0	.	.	0	0	0	.	.	0	0	0	0	115 – Career-minded	.1517*	0	.	.	0	0	0	.	.	0	0	0	0

See last page of table for key.

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Table 10 *(Continued)*

Validity (OER) and Direction of Weights - Comm. Off.													Variables	Validity (OER) and Direction of Weights - R & D Off.												
Val.	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112		Val.	9101	9102	9103	9104	9105	9106	9107	9108	9109	9110	9111	9112
.0464	0	·	·	0	0	0	·	·	·	0	0	0	116 - Quiet	.0497	0	·	·	0	0	0	·	·	·	0	0	0
.3085*	0	·	·	+	+	0	·	·	·	+	+	+	117 - Positive effect	.2620*	0	·	·	+	+	0	·	·	·	+	+	+
.3309*	0	·	·	+	+	0	·	·	·	+	+	+	118 - Mature	.2126*	0	·	·	0	+	0	·	·	·	0	0	0
.1749*	0	·	·	+	+	0	·	·	·	+	+	+	119 - Conforms to AF	.1379*	0	·	·	0	0	0	·	·	·	0	0	0
.0442	0	·	·	0	0	0	·	·	·	0	0	0	120 - Sense of humor	.0883*	0	·	·	+	+	0	·	·	·	+	+	+
.1573*	0	·	·	0	0	0	·	·	·	0	0	0	121 - Friendly	.0662	0	·	·	0	0	0	·	·	·	0	0	0
.2204*	0	·	·	0	0	0	·	·	·	0	0	0	122 - Considerate	.1528*	0	·	·	0	0	0	·	·	·	0	0	0
.0941*	0	·	·	0	0	0	·	·	·	0	0	0	123 - Understanding	.0855*	0	·	·	0	0	0	·	·	·	0	0	0
.2045*	0	·	·	+	+	0	·	·	·	+	+	+	124 - Strong	.2228*	0	·	·	+	+	0	·	·	·	+	+	+
.2367*	0	·	·	0	0	0	·	·	·	0	0	0	125 - Effective prog	.2171*	0	·	·	+	+	0	·	·	·	+	+	+
.2259*	0	·	·	0	0	0	·	·	·	0	0	0	126 - Impr tech ops	.0982*	0	·	·	0	0	0	·	·	·	+	+	0
.2285*	0	·	·	+	+	0	·	·	·	+	+	+	127 - Monetary svgs	.1058*	0	·	·	0	0	0	·	·	·	0	0	0
.1860*	0	·	·	0	0	0	·	·	·	0	0	0	128 - Personnel util	.1484*	0	·	·	+	0	0	·	·	·	0	0	0
.2091*	0	·	·	0	0	0	·	·	·	0	0	+	129 - Attitude of unit	.1538*	0	·	·	0	0	0	·	·	·	0	+	+
.2915*	0	·	·	+	+	0	·	·	·	+	+	+	130 - Unit command	.3117*	0	·	·	+	+	+	·	·	·	+	+	+
.1309*	0	·	·	0	0	0	·	·	·	0	0	0	131 - Unspec results	.0966*	0	·	·	0	0	0	·	·	·	0	0	0
.2996*	0	·	·	+	+	0	·	·	·	+	+	+	132 - Tech knowl	.2398*	0	·	·	+	+	0	·	·	·	+	+	+
.1877*	0	·	·	+	0	0	·	·	·	+	+	+	133 - Experience	.1272*	0	·	·	+	0	0	·	·	·	0	0	0
.2499*	0	·	·	0	0	0	·	·	·	0	0	0	134 - Well-qual	.2140*	0	·	·	+	+	0	·	·	·	+	+	+
.1652*	0	·	·	0	0	0	·	·	·	0	0	0	135 - Related areas	.1636*	0	·	·	+	+	0	·	·	·	+	+	+
.2066*	0	·	·	0	0	0	·	·	·	0	0	0	136 - Intrst in fld	.1626*	0	·	·	+	+	0	·	·	·	+	+	+
.3461*	0	·	·	+	+	0	·	·	·	+	+	+	137 - Superv req	.2563*	0	·	·	+	+	0	·	·	·	+	+	+
.4060*	0	·	·	·	·	·	·	·	·	+	·	·	138 - Global eval	.4115*	0	·	·	·	·	·	·	·	·	·	·	·
.0532	0	·	·	0	0	0	·	·	·	0	0	0	139 - Temp duty	.0806	0	·	·	+	0	0	·	·	·	0	0	+

See last page of table for key.

Table 10 (Continued)

Validity (OER) and Direction of Weights - Comm. Off.													Variables	Validity (OER) and Direction of Weights - R & D Off.												
Val.	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112		Val.	9101	9102	9103	9104	9105	9106	9107	9108	9109	9110	9111	9112
.2955*	0	.	.	+	+	0	.	.	.	+	+	+	140 – Incr resp	.2301*	0	.	+	+	+	0	.	.	.	+	+	+
.3577*	0	.	.	+	+	.	.	.	.	.	+	.	141 – Promoted	.3229*	0	.	.	+	+	0	.	.	.	+	+	+
.2475*	0	.	.	+	.	0	.	.	.	+	+	+	142 – Remain	.2565*	0	.	.	+	+	0	.	.	.	+	+	+
.2496*	0	.	.	+	+	+	.	.	.	+	+	+	143 – Staff	.1259*	0	.	.	+	0	0	.	.	.	0	+	0
.1453*	0	.	.	+	+	0	.	.	.	+	+	+	144 – Command/tchng	.1032*	0	.	.	0	0	0	.	.	.	0	0	0
.0759	0	.	.	+	+	0	.	.	.	+	+	+	145 – Other	.0901*	0	.	.	+	+	+	.	.	.	+	+	+
.0949*	0	.	.	+	0	0	.	.	.	0	+	0	146 – Prof school	.1632*	0	.	.	+	+	0	.	.	.	+	+	+
.0962*	0	.	.	0	+	0	.	.	.	0	0	0	147 – Tech school	.0755	0	.	.	+	+	0	.	.	.	+	+	+
.0543	0	.	.	0	0	0	.	.	.	0	0	0	148 – Credit courses	.0133	0	.	.	.	.	0	.	.	.	.	.	.
.0237	0	.	.	–	–	0	.	.	.	–	–	–	149 – Mil courses	.0328	0	.	.	–	–	0	.	.	.	–	–	–
.0446	0	.	.	–	–	0	.	.	.	–	–	–	150 – Plans for ed	.0581	0	.	.	0	0	0	.	.	.	0	0	0
.1210*	0	.	.	+	+	0	.	.	.	+	+	+	151 – Studies	.1138*	0	.	.	0	+	0	.	.	.	+	+	+
.0128	0	.	.	–	–	0	.	.	.	–	–	–	152 – Hobbies	.0025	0	.	.	.	.	0	.	.	.	.	.	.
.0864*	0	.	.	+	+	0	.	.	.	0	0	+	153 – Civic resp	.1312*	0	.	.	+	0	0	.	.	.	+	+	0
.0331	0	.	.	0	0	0	.	.	.	0	0	0	154 – Int flying	.1907*	0	.	.	+	0	+	.	.	.	0	0	0
-.2112*	.	.	.	.	.	.	.	.	.	.	.	.	155 – Actv duty stats	-.3080*	0	.	.	.	.	0	.	.	.	.	.	.
0.-----	0	.	.	.	.	.	.	.	.	0	0	0	156 – 2nd Lt.	-.0237	0	.	.	.	.	0	.	.	.	–	–	–
-.1030*	0	.	.	.	.	.	.	.	.	–	–	–	157 – 1st Lt.	-.3007*	0	.	.	.	.	0	.	.	.	–	–	–
.0377	0	.	.	.	.	.	.	.	.	0	0	0	158 – Captain	.2116*	0	.	.	.	.	0	.	.	.	0	0	0
.0730	0	.	.	.	.	.	.	.	.	0	0	0	159 – Major	.1459*	0	.	.	.	.	0	.	.	.	+	+	+
0.-----	0	.	.	.	.	.	.	.	.	0	0	0	160 – Lt. Colonel	0.-----	0	.	.	.	.	0	.	.	.	0	0	0
-.0532	–	.	.	.	.	.	.	.	.	.	.	.	161 – Maj acad fld in engrg,sci,math	-.0348	0	.	.	.	.	0	.	.	.	.	.	.
-.0371	0	.	.	.	.	.	.	.	.	.	.	.	162 – More than 2 yrs of college	-.0071	0	.	.	.	.	0	.	.	.	.	.	.

See last page of table for key.

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Table 10 (Continued)

Validity (OER) and Direction of Weights - R & D Off.

Val.	9101	9102	9103	9104	9105	9106	9107	9108	9109	9110	9111	9112
-.2264*	0	·	·	·	·	·	·	·	·	·	·	·
.0244	0	·	·	·	·	·	·	·	·	·	·	·
-.0057	0	·	·	·	·	·	·	·	·	·	·	·

Variables

163	ROTC grad
164	Maj acad fld in bus adm or mgmt
165	Maj acad fld in liberal arts

Validity (OER) and Direction of Weights - Comm. Off.

Val.	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112
-.0920*	0	·	·	·	·	·	·	·	·	·	·	·
.0128	0	·	·	·	·	·	·	·	·	·	·	·
-.0718	0	·	·	·	·	·	·	·	·	·	·	·

Key

* Significant beyond the 1% level of confidence

o Included in problem, weight uncorrected from zero

+ Included in problem and received a positive weight

- Included in problem and received a negative weight

· Not included in problem

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TABLE 11. Validities for All Variables

		OER Rating (Var. 40)		Active Duty Status (Var. 155)		
	VARIABLE	MATRIX 1	MATRIX 2	MATRIX 1	MATRIX 3	MATRIX 2
		C-E	R&D	C-E	R&D	
No.	Name	N=1205	N=1812	N=1205	N=1812	
1	Months in active commissioned service	.1177	.2961	-.3331	-.6989	-.6989
2	Break in active commissioned service	.0224	.1098	-.1040	-.3466	-.3466
3	Source of Commission	.1378	.2944	-.2616	.6167	-.5541
4	Relative speed of promotion	.0454	.1958	-.0521	.4300	-.4223
5	Months in grade	.0608	.1648	-.2306	-.4438	-.4438
6	Months overseas as an Officer	.0642	.1741	-.2469	-.4810	-.4810
7	Overseas service as an Officer	.0245	.1794	-.2844	-.5348	-.5348
8	Months in field	.1152	.1171	-.3021	-.2882	-.2882
9	Duty not in primary field	.0116	.0728	-.0717	-.1472	-.1472
10	Number of AFSC's held	.0861	.1979	-.1161	-.5071	-.5071
11	Number of Assignments in field	.0644	.1761	-.3040	-.4234	-.4234
12	Average responsibility level	.1075	.0910	-.1869	-.0810	-.0810
13	Combat experience	.0236	.1461	-.1655	-.3899	-.3899
14	Highest enlisted Rank	.1016	.1245	-.1311	.3736	-.3447
15	No enlisted service	-.0410	-.1105	.2007	.3725	.3725
16	Component-Regular Officer	.1922	.3441	-.1418	-.6377	-.6377
17	Component-Reserve Officer	-.1922	-.3441	.1418	.6377	.6377
18	Number of service school courses	.0902	.2292	-.2761	-.5682	-.5682
19	Highest career school	.0639	.1617	-.0715	.3909	-.3798
20	Level of education	.1015	.1521	-.1791	.2731	-.1488
21	Major academic field	.1757	.1961	-.1218	.2971	-.1559
22	Rating/flying status/ Jet qualification	.0439	.2128	-.0745	.4828	-.4355

Table 11 (*Continued*)

No.	Name	C-E N=1205	R&D N=1812		C-E N=1205	R&D N=1812
23	Total flying hours	.0251	.1815	-.1203	-.4084	-.4084
24	Age in years	.0848	.2209	-.3338	-.6164	-.6164
25	Grade	.1172	.3125	-.3500	.7515	-.7294
26	Security clearance level	.0945	.2284	-.1324	.3971	-.3921
27	Marital status	.1462	.1642	-.2939	.3787	-.3763
28	Religion	.0404	.1312	.0012	.2197	-.1824
29	Race	.1012	.0407	-.0462	.0431	.0181
30	Career preference	.0852	.1870	-.1492	.5385	-.5275
31	Command preference	.0610	.1338	-.0940	.3896	-.3824
32	School preference	.0916	.1913	-.3516	.5277	-.4932
33	Next assignment preference	.0590	.1749	-.2294	.5414	-.5388
34	Awards (dated 1952 & later)	.2504	.3260	-.8427	.9973	-.9444
35	Coded duty AFSC	.1030	.1581	-.0718	.3127	-.2768
36	Command (OER)	.2072	.1480	.0059	.1784	-.1386
37	Civilian rater	.0067	-.1653	.0007	.3301	.3301
38	Rater grade	.2065	.2378	-.2191	.3809	-.3609
39	Relative level of rater	.1318	.1536	.0141	.4467	-.4048
40	Overall effectiveness, OER (criterion score)	1.0000	1.0000	-.2112	-.3080	-.3080
41	Subscale 1 - Job knowledge	.7719	.7585	-.1959	.2114	-.2047
42	Subscale 2 - Cooperation	.7304	.7072	-.1778	.2565	-.2557
43	Subscale 3 - Judgement	.8615	.8105	-.1879	.2420	-.2321
44	Subscale 4 - Management Qualities	.8157	.7656	-.2291	.3146	-.3083
45	Subscales 5 - Leadership	.8556	.8089	-.1898	.3031	-.2931
46	Subscale 6 - Communication facility	.7463	.6571	-.1448	.3876	-.2178
47	Subscale 7 - Promotional Potential	.9090	.8831	-.1728	.2865	-.2653

Table 11 (*Continued*)

No.	Name		C-E N=1205	R&D N=1812	C-E N=1205	R&D N=1812	
48	Number of additional factors rated		.1521	.1643	-.0498	-.1267	-.1267
49	Unique factor rated		.0494	.1173	-.0335	-.0539	-.0539
50	Responsibility score		.2465	.1758	-.0784	.1106	-.0929
51	Initiative score		.4092	.3072	-.0571	.1278	-.1147
52	Adaptability score		.3013	.1415	-.0586	.0855	-.0687
53	Creativity score		.0871	.0921	-.0550	.0201	-.0194
54	Reaction to stress score		.1458	.0691	.0013	.0631	-.0347
55	Responsibility not rated		-.0684	-.0484	.0255	.0767	.0767
56	Initiative not rated		-.1490	-.1250	.0758	.0918	.0918
57	Adaptability not rated		-.1413	-.0585	.0566	.0698	.0698
58	Creativity not rated		-.0293	-.0828	-.0382	.0144	.0144
59	Reaction to stress not rated		.0045	-.0479	.0373	.0567	.0567
60	Length of Section V		.3628	.4149	-.1508	-.3160	-.3160
61	Number of scorable units of information		.3240	.3755	-.0469	-.2403	-.2403
62	Number of examples of effective performance		.2728	.2270	-.1198	-.1166	-.1166
63	Number of examples ineffective performance		-.2695	-.1916	-.0150	.0133	.0133
64	Number of information units involving ineffectiveness		-.4614	-.4760	.1164	.1364	.1364
65	Analyst's Rating of rater		.7739	.7462	-.1635	-.1961	-.1961
66	Analytical	1 a	.1588	.1582	-.0476	.0719	-.0364
67	Direct x	bx	.1889	.1705	-.0337	.0496	-.0087
68	Direct	b	.2653	.2238	-.0279	.0870	-.0463
69	Methodical x	cx	.1897	.1541	.0018	.0959	-.0563
70	Methodical	c	.2509	.1208	-.1168	.0789	-.0721
71	Initiative x	dx	.1488	.1382	-.0272	.0927	-.0821

Table 11 *(Continued)*

No.	Name		C-E N=1205	R&D N=1812	C-E N=1205	R&D N=1812	
72	Initiative	d	.2746	.2536	-.0626	.1380	-.1131
73	Jundgment	e	.2168	.1582	-.0245	.0488	-.0169
74	Keen	f	.0925	.0895	.0212	.0328	-.0059
75	Apply Knowledge	gx	.1198	.0436	-.0327	.0625	-.0514
76	Apply knowledge	g	.1803	.1242	-.0751	.0942	-.0564
77	Decisive	h	.1944	.2193	-.0339	.0794	-.0588
78	Meets req x	ix	.1909	.1292	-.0776	.0365	-.0115
79	Meets req	i	.1978	.1555	-.1550	.1105	-.0800
80	Sound x 2	ax	.1079	.1104	-.0559	.0601	-.0480
81	Sound	a	.2049	.2225	-.0441	.1261	-.1182
82	Creative x	bx	.1606	.0741	-.0480	.0340	-.0050
83	Creative	b	.1740	.1398	-.0065	.0459	-.0241
84	Drive x 3	ax	.1184	.1485	-.0106	.0800	-.0571
85	Drive	a	.2342	.2471	-.0475	.1175	-.0911
86	Determination x	bx	.0742	.0847	-.0199	.0937	-.0463
87	Determination	b	.1453	.1728	-.0961	.1338	-.0450
88	Task oriented x	cx	.0765	.0996	-.0128	.0678	-.0503
89	Task oriented	c	.1734	.1953	-.0617	.1366	-.1139
90	Accepts resp. x	dx	.0609	.0326	-.0238	.0730	-.0530
91	Accepts resp.	d	.1954	.2130	-.1500	.1309	-.0643
92	Cooperative x	ex	.1904	.0876	-.0496	.0495	-.0242
93	Cooperative	e	.1622	.1714	-.0798	.0899	-.0532
94	Plans x 4	ax	.2958	.1466	-.0509	.0744	-.0333
95	Plans	a	.1235	.1301	-.0028	.0594	-.0430

Table 11 (*Continued*)

No.	Name		C-E N=1205	R&D N=1812	C-E N=1205	R&D N=1812	
96	Written Comm. x	bx	.0942	.1298	.0019	.0803	-.0416
97	Written comm.	b	.1766	.1379	-.0282	.0553	-.0303
98	Oral comm. x	cx	.2048	.1589	-.0322	.1112	-.0778
99	Oral comm.	c	.2013	.2050	-.0407	.0851	-.0594
100	Management x	dx	.1944	.1843	-.0892	.1035	-.0703
101	Management	d	.2465	.2491	-.0887	.1541	-.1401
102	Coordination x	ex	.2090	.1203	-.0826	.1019	-.0887
103	Coordination	e	.1345	.1364	.0150	.0961	-.0814
104	Analysis x	fx	.1444	.1281	.0043	.0618	-.0258
105	Analysis	f	.1447	.1282	-.0659	.0572	-.0019
106	Leadership x 5	ax	.2159	.1165	-.0239	.0860	-.0645
107	Leadership	a	.2513	.2615	-.0629	.1072	-.0848
108	Personal interest	b	.2010	.0671	-.0717	.0969	-.0864
109	Instructions	c	.0762	.0675	-.0173	.0648	-.0374
110	Trustworthy 6	a	.1838	.1426	-.1268	.0617	-.0365
111	Dependable	b	.2064	.1138	-.0938	.0935	-.0833
112	Ambition	c	.1009	.1147	.0086	.0604	-.0467
113	Loyal	d	.1599	.1861	-.1103	.1221	-.0640
114	Conscientious	c	.1144	.0923	-.0282	.0686	-.0601
115	Career minded	f	.1376	.1517	-.0475	.1778	-.1466
116	Quiet 7	a	.0464	.0497	.0696	.0647	.0054
117	Positive effect	b	.3085	.2620	-.0461	.1319	-.1160
118	Mature	c	.3309	.2126	-.1260	.1240	-.1046
119	Conforms to AF	d	.1749	.1349	-.0378	.1050	-.0290
120	Sense of humor	e	.0442	.0883	-.0639	.0448	-.0313
121	Friendly	f	.1573	.0662	-.0553	.0534	-.0199

Table 11 (*Continued*)

No.	Name		C-E N=1205	R&D N=1812	C-E N=1205	R&D N=1812	
122	Considerate	g	.2204	.1528	-.0759	.0625	-.0383
123	Understanding	h	.0941	.0855	.0288	,1056	-.0870
124	Strong	i	.2045	.2228	-.0044	.1139	-.0991
125	Effective prog 8	a	.2367	.2171	.0302	.1498	-.1138
126	Improved Tech ops	b	.2259	.0982	-.0588	.0872	-.0722
127	Monetary savings	c	.2285	.1058	-.0323	.0785	-.0613
128	Personnel util	d	.1860	.1484	-.1406	.1044	-.0994
129	Attitude of unit	e	.2091	.1538	-.1160	.0651	-.0601
130	Unit commend	f	.2915	.3117	-.0428	.1140	-.1043
131	Unspec. results	g	.1309	.0966	-.0797	.0733	-.0423
132	Tech. knowledge 9	a	.2996	.2398	-.0840	.0822	-.0546
133	Experience	b	.1877	.1242	.0167	.0878	-.0513
134	Well-qualified	c	.2499	.2140	-.0636	.0593	-.0299
135	Related areas	d	.1652	.1636	.0677	.1320	-.0951
136	Interest in field	e	.2066	.1626	-.1615	.0638	-.0451
137	Supervision req 10	a	.3461	.2563	-.1311	.1136	-.1014
138	Global eva.	b	.4060	.4115	-.0501	.1125	-.1025
139	Temp duty	c	.0532	.0806	-.0317	.0702	-.0446
140	Incr. resp. 11	a	.2955	.2301	-.0405	.1000	-.0701
141	Promoted	b	.3577	.3229	-.1015	.1201	-.0899
142	remain in assign 12	a	.2475	.2565	-.0478	.1564	-.1427
143	Staff Position	b	.2496	.1259	-.1073	.1587	-.1413
144	Command/teaching	c	.1453	.1032	-.0862	.0204	-.0172
145	Other assign.	d	.0759	.0901	-.1137	.0909	-.0260
146	Prof. school	e	.0949	.1632	-.1283	.1978	-.1966
147	Tech. school	f	.0962	.0755	.0228	.1036	-.0448
148	Courses for credit 13 a		.0543	.0133	-.0840	.0245	-.0364

Table 11 (*Continued*)

No.	Name		C-E N=1205	R&D N=1812	C-E N=1205	R&D N=1812	
149	Mil courses	b	.0237	.0328	-.0322	.1914	-.1756
150	Plans for ed.	c	.0446	.0581	-.0137	.1702	-.1684
151	Studies 14	a	.1210	.1138	-.0679	.0610	-.0392
152	Hobbies	b	.0128	.0025	.0145	.0126	.0031
153	Civic resp. 15	a	.0864	.1312	-.0352	.1391	-.1390
154	Interest in flying	b	.0331	.1907	-.0461	.4035	-.3987
155	Active duty status		-.2112	-.3080	1.0000	1.0000	1.0000
156	2nd Lieutenant		0.----	-.0237	0.----	.0367	.0367
157	1st Lieutenant		-.1030	-.3007	.3944	.7496	.7496
158	Captain		.0377	.2116	-.2841	-.6245	-.6245
159	Major		.0730	.1459	-.0761	-.1849	-.1849
160	Lt. Colonel		0.----	0.----	0.----	0.----	0.----
161	Major academic field in Engineering, Science, and Math.		-.0532	-.0348	.0963	.1162	.1162
162	More than 2 yrs. of college		-.0371	-.0071	.0844	.0522	.0522
163	ROTC Graduate		-.0920	-.2264	.3855	.5687	.5687
164	Major academic field in Business Adm. & Management		.0128	.0244	.0333	-.0265	-.0265
165	Major academic field in Liberal Arts		-.0718	-.0057	.0450	-.0939	-.0939

APPENDIX V

SAMPLE FREQUENCY DISTRIEUTIONS

TABLE 12. Distribution of OER Criterion Scores by Sample

Overall Effectiveness Score			Communications Officers Freq.	Communications Officers %	R & D Officers %	R & D Officers Freq.
Unsatisfactory	-	0	0	0.0	.1	2
Marginal	-	1	3	.2	.2	4
Acceptable	-	2	9	.7	.4	7
Dependable	-	3	13	1.1	.7	13
		4	38	3.2	1.9	35
		5	132	11.0	6.4	116
Very Fine	-	6	231	19.2	11.8	213
		7	292	24.2	22.9	412
		8	357	29.6	36.3	655
Outstanding	-	9	130	10.8	19.2	346
Totals			1205	100.0	99.9	1803
Mean OER			6.91			7.38
σ			1.44			1.37
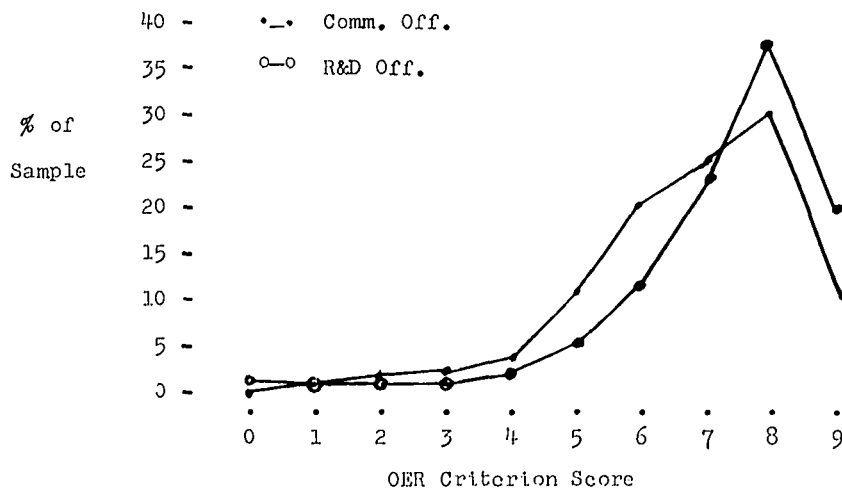
TABLE 13. Distribution of a Content Variable With Significant Validity for Both Samples by OER Criterion Score and by Sample

(Distribution of Scores for Variable 72 — Initiative)

Initiative Score	Overall Effectiveness Score																			N		%**	
	0		1		2		3		4		5		6		7		8		9					
	C-E	R&D	C-E	R&D	C-E	R&D	C-E	R&D	C-E	R&D	C-E	R&D	C-E	R&D	C-E	R&D	C-E	R&D	C-E	R&D	C-E	R&D	C-E	R&D
1	0*	5.0	11.1	10.0	11.1	0	22.2	5.0	22.2	10.0	11.1	45.0	22.2	0	0	10.0	0	15.0	0	0	9	20	.7	1.1
2	0	0	0	0	0	50.0	0	0	25.0	0	25.0	50.0	50.0	0	0	0	0	0	0	0	4	2	.3	.1
3	0	0	.2	.2	.9	.2	1.1	.9	3.5	2.4	13.0	6.6	19.1	12.7	25.2	23.8	27.8	36.5	9.2	16.6	915	1312	75.9	72.8
4	0	0	0	0	.8	1.0	.8	0	.8	.5	4.0	5.1	25.4	13.8	24.6	21.4	33.3	38.3	11.1	19.9	126	196	10.5	10.9
5	0	.6	0	0	0	0	0	0	0	0	6.6	4.4	12.1	8.8	24.2	22.6	37.4	37.1	19.8	26.4	91	159	7.6	8.8
6	0	0	0	0	0	1.0	0	0	3.7	0	0	1.0	14.8	5.2	14.8	18.6	44.4	36.1	22.2	38.1	54	97	4.5	5.4
7	0	0	0	0	0	0	0	0	0	0	0	8.3	25.0	0	0	16.7	75.0	25.0	0	50.0	4	12	.3	.7
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20.0	100.0	80.0	1	5	.1	.3
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100.0	0	1	0	.1	0
																					1205	1805	100.0	100.1

*Entries represent % of officers with a given initiative score who received a given OER score.

**Entries represent % of all officers who received a given initiative score.

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TABLE 14. Distribution of a Content Variable With Significant Validity for R & D Officers Only by OER Criterion Score and by Sample

(Distribution of Scores for Variable 120 – Sense of Humor)

Overall Effectiveness Score

Sense of Humor Score	0 C-E	0 R&D	1 C-E	1 R&D	2 C-E	2 R&D	3 C-E	3 R&D	4 C-E	4 R&D	5 C-E	5 R&D	6 C-E	6 R&D	7 C-E	7 R&D	8 C-E	8 R&D	9 C-E	9 R&D	N C-E	N R&D	%** C-E	%** R&D
1	0*	0	0	0	0	0	0	0	0	0	0	0	0	0	100.0	0	0	0	0	0	2	0	.2	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	.1	.3	.2	.8	.4	1.1	.7	3.2	2.0	11.1	6.5	19.2	12.2	23.9	23.1	29.6	36.0	10.9	18.8	1159	1736	96.2	96.3
4	0	0	0	0	0	0	0	0	5.0	0	10.0	3.7	25.0	0	10.0	18.5	35.0	40.7	15.0	37.0	20	27	1.7	1.5
5	0	0	0	0	0	0	0	0	0	0	0	0	11.8	7.1	47.1	10.7	35.3	53.6	5.9	28.6	17	28	1.4	1.6
6	0	0	0	0	0	0	0	10.0	0	0	16.7	10.0	16.7	0	50.0	20.0	16.7	40.0	0	20.0	6	10	.5	.6
7	0	0	0	0	0	0	0	0	0	0	0	0	100.0	0	0	100.0	0	0	0	0	1	1	.1	.1
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
																					1205	1802	100.1	100.1

* Entries represent % of officers with a given sense of humor score who received a given OER score.

** Entries represent % of all officers who received a given sense of humor score.

TABLE 15. Distribution of a Content Variable with Significant Validity for Communications Officers Only by OER Criterion Score and by Sample

(Distribution of Scores for Variable 108 – Personal Interest in Others)

Overall Effectiveness Score

Interest in Others Score	0 C-E	0 R&D	1 C-E	1 R&D	2 C-E	2 R&D	3 C-E	3 R&D	4 C-E	4 R&D	5 C-E	5 R&D	6 C-E	6 R&D	7 C-E	7 R&D	8 C-E	8 R&D	9 C-E	9 R&D	N C-E	N R&D	%** C-E	%** R&D
1	0*	0	12.5	0	25.0	0	0	0	25.0	0	25.0	50.0	12.5	0	0	0	0	50.0	0	0	8	2	.7	.1
2	0	0	0	0	0	0	0	0	0	0	50.0	0	50.0	0	0	0	0	0	0	0	2	0	.2	0
3	0	.1	.2	.2	.6	.4	1.2	.7	3.0	2.0	11.0	6.5	19.8	12.0	24.3	22.9	29.5	36.3	10.5	18.9	1021	1728	84.7	95.8
4	0	0	0	0	1.2	0	0	0	2.4	0	11.0	5.9	15.9	11.8	29.3	23.5	32.9	23.5	7.3	35.3	82	34	6.8	1.9
5	0	0	0	0	0	0	2.0	0	3.9	0	7.8	0	17.6	4.2	21.6	20.8	31.4	54.2	15.7	20.8	51	24	4.2	1.3
6	0	0	0	0	0	0	0	0	3.4	0	10.3	7.7	13.8	7.7	20.7	15.4	27.6	46.2	24.1	23.1	29	13	2.4	.7
7	0	0	0	0	0	0	0	50.0	0	0	16.7	0	0	0	16.7	50.0	50.0	0	16.7	0	6	2	.5	.1
8	0	0	0	0	0	0	0	0	0	0	0	0	20.0	0	20.0	0	40.0	0	20.0	0	5	0	.4	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100.0	0	0	0	0	0	1	0	.1	0
																					1205	1803	100.0	99.9

* Entries represent % of officers with a given personal interest in others score who received a given OER score.

** Entries represent % of all officers who received a given personal interest in others score.

TABLE 16. Distribution of Selected Background Variables by Active Duty Status and by Sample

(Var 7) Overseas Service as an Officer	R&D Officers			C-E Officers		
	Active Duty Status			Active Duty Status		
	On Active Duty	Not on Active Duty	Total	On Active Duty	Not on Active Duty	Total
Yes	95.0	5.0	100.0	95.4	4.6	100.0
No	46.3	53.7	100.0	70.9	29.1	100.0
	71.0	29.0	100.0	93.0	7.0	100.0
(Var 11) No. of Assignments in Field						
1	76.5	23.5	100.0	57.1	42.9	100.0
2	28.7	71.3	100.0	38.9	61.1	100.0
3	53.0	47.0	100.0	50.0	50.0	100.0
4	65.9	34.1	100.0	69.8	30.2	100.0
5	80.4	19.6	100.0	81.3	18.7	100.0
6	87.9	12.1	100.0	90.9	9.1	100.0
7	96.6	3.4	100.0	90.0	10.0	100.0
8	98.2	1.8	100.0	97.2	2.8	100.0
9	97.0	3.0	100.0	97.0	3.0	100.0
10	97.9	2.1	100.0	94.0	6.0	100.0
11	100.0	0	100.0	100.0	0	100.0
12	100.0	0	100.0	100.0	0	100.0
13	100.0	0	100.0	100.0	0	100.0
	71.0	29.0	100.0	93.0	7.0	100.0
(Var 15) Enlisted Service						
Yes	94.6	5.4	100.0	96.6	3.4	100.0
No	58.8	41.2	100.0	85.6	14.4	100.0
	70.9	29.1	100.0	93.0	7.0	100.0
(Var 20) Level of Education						
Unknown	100.0	0	100.0	66.7	33.3	100.0
1	100.0	0	100.0	100.0	0	100.0
2	100.0	0	100.0	97.0	3.0	100.0
3	100.0	0	100.0	98.2	1.8	100.0
4	97.5	2.5	100.0	97.2	2.8	100.0
5	65.4	34.6	100.0	84.6	15.4	100.0
6	91.2	8.8	100.0	90.0	10.0	100.0
7	76.8	23.2	100.0	86.7	13.3	100.0
8	88.9	11.1	100.0	0	0	100.0
9	18.9	81.1	100.0	0	0	100.0
	71.0	29.0	100.0	93.0	7.0	100.0

6570th Personnel Research Laboratory (AMD),
Lackland AFB, Tex.
Rpt No. PRL-TDR-62-16. FEASIBILITY OF IDENTIFYING PREDICTORS OF SUCCESS IN OFFICER JOBS FROM PERSONNEL RECORDS AND THE WORD PICTURE SECTION OF EFFECTIVENESS REPORTS.
Final report, Aug 62, 62 + v, incl tables.
Unclassified Report

To increase the amount of information that can be used in determining desirable job requirements and in evaluating officer performance, two sources were examined for pertinent and scalable variables. From personnel records of officers in the Communications Specialty and the Research & Development career area, 75 variables were identified and scaled. By developing a

method for content analysis, information from the Word Picture section of the Officer Effectiveness Reports for the same officers was quantified on 89 scales. Individual data records, score distributions, and inter-correlations of 165 variables for the two samples are available for use in developing qualifications and criteria for jobs in these areas.

1 Officer personnel	I AFSC Project(Task) 7734(04)
2 Statistical analysis	II Contract AF 41(657)-352
3 Mathematical prediction	III American Institute for Research, Wash, DC
4 Communications personnel	IV S. Lichtenstein, C.P. Hahn
5 Engineering personnel	V Aval fr OTS
6 Scientific personnel	VI In ASTIA collection
7 Effectiveness	

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1	Officer personnel
2	Statistical analysis
3	Mathematical prediction
4	Communications personnel
5	Engineering personnel
6	Scientific personnel
7	Effectiveness
I	AFSC Project(Task) 7734(04)
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teria for jobs in these areas.