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Impact of the Computer on Job Analysis in the United States Air Force

By

Joseph E. Morsh
Raymond E. Christal

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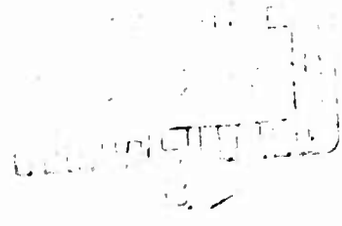

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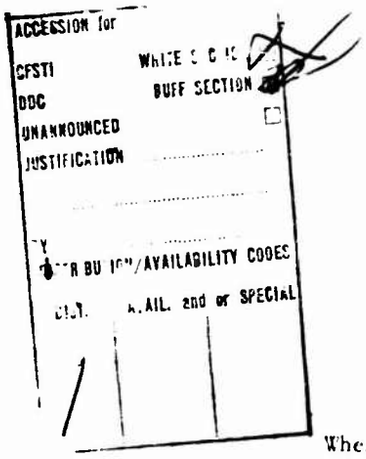

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FOREWORD

The computer printouts given in the tables were derived from a survey of veterinary career ladders conducted during December 1965 and January 1966 by HRB-Singer, Inc., State College, Pennsylvania, under contract No. AF 41(609)-2379. Computer programs for analyzing the job inventory data were prepared by Computer Sciences Corporation, Houston, Texas, under contract No. AF 41(609)-1982 and contract No. AF 41(609)-2387.

The research reported was carried out under Project 7734, Development of Methods for Describing, Evaluating, and Structuring Air Force Occupations; Task 773401, Development of Methods for Collecting, Analyzing, and Reporting Information Describing Air Force Specialties.

This report has been reviewed and is approved.

James H. Ritter, Colonel USAF
Commander

ABSTRACT

In keeping with present trends toward the automation of personnel information, the Air Force method of job analysis provides for the exploitation of advances in electronic computer technology. Computer capability is applied not only in the analysis of job inventory data but also in the construction, administration, and publication phases of the procedure. During inventory construction the computer is used to prepare alphabetic lists of tentative task statements according to pertinent key words. This grouping by topic facilitates the detection of redundancy and insures the elimination of duplicate statements. In the administration phase, the computer selects the required sample of job incumbents from current personnel rosters maintained on magnetic tape. In addition, the computer prints names and addresses on appropriate labels to attach to inventories for mailing. It is in the area of occupational data analysis, however, that the computer makes its most impressive impact. By application of a complex program consisting of over 50,000 instructions, those incumbents in a survey sample who perform essentially the same job are grouped together, and a job description composed of duties and tasks is published for each such job type identified. The computer also lists information available for each case and reports means, standard deviations, and distributions of values for specified variables. Composite job descriptions may also be obtained for any group defined in terms of job-related variables such as grade, specialty, years of experience, or specialized training. Other programs compute and generate tables showing group similarities and group differences, thus providing a condensed picture of interrelationships or revealing dissimilarities among job types or other groups. And finally, a program selects and arranges the job descriptions, tabular outputs, and explanatory text materials in any desired order and publishes the complete job analysis survey report.

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IMPACT OF THE COMPUTER ON JOB ANALYSIS IN THE UNITED STATES AIR FORCE

I. INTRODUCTION

The phenomenal computer capability of compressing months of calculation by conventional methods into a matter of hours has led to widespread applications in business and industry and in agencies of the United States government. The computer today plays a major role in the solution of problems of astronomy, space flight, airplane and missile design, nuclear physics, weather forecasting, trend analysis, and information storage and retrieval. The use of the computer in the operations of the Internal Revenue Service, in public utilities, and in banks has made commonplace the injunction, "Do not fold, spindle, or mutilate." It is inevitable perhaps that the computer should become involved with personnel management. In step with advances in the processing of personnel data, the Air Force has evolved a job analysis methodology which is compatible with specifically designed computer programs.

II. THE AIR FORCE METHOD OF JOB ANALYSIS

As described in detail in several reports by Morsh and others,[1] the job inventory is the foundation of the Air Force method of job analysis. The inventory, designed to cover all levels of a particular career or promotion ladder, is constructed from published source materials according to a standardized format. An inventory usually consists of from 200 to 400 task statements, grouped under major functional categories which are called duties. After technical review and revision the inventory is administered by mail to samples of approximately 500 to 2,000 job incumbents. The participants supply identification and background information and indicate performance or non-performance of tasks. They then record the relative time spent on each task and rate the tasks on factors such as difficulty, frequency of performance, criticality, or training emphasis required. Incumbents' responses constitute the raw data for the computer analyses.

III. SELECTION OF REPRESENTATIVE SAMPLES

The computer facilitates the selection of current and representative samples for inventory administration. Up-to-date files of all personnel in the Air Force are maintained on magnetic tape for maximum accessibility. A computer program enables a user to request any desired roster from this tape. In addition, the computer prints the name and mailing address on appropriate labels. Thus, the required sample may be selected and inventories addressed and mailed to incumbents with a minimum of clerical assistance.

IV. GROUP JOB DESCRIPTIONS

It is in the analysis of occupational data, however, that the electronic computer makes its most impressive impact. Complex programs have been written for treating masses of job

[1] All of the sources included in the list of references serve to provide a general background of job analysis concepts and techniques.

data which until recently would have been impossible to handle. The outputs of these programs have significant implications for occupational research and for personnel management.

The computer will generate composite job descriptions, made up of tasks performed, for any group of individuals where the cases can be defined in terms of background variables. For example, a job description can be computed for incumbents who have taken a special course, or for individuals who have been on the job for less than six months, or for men in the surveyed specialty who are assigned to a particular squadron. Indeed, job descriptions can be generated in terms of values or ranges of values on as many as nine variables. Thus, it is perfectly feasible to obtain a description for a group of weather officers, say, who are all majors with regular commissions, who hold a Bachelor's degree in engineering and have completed a course in high altitude forecasting, have a minimum of 24 months' experience as meteorologists, are assigned to an overseas command, are less than 35 years of age, and are married or divorced.

Tables 1 through 10 in the appendix are replications of computer printouts of various facets of job analysis procedures. Table 1 presents the first page of a standard consolidated group job description which may run to five or six pages. This particular description was compiled for Air Force Veterinary Specialists working at the journeyman level. The percentage of work time fully accounted for is computed for both duties and tasks. The percentage shows the extent to which the composite job description covers the work of the average member of the group. Values in the first numeric column indicate the percentage of members performing each task. Column 2 shows the average percentage of work time spent by members of this journeyman group who perform each task. Column 3 indicates the average percentage of work time spent on each task distributed across the group. This third column is the group job description since it accounts for the work time of all members. Tasks in the job description are arranged in descending order of magnitude of values in this column. Column 4 presents the cumulative sums of the values in Column 3, that is, the average percentage of work time accounted for by tasks up to and including any task listed in the job description.

As seen in Table 2, similar job descriptions are also published where duty categories are used instead of tasks.

V. JOB TYPE DESCRIPTIONS

The computer program having the greatest potentiality for manpower organization and personnel management is that which identifies and describes the job types existing in an occupational survey sample (Morsh, April 1965). This highly complex program first computes the similarity between every pair of jobs in the sample. Since the complete square matrix is generated, the initial step for a 2,000-case sample involves computation of some 4,000,000 overlap values. Then, by means of an automated job clustering program consisting of over 50,000 programmed instructions, incumbents performing essentially the same jobs are identified and grouped together. Task and duty job descriptions are published for each job type differentiated.

Table 3 presents the first page of the job description by tasks computed for the Food and Sanitation Inspector job type identified in the veterinary career ladder. The same job type description based on duties is shown in Table 4. Job type descriptions appear in the same format as other group descriptions previously described.

VI. DESCRIPTION OF JOB TYPE MEMBERS

Another program is used to describe the individual members of each job type in terms of the history and background information collected during the survey. The computer tabulates

all the data available for each member of the group under appropriate headings. For example, the tabulation might include such information as grade, specialty, education, command, special courses attended, and months of experience in the career field reported by members of the particular job type. Table 5 presents the background information data of Food and Sanitation Inspectors who compose one of the significant job types identified in the survey of the veterinary career ladder. These history and background summary reports are extremely valuable. For instance, they serve to identify persons working above or below their skill level or to locate jobs which can be performed by inexperienced personnel.

VII. CONSOLIDATION OF GROUP INFORMATION BY TASK

Instead of reporting job data in terms of groups of individuals surveyed, a program has been developed which analyzes the data according to the tasks performed. Tasks are listed in inventory order showing the percentage of the members of a group who perform each task. The group may be the entire sample surveyed or any job type or other subgroup specified. The percentage of members performing each task for groups with differing amounts of active federal military service is shown in Table 6. Only the first 48 tasks of the 256 tasks in the inventory have been included. Similar tables list tasks in inventory order but show the average percentage of time spent on each task by group members. The average percentage of time spent on the first 48 tasks by the same experience groups appearing in Table 6 is presented in Table 7. In order to facilitate comparison, data pertaining to several groups are usually shown in the same table. For example, several job types, or skill level groups, or groups having various amounts of experience are shown together.

VIII. GROUP SIMILARITY ANALYSIS

For purposes of selection and training, it is often desirable to know in what respects the work performed by one group resembles the performance of another group. To meet this need, a program has been written which computes and reports a matrix of similarities among all groups identified in an analysis. This output provides a condensed picture of the interrelationships among job types and other groups. It is especially useful in detecting the need for new shredouts or for combining existing shredouts. Part of a group similarity summary table is presented in Table 8 which shows the overlap of veterinary career ladder groups in terms of the average percentage of time spent on each task by group members. The groups are identified in Table 11.

IX. JOB DIFFERENCE DESCRIPTIONS

Because it sometimes is as important to know why groups are different as to know why they are similar, a program has been designed to publish job difference descriptions. These descriptions reveal dissimilarities between job types or other groups identified. All tasks in the inventory are ordered according to the magnitude of the absolute differences between the two groups compared. Group differences are shown for percentage of the members performing each task and for the average percentage of time spent on each task. A page from such a job difference description is shown in Table 9.

X. STATISTICS ON BACKGROUND INFORMATION VARIABLES

Another program provides an analysis of background information collected as part of a survey. The output reports mean, standard deviation, and distribution of responses of any group for any variable specified. Information may be obtained, for example, on the extent to which certain tools are used and the types of equipment worked on, as well as the kinds of individuals who use the tools or work on the equipment. The investigator has complete flexibility in selecting variables and in prescribing intervals in the distributions.

XI. ANALYSIS OF TASK RATING FACTORS

In most occupational surveys conducted by the Air Force, besides data on task performance and non-performance and the relative time spent on tasks, information is obtained on such task ratings as difficulty, criticality, frequency, or required training emphasis. Several of these task rating factors may be included as subsamples in a single survey. A computer program automatically breaks out the cases responding to each factor, analyzes the data, and publishes the results. A printout derived from this program, for 10 groups and for the first 11 tasks in the inventory, is presented in Table 10. The groups are identified in Table 11 in the appendix.

XII. FINAL OCCUPATIONAL ANALYSIS SURVEY REPORT

Finally, a program is available which selects and arranges the job descriptions and tables produced by the programs previously mentioned in any desired order for publication. Verbal texts including tables of contents and descriptive or explanatory materials may be introduced as required. The computer is then used as the means for publication of 12 to 24 copies of the comprehensive job analysis survey report. This report may contain as many as 1,000 pages.

APPENDIX

Table 1. Group Job Description by Tasks – Veterinary Specialist DAFSC 90850

TASK JOB DESCRIPTION,CASES= 327,TASKS= 256,DUTIES= 11,MOBS= 176
DAFSC 90850 VETERINARY SPECIALIST
TIME PERFECTLY DESCRIBED ON DUTIES= 68.28,TASKS= 43.39

D-TSK		DUTY/TASK TITLE	CUMULATIVE SUM OF AVERAGE PERCENT TIME SPENT BY ALL MEMBERS	AVERAGE PERCENT TIME SPENT BY ALL MEMBERS	AVERAGE PERCENT TIME SPENT BY MEMBERS PERFORMING	PERCENT OF MEMBERS PERFORMING
E	21	INSPECT PERISHABLE FOODS FOR CONTRACT COMPLIANCE	78.41	2.95	2.32	2.32
E	6	COLLECT LABORATORY SAMPLES OF SUBSISTENCE ITEMS	80.11	2.86	2.29	4.61
E	14	INSPECT EGGS AND EGG PRODUCTS	76.70	2.43	1.86	6.47
E	24	INSPECT SANITARY CONDITIONS OF CONTAINERS AND VEHICLES USED FOR SHIPMENT	74.43	2.48	1.85	8.32
B	3	COMPILE STATISTICAL DATA FOR RECORDS AND REPORTS	61.36	3.00	1.84	10.16
E	22	INSPECT PREPACKAGED FROZEN FOODS	73.30	2.34	1.72	11.87
G	8	PERFORM ORGANOLEPTIC EXAMINATIONS	80.11	2.12	1.70	13.57
E	13	INSPECT DAIRY PRODUCTS FOR QUALITY AND CONTRACT COMPLIANCE	71.02	2.38	1.69	15.26
E	31	PREPARE LABORATORY SAMPLES FOR SHIPMENT	75.00	1.99	1.49	16.76
E	18	INSPECT MISCELLANEOUS PRODUCTS SUCH AS FATS, OILS, MARGARINE, AND CEREAL	68.75	2.12	1.46	18.21
B	24	MAINTAIN FILES OF RECORDS, FORMS, CORRESPONDENCE, AND REPORTS	61.93	2.30	1.42	19.63
I	8	MAINTAIN ORDER AND CLEANLINESS OF BASE VETERINARY CLINIC	63.07	2.16	1.36	21.00
E	9	GRADE EGGS TO DETERMINE CONTRACT COMPLIANCE OF EGGS AND EGG PRODUCTS	61.36	2.19	1.35	22.35
B	28	PREPARE MAINTENANCE AND INSPECTION RECORDS AND REPORTS	55.11	2.41	1.33	23.67
F	5	CONDUCT SANITARY INSPECTIONS OF BASE FACILITIES	67.05	1.97	1.32	24.99
G	3	INSPECT ARRANGEMENTS OF DUNNAGE AND FOOD ITEMS	69.32	1.82	1.26	26.26
E	33	REPORT RECOMMENDED REJECTIONS OF SUBSISTENCE ITEMS TO CONTRACTING OFFICER AND TO COMMISSARY OFFICER	67.05	1.88	1.26	27.52
E	29	MAINTAIN LIST OF FEDERAL AND MILITARY SPECIFICATIONS	68.75	1.76	1.21	28.73
G	5	INSPECT STOCK ROTATION CONTROL METHODS	65.34	1.81	1.18	29.91
G	2	INSPECT AND RECOMMEND PROPER HANDLING OF STORAGE ITEMS	64.20	1.80	1.15	31.06
B	27	PREPARE CORRESPONDENCE	57.39	1.96	1.13	32.19
E	19	INSPECT NONPERISHABLE SUBSISTENCE ITEMS FOR CONTRACT REQUIREMENTS	53.41	2.11	1.12	33.32
E	20	INSPECT PACKING METHODS AND PACKAGING	54.55	2.06	1.12	34.44
H	22	MAINTAIN HEALTH AND TREATMENT RECORDS OF ANIMALS	57.95	1.93	1.12	35.56
B	23	MAINTAIN FILES OF LABORATORY RECORDS AND REPORTS	62.50	1.72	1.08	36.63
G	4	INSPECT MAINTENANCE OF TEMPERATURE AND HUMIDITY LEVELS IN STORAGE AREAS	63.64	1.69	1.07	37.71
G	6	INSPECT STORAGE AREAS FOR INSECT AND RODENT CONTROL	68.18	1.56	1.06	38.77
I	1	AID VETERINARY OFFICER IN ZOONOTIC DISEASE CONTROL PROGRAM	58.52	1.81	1.06	39.83
G	9	RECOMMEND IMMEDIATE USE OR OTHER DISPOSITION OF DETERIORATED ITEMS	62.50	1.64	1.03	40.86
H	19	EXAMINE FECAL SPECIMENS	59.09	1.68	0.99	41.85
E	11	GRADE PERISHABLE FOODS FOR CONTRACT COMPLIANCE	42.05	2.25	0.94	42.79
H	28	POST DATA IN ANIMAL RECORDS	52.27	1.79	0.94	43.73
H	9	ASSIST IN PHYSICAL EXAMINATION OF ANIMALS	58.52	1.56	0.91	44.64

Table 2. **Group Job Description by Duties – Veterinary Specialist DAFSC 90850**

DUTY JOB DESCRIPTION,CASES= 327,TASKS= 256,DUTIES= 11,MBRS= 176
DAFSC 90850 VETERINARY SPECIALIST
TIME PERFECTLY DESCRIBED ON DUTIES= 68.28,TASKS= 43.39

D-TSK	DUTY/TASK TITLE	CUMULATIVE SUM OF AVERAGE PERCENT TIME SPENT BY ALL MEMBERS	AVERAGE PERCENT TIME SPENT BY ALL MEMBERS	AVERAGE PERCENT TIME SPENT BY MEMBERS PERFORMING	PERCENT OF MEMBERS PERFORMING
E	PERFORMING SUBSISTENCE INSPECTIONS	93.18	32.39	30.18	30.18
H	PERFORMING ANIMAL MEDICAL CARE	76.14	23.45	17.85	48.03
B	DIRECTING AND IMPLEMENTING	88.07	18.77	16.53	64.56
G	INSPECTING COLD AND DRY FOOD STORAGE IN WAREHOUSE	84.66	11.77	9.97	74.52
F	INSPECTING FOOD SERVICE FACILITIES	77.84	11.25	8.76	83.28
I	PERFORMING BASE VETERINARY ANIMAL SERVICES AND ZOONOSIS CONTROL	72.16	9.67	6.98	90.26
A	ORGANIZING AND PLANNING	63.64	4.30	2.74	93.00
C	EVALUATING	51.14	4.45	2.28	95.28
D	TRAINING	55.68	4.08	2.27	97.55
J	SUPPORTING SENTRY DOG PROGRAM	37.50	5.02	1.88	99.43
K	SUPPORTING ANIMAL RESEARCH PROGRAM	4.55	11.77	0.54	99.97

Table 3. **Job Type Description by Tasks – Food and Sanitation Inspector**

TASK JOB DESCRIPTION,CASES= 227,TASKS= 256,DUTIES= 11,MOBS= 20
KPATH ORDER FROM 213 TO 235 GROUP STAGE= 50
TIME PERFECTLY DESCRIBED ON DUTIES= 77.85,TASKS= 56.78

D–TSK		DUTY/TASK TITLE	CUMULATIVE SUM OF AVERAGE PERCENT TIME SPENT BY ALL MEMBERS	AVERAGE PERCENT TIME SPENT BY ALL MEMBERS	AVERAGE PERCENT TIME SPENT BY MEMBERS PERFORMING	PERCENT OF MEMBERS PERFORMING
E	21	INSPECT PERISHABLE FOODS FOR CONTRACT COMPLIANCE	90.00	4.10	3.69	3.69
E	22	INSPECT PREPACKAGED FROZEN FOODS	100.00	3.32	3.32	7.02
G	3	INSPECT ARRANGEMENTS OF DUNNAGE AND FOOD ITEMS	100.00	3.31	3.31	10.33
E	14	INSPECT EGGS AND EGG PRODUCTS	100.00	3.02	3.02	13.35
G	5	INSPECT STOCK ROTATION CONTROL METHODS	100.00	2.93	2.93	16.27
G	2	INSPECT AND RECOMMEND PROPER HANDLING OF STORAGE ITEMS	95.00	3.08	2.92	19.19
E	24	INSPECT SANITARY CONDITIONS OF CONTAINERS AND VEHICLES USED FOR SHIPMENT	90.00	3.16	2.84	22.04
B	3	COMPILE STATISTICAL DATA FOR RECORDS AND REPORTS	65.00	4.32	2.81	24.84
G	8	PERFORM ORGANOLEPTIC EXAMINATIONS	100.00	2.68	2.68	27.52
E	33	REPORT RECOMMENDED REJECTIONS OF SUBSISTENCE ITEMS TO CONTRACTING OFFICER AND TO COMMISSARY OFFICER	95.00	2.80	2.66	30.18
E	13	INSPECT DAIRY PRODUCTS FOR QUALITY AND CONTRACT COMPLIANCE	75.00	3.45	2.59	32.77
G	4	INSPECT MAINTENANCE OF TEMPERATURE AND HUMIDITY LEVELS IN STORAGE AREAS	95.00	2.72	2.59	35.36
E	18	INSPECT MISCELLANEOUS PRODUCTS SUCH AS FATS, OILS, MARGARINE, AND CEREAL	85.00	2.91	2.47	37.83
E	9	GRADE EGGS TO DETERMINE CONTRACT COMPLIANCE OF EGGS AND EGG PRODUCTS	80.00	3.07	2.46	40.29
G	6	INSPECT STORAGE AREAS FOR INSECT AND RODENT CONTROL	95.00	2.58	2.45	42.74
G	9	RECOMMEND IMMEDIATE USE OR OTHER DISPOSITION OF DETERIORATED ITEMS	90.00	2.63	2.37	45.11
E	19	INSPECT NONPERISHABLE SUBSISTENCE ITEMS FOR CONTRACT REQUIREMENTS	70.00	3.10	2.17	47.28
G	1	DETERMINE EXPECTED SHELFLIFE, CONDITION OF GOODS, AND ADEQUACY OF SUPPLY FOR EMERGENCIES	65.00	2.93	1.91	49.18
B	24	MAINTAIN FILES OF RECORDS, FORMS, CORRESPONDENCE, AND REPORTS	50.00	3.61	1.80	50.99
E	11	GRADE PERISHABLE FOODS FOR CONTRACT COMPLIANCE	50.00	3.56	1.78	52.77
E	6	COLLECT LABORATORY SAMPLES OF SUBSISTENCE ITEMS	80.00	2.20	1.76	54.53
F	5	CONDUCT SANITARY INSPECTIONS OF BASE FACILITIES	65.00	2.53	1.64	56.17
G	7	INSPECT STORAGE OF EMERGENCY, SURVIVAL, AND IN-FLIGHT RATIONS	70.00	2.26	1.58	57.75
E	31	PREPARE LABORATORY SAMPLES FOR SHIPMENT	70.00	2.10	1.47	59.22
E	15	INSPECT EMERGENCY AND SURVIVAL RATIONS	65.00	2.16	1.41	60.63
E	20	INSPECT PACKING METHODS AND PACKAGING	60.00	2.32	1.39	62.02
E	29	MAINTAIN LIST OF FEDERAL AND MILITARY SPECIFICATIONS	60.00	2.32	1.39	63.42
E	16	INSPECT INFLIGHT MEALS	65.00	2.11	1.37	64.79
E	23	INSPECT PROCEDURES FOR LOADING AND TRANSPORTING SUBSISTENCE ITEMS	40.00	3.20	1.28	66.07
E	28	MAINTAIN LISTS OF APPROVED SOURCES FROM OTHER GOVERNMENTAL AGENCIES	65.00	1.91	1.24	67.31

Table 4. **Job Type Description by Duties – Food and Sanitation Inspector**

DUTY JOB DESCRIPTION,CASES= 327,TASKS= 256,DUTIES= 11,MBRS= 20
KPATH ORDER FROM 213 TO 232 GROUP STAGE= 50
TIME PERFECTLY DESCRIBED ON DUTIES= 77.86,TASKS= 56.78

D-TSK	DUTY/TASK TITLE	CUMULATIVE SUM OF AVERAGE PERCENT TIME SPENT BY ALL MEMBERS	AVERAGE PERCENT TIME SPENT BY ALL MEMBERS	AVERAGE PERCENT TIME SPENT BY MEMBERS PERFORMING	PERCENT OF MEMBERS PERFORMING
E	PERFORMING SUBSISTENCE INSPECTIONS	100.00	45.35	45.35	45.35
G	INSPECTING COLD AND DRY FOOD STORAGE IN WAREHOUSE	100.00	22.74	22.74	68.09
B	DIRECTING AND IMPLEMENTING	85.00	13.99	11.89	79.98
F	INSPECTING FOOD SERVICE FACILITIES	85.00	12.82	10.89	90.87
H	PERFORMING ANIMAL MEDICAL CARE	30.00	13.72	4.12	94.99
D	TRAINING	50.00	3.66	1.83	96.82
I	PERFORMING BASE VETERINARY ANIMAL SERVICES AND ZOONOSIS CONTROL	30.00	4.71	1.41	98.23
A	ORGANIZING AND PLANNING	45.00	2.23	1.00	99.24
C	EVALUATING	30.00	2.33	0.70	99.93
J	SUPPORTING SENTRY DOG PROGRAM	5.00	0.88	0.04	99.98

Table 5. **Description of Individual Members of Food and Sanitation Inspector Job Type**

KPATH SEQ NUM	CASE CTRL NUM	MAJ AIR CMD	GRD	PRIMARY AFSC	DUTY AFSC	NUMBER N-ZERO RESPONSE	MOS IN DUTY AFSC	MOS AT PRES BASE	MOS IN PRES ASGMT	MOS IN CAREER FIELD	MOS ACT FED MIL SERVICE	BASIC VET CRS	ADV VET CRS	BASE MGT CRS	OTHER SPCL CRS	DIRECT DUTY ASGMT	MEMBER OVRLAP
222	0023	A	3	90850	90850	47	014	017	008	031	038	1	2	2	2	2	66.56
217	0193	R	3	90850	90850	36	023	010	010	034	036	1	2	+	1	2	64.48
223	0024	A	3	90850	90850	54	014	009	008	027	029	1	2	2	2	2	64.04
213	0009	J	3	90850	90850	29	031	020	020	024	027	1	2	2	1	2	61.62
216	0101	K	4	90850	90850	42	049	011	011	051	051	1	2	2	1	2	61.34
229	0205	S	3	90850	90850	82	015	020	015	023	028	1	2	2	2	2	59.36
218	0243	J	3	90850	90850	28	038	002	002	053	053	1	2	2	2	2	59.08
214	0320	D	4	90850	90850	37	040	035	040	041	048	1	+	+	+	+	58.11
215	0312	D	4	90850	90850	35	021	021	021	040	040	1	2	2	2	1	57.98
228	0172	D	6	T90870	90850	67	001	001	001	168	170	2	1	1	1	1	57.64
226	0226	H	3	90850	90850	57	020	020	020	020	027	1	2	2	2	2	55.94
221	0102	K	4	90850	90850	38	060	013	013	060	060	2	2	2	1	1	55.56
219	0174	D	3	90850	90850	31	012	007	007	000	020	1	2	2	2	2	55.33
224	0104	K	4	90850	90850	31	108	066	035	114	120	1	1	2	2	2	54.85
225	0291	D	4	90850	90850	40	026	009	009	026	030	1	2	2	2	2	53.44
220	0117	D	3	90850	90850	29	003	005	005	020	027	1	2	2	2	1	52.56
227	0235	F	5	90870	90850	27	000	062	066	198	210	2	1	1	1	1	52.43
230	0141	S	5	90870	90870	24	026	026	003	136	142	1	1	1	+	+	51.01
232	0255	C	4	90850	90850	36	027	009	009	030	033	1	2	2	2	1	50.43
231	0253	R	3	90850	90850	24	016	014	004	024	027	1	2	2	2	2	43.76

AVR OVERLAP 56.78
STD DEV 5.32

Table 6. **Percentage of Members Performing Each Task — Veterinary Groups with Increasing Amounts of Active Federal Military Service**

TASK		1-12 MONTHS	13-24 MONTHS	25-48 MONTHS	49-96 MONTHS	97-144 MONTHS	145-192 MONTHS	193-240 MONTHS	241 OR MORE MONTHS
A	1	0.	2.222	2.857	11.765	18.333	25.926	43.590	44.444
A	2	0.	2.222	2.857	27.451	46.667	66.667	92.308	94.444
A	3	0.	6.667	10.000	29.412	45.000	59.259	84.615	77.778
A	4	0.	4.444	1.429	17.647	36.667	37.037	61.538	72.222
A	5	0.	11.111	8.571	31.373	45.000	62.963	84.615	83.333
A	6	0.	2.222	1.429	17.647	38.333	48.148	61.538	56.667
A	7	0.	2.222	1.429	13.725	28.333	44.444	71.795	83.333
A	8	0.	24.444	34.286	50.980	66.667	74.074	92.308	94.444
A	9	0.	26.667	27.143	64.706	71.667	66.667	89.744	88.889
A	10	0.	17.778	7.143	23.529	43.333	55.556	66.667	88.889
A	11	0.	2.222	1.429	17.647	38.333	44.444	74.359	88.889
A	12	0.	4.444	0.	7.843	25.000	29.630	51.282	66.667
A	13	0.	2.222	7.143	7.843	31.667	29.630	48.718	55.556
A	14	0.	2.222	0.	7.843	13.333	44.444	41.026	50.000
A	15	0.	4.444	7.143	37.255	51.667	55.556	92.308	83.333
A	16	0.	0.	4.286	13.725	30.000	40.741	53.846	77.778
A	17	0.	11.111	14.286	41.176	46.667	48.148	69.231	72.222
A	18	0.	0.	1.429	3.922	18.333	37.037	56.410	61.111
A	19	0.	2.222	2.857	9.804	38.333	48.148	84.615	83.333
B	1	0.	2.222	0.	5.882	8.333	11.111	12.821	44.444
B	2	8.333	17.778	30.000	35.294	55.000	70.370	64.103	77.778
B	3	0.	44.444	55.714	64.706	75.000	88.889	92.308	83.333
B	4	8.333	28.889	25.714	43.137	55.000	62.963	64.103	72.222
B	5	0.	4.444	11.429	25.490	38.333	25.926	46.154	38.889
B	6	0.	6.667	5.714	25.490	33.333	40.741	51.282	61.111
B	7	0.	0.	1.429	5.882	10.000	18.519	23.077	44.444
B	8	0.	0.	1.429	7.843	13.333	3.704	15.385	11.111
B	9	0.	15.556	28.571	37.255	35.000	44.444	53.846	55.556
B	10	0.	6.667	4.286	19.608	18.333	22.222	43.590	33.333
B	11	0.	2.222	1.429	23.529	41.667	62.963	89.744	94.444
B	12	0.	2.222	1.429	21.569	33.333	51.852	76.923	77.778
B	13	0.	4.444	5.714	37.255	50.000	66.667	92.308	94.444
B	14	0.	2.222	1.429	19.608	45.000	48.148	76.923	83.333
B	15	0.	8.889	8.571	23.529	41.667	59.259	87.179	83.333
B	16	0.	0.	2.857	15.686	33.333	48.148	66.667	66.667
B	17	0.	0.	1.429	5.882	25.000	18.519	28.205	44.444
B	18	0.	6.667	15.714	45.098	53.333	66.667	89.744	94.444
B	19	8.333	0.	7.143	17.647	40.000	51.852	66.667	72.222
B	20	0.	0.	0.	7.843	15.000	25.926	38.462	50.000
B	21	0.	6.667	4.286	17.647	26.667	33.333	58.974	72.222
B	22	25.000	40.000	42.857	54.902	51.667	59.259	69.231	77.778
B	23	16.667	48.889	57.143	70.588	66.667	55.556	69.231	55.556
B	24	8.333	42.222	57.143	76.471	68.333	62.963	79.487	72.222
B	25	0.	2.222	1.429	5.882	15.000	22.222	30.769	44.444
B	26	0.	2.222	15.714	11.765	26.667	33.333	35.897	50.000
B	27	8.333	48.889	40.000	72.549	83.333	96.296	89.744	83.333
B	28	8.333	46.667	50.000	52.941	60.000	77.778	74.359	77.778
B	29	0.	20.000	18.571	29.412	43.333	51.852	58.974	61.111

Table 7. Average Percentage of Time Spent on Each Task — Veterinary Groups with Increasing Amounts of Active Federal Military Service

TASK		1-12 MONTHS	13-24 MONTHS	25-48 MONTHS	49-96 MONTHS	97-144 MONTHS	145-192 MONTHS	193-240 MONTHS	241 OR MORE MONTHS
A	1	0.	0.005	0.011	0.071	0.070	0.102	0.200	0.176
A	2	0.	0.030	0.061	0.296	0.490	0.633	0.891	0.889
A	3	0.	0.054	0.104	0.320	0.348	0.550	0.596	0.493
A	4	0.	0.053	0.011	0.203	0.272	0.348	0.407	0.437
A	5	0.	0.106	0.045	0.327	0.408	0.649	0.728	0.782
A	6	0.	0.005	0.005	0.130	0.309	0.491	0.436	0.355
A	7	0.	0.030	0.009	0.075	0.303	0.405	0.451	0.797
A	8	0.	0.333	0.487	0.530	0.726	0.872	0.828	0.886
A	9	0.	0.371	0.287	0.847	0.905	0.801	1.027	0.849
A	10	0.	0.310	0.051	0.217	0.497	0.523	0.439	0.632
A	11	0.	0.008	0.026	0.137	0.378	0.420	0.557	0.693
A	12	0.	0.035	0.	0.132	0.328	0.326	0.372	0.378
A	13	0.	0.030	0.119	0.070	0.259	0.201	0.286	0.340
A	14	0.	0.030	0.	0.131	0.106	0.293	0.349	0.395
A	15	0.	0.067	0.109	0.445	0.594	0.540	0.996	0.896
A	16	0.	0.	0.020	0.126	0.220	0.277	0.396	0.546
A	17	0.	0.164	0.199	0.573	0.543	0.454	0.512	0.531
A	18	0.	0.	0.013	0.036	0.133	0.313	0.387	0.382
A	19	0.	0.030	0.026	0.109	0.359	0.373	0.634	0.586
B	1	0.	0.024	0.	0.039	0.080	0.066	0.092	0.240
B	2	0.132	0.276	0.345	0.316	0.513	0.788	0.573	0.651
B	3	0.	1.296	1.691	1.217	1.438	1.733	1.011	3.138
B	4	0.074	0.464	0.384	0.564	0.724	0.956	0.493	0.650
B	5	0.	0.042	0.092	0.211	0.277	0.165	0.210	0.193
B	6	0.	0.061	0.059	0.186	0.243	0.302	0.309	0.472
B	7	0.	0.	0.005	0.025	0.049	0.086	0.129	0.223
B	8	0.	0.	0.004	0.114	0.107	0.018	0.115	0.075
B	9	0.	0.278	0.277	0.328	0.217	0.387	0.354	0.448
B	10	0.	0.146	0.034	0.146	0.221	0.129	0.221	0.163
B	11	0.	0.038	0.013	0.311	0.384	0.656	0.856	1.004
B	12	0.	0.030	0.008	0.197	0.286	0.412	0.631	0.578
B	13	0.	0.083	0.058	0.498	0.625	0.724	1.037	1.077
B	14	0.	0.030	0.010	0.212	0.385	0.384	0.656	0.588
B	15	0.	0.158	0.078	0.253	0.410	0.573	0.761	0.604
B	16	0.	0.	0.019	0.164	0.283	0.336	0.515	0.544
B	17	0.	0.	0.011	0.086	0.229	0.159	0.274	0.321
B	18	0.	0.104	0.272	0.344	0.889	0.938	1.102	1.201
B	19	0.264	0.	0.072	0.151	0.403	0.626	0.580	0.587
B	20	0.	0.	0.	0.051	0.179	0.171	0.254	0.307
B	21	0.	0.154	0.094	0.238	0.304	0.329	0.557	0.659
B	22	0.856	0.651	0.753	0.722	0.685	0.807	0.557	1.069
B	23	0.503	1.006	1.145	1.050	0.871	0.584	0.536	0.372
B	24	0.493	1.656	1.627	1.255	1.359	0.939	0.744	0.638
B	25	0.	0.020	0.017	0.036	0.268	0.188	0.340	0.438
B	26	0.	0.077	0.300	0.157	0.276	0.340	0.288	0.359
B	27	0.221	1.003	0.761	1.213	1.656	1.885	1.133	1.016
B	28	0.221	1.191	1.216	0.937	0.986	1.095	0.672	2.235
B	29	0.	0.430	0.390	0.296	0.556	0.713	0.481	0.391

Table 8. **Group Similarities in Terms of Overlap of Average Percentage of Time Spent on Tasks**

	SPC001	SPC002	SPC003	SPC004	SPC005	SPC006	SPC007	SPC008	SPC009	SPC010	SPC011	SPC012
SPC001	100.000	32.917	72.644	47.476	24.682	36.693	77.612	83.049	75.186	68.847	58.694	49.134
SPC002	32.917	100.000	18.862	9.832	26.576	12.956	36.096	34.164	27.572	23.465	16.066	9.857
SPC003	72.644	18.862	100.000	63.489	29.802	48.393	59.290	77.069	86.951	85.110	76.767	66.685
SPC004	47.476	9.832	63.489	100.000	47.825	77.734	34.397	49.676	56.530	70.147	82.368	86.747
SPC005	24.682	26.576	29.802	47.825	100.000	60.333	20.873	31.368	32.456	38.524	44.746	44.665
SPC006	36.693	12.956	48.393	77.734	60.333	100.000	28.004	40.962	43.820	55.850	67.263	70.370
SPC007	77.612	36.096	59.290	34.397	20.873	28.004	100.000	69.678	63.168	54.949	45.200	36.786
SPC008	83.049	34.164	77.069	49.676	31.368	40.962	69.678	100.000	80.538	72.017	61.808	51.005
SPC009	75.186	27.572	86.951	56.530	32.456	43.820	63.168	80.538	100.000	79.769	69.489	59.207
SPC010	68.847	23.465	85.110	70.147	38.524	55.850	54.949	72.017	79.769	100.000	82.421	71.115
SPC011	58.694	16.066	76.767	82.368	44.746	67.263	45.200	61.808	69.489	82.421	100.000	82.354
SPC012	49.134	9.857	66.685	86.747	44.665	70.370	36.786	51.005	59.207	71.115	82.354	100.000
SPC013	47.521	10.643	61.452	91.647	50.859	80.581	33.970	49.165	54.429	67.801	78.742	82.467
SPC014	41.941	8.999	56.470	86.640	48.541	79.155	31.445	44.283	50.117	62.334	73.963	79.434
SPC015	82.001	31.262	83.955	53.859	31.662	42.937	69.737	88.920	90.809	77.485	66.826	55.914
SPC016	52.900	12.772	69.821	91.670	47.595	74.618	39.452	55.685	62.605	75.404	88.958	89.166
SPC017	79.708	28.337	89.827	59.465	33.284	47.005	65.067	84.656	90.683	83.816	73.086	61.743
SPC018	71.300	19.463	87.482	63.811	31.017	49.106	58.122	74.024	79.407	82.772	75.873	69.548
SPC019	45.450	10.659	60.280	94.191	52.923	81.166	32.910	48.042	54.144	67.341	80.305	85.133
SPC020	54.384	17.906	68.609	81.569	48.542	70.470	43.423	57.380	64.390	76.322	81.955	76.850
SPC021	71.027	18.230	90.357	63.075	28.703	47.293	57.970	74.201	83.582	81.598	75.349	64.808
SPC022	71.027	18.230	90.357	63.075	28.703	47.293	57.970	74.201	83.582	81.598	75.349	64.808
GRP054	49.777	9.856	65.641	93.500	45.430	75.264	35.790	51.031	58.147	71.964	82.257	86.640
GRP023	12.134	0.823	23.705	51.373	68.460	63.151	7.727	17.748	19.547	29.680	41.014	47.334
GRP036	32.612	1.783	45.921	38.574	18.386	28.838	29.272	37.112	41.042	41.806	41.769	43.597
GRP042	76.978	20.006	89.622	60.494	27.735	45.681	62.202	78.657	83.896	81.594	73.056	62.846
GRP022	45.399	10.234	49.413	26.732	10.939	20.252	54.264	49.677	49.032	40.976	34.994	31.931
GRP029	35.732	1.072	42.817	26.296	5.110	15.322	32.889	36.991	41.509	34.516	31.915	30.174
GRP050	52.181	5.437	64.886	45.785	13.522	30.998	45.278	51.955	63.354	57.718	52.809	48.256
GRP072	29.266	1.762	45.491	39.337	18.765	29.792	26.120	33.370	42.663	42.414	42.281	41.098
GRP030	52.160	16.939	59.927	44.581	20.409	32.880	45.662	52.621	58.270	59.161	53.023	46.597
GRP053	40.713	45.376	27.886	16.057	19.685	16.990	45.524	40.568	28.903	29.319	22.869	15.215
GRP046	32.509	42.333	30.616	42.445	74.344	51.233	29.151	38.931	35.333	40.804	41.867	39.737
GRP111	36.103	78.774	17.941	7.261	23.436	10.554	41.422	35.132	26.833	21.797	14.041	7.254
GRP087	22.948	59.712	13.012	7.500	21.104	9.817	25.259	24.944	21.005	16.201	11.511	7.697
GRP001	69.744	22.453	85.076	74.076	41.979	60.453	55.569	73.613	80.838	89.192	86.287	75.402

Table 9. **Group Differences in Terms of Percentage of Members Performing Each Task**

SPC004 VET TECHNICIAN 90870 (N=90) VS SPC003 VET SPECIALIST 90850 (N=176)
VETERINARY CAREER LADDER INVENTORY - AFSCS 908X0/908X1
SPC004 MEMBERS = 90 DAFSC 90870 VETERINARY TECHNICIAN
SPC003 MEMBERS = 176 DAFSC 90850 VETERINARY SPECIALIST

AVERAGE PERCENT TIME BY ALL GROUP MEMBERS - DIFFERENCE, SPC004 MINUS SPC003.....
PERCENT MEMBERS PERFORMING - DIFFERENCE, SPC004 MINUS SPC003.....
SPC004 AVERAGE PERCENT TIME BY ALL GROUP MEMBERS.....
SPC004 PERCENT MEMBERS PERFORMING.....
SPC003 AVERAGE PERCENT TIME BY ALL GROUP MEMBERS.....
SPC003 PERCENT MEMBERS PERFORMING.....

D-TSK		TASK TITLE						
E	6	COLLECT LABORATORY SAMPLES OF SUBSISTENCE ITEMS	80.11	2.29	66.67	0.52	-13.45	-1.77
E	21	INSPECT PERISHABLE FOODS FOR CONTRACT COMPLIANCE	78.41	2.32	75.56	0.84	-2.85	-1.48
E	14	INSPECT EGGS AND EGG PRODUCTS	76.70	1.86	68.89	0.70	-7.82	-1.16
E	24	INSPECT SANITARY CONDITIONS OF CONTAINERS AND VEHICLES USED FOR SHIPMENT	74.43	1.85	76.67	0.81	2.23	-1.03
E	31	PREPARE LABORATORY SAMPLES FOR SHIPMENT	75.00	1.49	62.22	0.46	-12.78	-1.03
E	22	INSPECT PREPACKAGED FROZEN FOODS	73.30	1.72	71.11	0.68	-2.18	-1.03
E	13	INSPECT DAIRY PRODUCTS FOR QUALITY AND CONTRACT COMPLIANCE	71.02	1.69	74.44	0.69	3.42	-0.99
I	8	MAINTAIN ORDER AND CLEANLINESS OF BASE VETERINARY CLINIC	63.07	1.36	50.00	0.40	-13.07	-0.97
E	18	INSPECT MISCELLANEOUS PRODUCTS SUCH AS FATS, OILS, MARGARINE, AND CEREAL	68.75	1.46	64.44	0.53	-4.31	-0.93
C	9	EVALUATE THE WORK OF VETERINARY SPECIALISTS 90850	9.66	0.10	78.89	0.90	69.23	0.80
B	13	DIRECT PERSONNEL IN MAINTAINING WORK PERFORMANCE	17.05	0.21	86.67	0.98	69.62	0.76
H	22	MAINTAIN HEALTH AND TREATMENT RECORDS OF ANIMALS	57.95	1.12	54.44	0.37	-3.51	-0.75
B	18	EDIT AND REVIEW CORRESPONDENCE	25.00	0.39	87.78	1.14	62.78	0.75
E	9	GRADE EGGS TO DETERMINE CONTRACT COMPLIANCE OF EGGS AND EGG PRODUCTS	61.36	1.35	62.22	0.61	0.86	-0.74
H	19	EXAMINE FECAL SPECIMENS	59.09	0.99	48.89	0.26	-10.20	-0.73
D	10	EXPLAIN POLICIES AND DIRECTIVES TO SUBORDINATES	22.73	0.23	86.67	0.93	63.94	0.70
H	28	POST DATA IN ANIMAL RECORDS	52.27	0.94	43.33	0.25	-8.94	-0.68
A	15	PLAN AND SCHEDULE WORK ASSIGNMENTS	17.61	0.20	82.22	0.87	64.61	0.67
H	21	MAINTAIN ASEPTIC CONDITIONS IN TREATMENT AND SURGERY ROOMS	48.30	0.90	42.22	0.24	-6.07	-0.67
G	8	PERFORM ORGANOLEPTIC EXAMINATIONS	80.11	1.70	84.44	1.03	4.33	-0.67
E	20	INSPECT PACKING METHODS AND PACKAGING	54.55	1.12	60.00	0.48	5.45	-0.64
C	2	EVALUATE ADHERENCE TO WORK STANDARDS	7.39	0.06	71.11	0.69	63.72	0.63
B	11	COUNSEL SUBORDINATES ON CAREER DEVELOPMENT	10.23	0.12	78.89	0.75	68.66	0.63
D	12	MAINTAIN AND REVIEW TRAINING RECORDS	9.09	0.09	76.67	0.71	67.58	0.63
D	15	REVIEW TRAINING PROGRESS OF INDIVIDUALS	5.11	0.06	73.33	0.67	68.22	0.61
B	3	COMPILE STATISTICAL DATA FOR RECORDS AND REPORTS	61.36	1.84	90.00	1.23	28.64	-0.61
H	9	ASSIST IN PHYSICAL EXAMINATION OF ANIMALS	58.52	0.91	53.33	0.31	-5.19	-0.61
A	2	ASSIGN PERSONNEL TO DUTY POSITIONS	13.64	0.16	82.22	0.77	68.59	0.61
E	19	INSPECT NONPERISHABLE SUBSISTENCE ITEMS FOR CONTRACT REQUIREMENTS	53.41	1.12	63.33	0.52	9.92	-0.61
B	30	PREPARE WORK SCHEDULES	12.50	0.14	82.22	0.74	69.72	0.60
C	15	PREPARE AIRMAN PERFORMANCE REPORTS IAF FORMS 911,910, 909)	5.11	0.04	73.33	0.63	68.22	0.59
B	32	RESOLVE TECHNICAL PROBLEMS OF SUBORDINATES	13.07	0.13	76.67	0.71	63.60	0.58
C	1	ASSIST IN REVIEWING AND EVALUATING UNIT OPERATIONS FOR EFFICIENCY, ECONOMY AND EFFECTIVENESS	13.64	0.12	70.00	0.70	56.36	0.58
B	40	SUPERVISE INSPECTIONS OF FOOD SERVICE AND STORAGE FACILITIES	28.41	0.45	80.00	1.03	51.59	0.57
D	1	ADMINISTER WRITTEN, ORAL, AND PERFORMANCE TESTS	14.20	0.14	74.44	0.71	60.24	0.57

Table 10. Analysis of Task Rating Factor by Groups – Time on Job Before Performing Task

NUMBER OF GROUP MEMBERS RESPONDING TO EACH TASK, AND MEAN AND STANDARD DEVIATION OF TASK RATINGS. A RATING OF 1 INDICATES TASK WAS PERFORMED DURING FIRST MONTH ON JOB. RATING 2 INDICATES TASK WAS FIRST PERFORMED AFTER THE 1ST MONTH BUT WITHIN 3 MOS. RATING 3 = 3 TO 6 MOS. RATING 4 = 6 TO 12 MOS. RATING 5 = 12 TO 18 MOS. RATING 6 = 18 TO 24 MOS. RATING 7 INDICATES TASK WAS FIRST PERFORMED AFTER 24 MONTHS ON THE JOB.

GROUP-ID.			SPC001	SPC002	SPC003	SPC004	SPC005	SPC006	SPC010	SPC015	SPC016	GRP001
GROUP MEMBERS			25	17	176	90	9	10	51	127	144	327
FACTOR SUBGRP			25	17	172	88	9	10	51	126	139	321
D-TSK		VARIABLE INFO										
A	1	N	1	0	12	34	0	5	6	3	42	52
		MEAN	6.000	0.	5.333	4.294	0.	2.200	5.500	4.000	4.310	4.365
		SD	-0.	0.	1.972	2.333	0.	2.400	1.803	1.633	2.445	2.394
A	2	N	1	2	23	72	6	10	14	3	96	114
		MEAN	3.000	1.000	3.783	2.625	1.000	1.800	4.500	1.333	2.469	2.675
		SD	-0.	-0.	2.302	2.251	-0.	1.778	2.291	0.471	2.150	2.250
A	3	N	1	2	30	67	6	9	15	10	89	115
		MEAN	5.000	1.000	2.967	2.567	1.000	1.778	3.000	2.800	2.427	2.522
		SD	-0.	-0.	1.906	2.180	-0.	1.872	2.000	1.600	2.125	2.074
A	4	N	0	0	16	52	3	9	9	2	68	80
		MEAN	0.	0.	3.187	3.673	1.000	2.333	3.556	2.000	3.368	3.325
		SD	0.	0.	1.878	2.276	-0.	1.826	2.166	1.000	2.216	2.201
A	5	N	2	0	34	67	5	10	16	11	90	118
		MEAN	4.500	0.	3.265	2.851	1.000	2.000	4.062	2.909	2.644	2.847
		SD	0.500	0.	2.146	2.208	-0.	1.483	2.436	1.621	2.073	2.142
A	6	N	0	0	18	50	6	9	9	2	71	83
		MEAN	0.	0.	4.444	2.900	1.000	1.889	5.121	5.000	2.676	2.988
		SD	0.	0.	2.191	2.274	-0.	0.875	2.183	1.000	2.135	2.263
A	7	N	1	0	10	54	5	10	7	2	70	80
		MEAN	7.000	0.	3.600	3.333	1.000	2.100	4.143	2.000	3.071	3.112
		SD	-0.	0.	2.154	2.419	-0.	1.814	2.295	1.000	2.374	2.366
A	8	N	3	2	69	77	9	10	26	34	109	170
		MEAN	4.667	1.000	2.986	2.662	1.000	1.800	3.346	2.824	2.477	2.671
		SD	0.471	-0.	1.822	2.136	-0.	1.778	2.018	1.444	2.084	1.985
A	9	N	3	2	72	77	9	10	33	30	108	173
		MEAN	3.333	1.000	3.000	2.506	1.000	2.000	3.394	2.867	2.296	2.601
		SD	0.943	-0.	1.922	2.099	-0.	0.632	2.399	1.335	1.877	1.949
A	10	N	1	0	31	56	6	10	12	12	79	104
		MEAN	3.000	0.	3.548	3.036	1.000	2.400	4.583	3.000	2.772	3.010
		SD	-0.	0.	2.168	1.973	-0.	1.855	2.431	1.414	1.968	2.045
A	11	N	1	0	18	56	7	9	9	2	79	91
		MEAN	3.000	0.	3.111	3.196	1.000	2.333	4.111	1.500	2.810	2.923
		SD	-0.	0.	2.105	2.207	-0.	1.944	2.514	0.500	2.087	2.150

Table 11. **Identification of Veterinary Groups**

Group No.	Group Title
SPC001	DAFSC 90830 Apprentice Veterinary Specialist
SPC002	DAFSC 90831 Laboratory Animal Specialist
SPC003	DAFSC 90850 Veterinary Specialist
SPC004	DAFSC 90870 Veterinary Technician
SPC005	DAFSC 90871 Laboratory Animal Technician
SPC006	DAFSC 90891 Veterinary Superintendent
SPC007	1 to 12 months AFMS
SPC008	13 to 24 months AFMS
SPC009	25 to 48 months AFMS
SPC010	49 to 96 months AFMS (2d Enlistment)
SPC011	97 to 144 months AFMS
SPC012	145 to 192 months AFMS
SPC013	193 to 240 months AFMS
SPC014	241 or more months AFMS
SPC015	First enlistment (−48 mos AFMS)
SPC016	Third or later enlistment (97 + mos AFMS)
SPC017	3- and 5-skill level grads basic vet course
SPC018	3- and 5-skill level nongrads basic vet course
SPC019	7-skill level grads advanced vet course
SPC020	7-skill level nongrads advanced vet course
SPC021	5-skill level airmen with directed duty assignment
SPC022	5-skill level airmen with no directed duty assignment
GRP001	Veterinary Career Ladders Total Sample
GRP022	Perishable Foods Inspector
GRP023	NCOIC Veterinary Training
GRP029	Egg Inspector
GRP030	Inspector, Food Service Facilities
GRP036	Food Inspection Supervisor
GRP042	Veterinary Specialist (Journeyman)
GRP046	Laboratory Animal Supervisor
GRP050	Food and Sanitation Inspector
GRP053	Veterinary Specialist, Sentry Dog Support
GRP054	NCOIC Veterinary Services
GRP072	Depot and Dockside Food Inspector
GRP111	Laboratory Animal Specialist I
GRP087	Laboratory Animal Specialist II

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13 ABSTRACT

In keeping with present trends toward the automation of personnel information, the Air Force method of job analysis provides for the exploitation of advances in electronic computer technology. Computer capability is applied not only in the analysis of job inventory data but also in the construction, administration, and publication phases of the procedure. During inventory construction the computer is used to prepare alphabetic lists of tentative task statements according to pertinent key words. This grouping by topic facilitates the detection of redundancy and insures the elimination of duplicate statements. In the administration phase, the computer selects the required sample of job incumbents from current personnel rosters maintained on magnetic tape. In addition, the computer prints names and addresses on appropriate labels to attach to inventories for mailing. It is in the area of occupational data analysis, however, that the computer makes its most impressive impact. By application of a complex program consisting of over 50,000 instructions, those incumbents in a survey sample who perform essentially the same job are grouped together, and a job description composed of duties and tasks is published for each such job type identified. The computer also lists information available for each case and reports means, standard deviations, and distributions of values for specified variables. Composite job descriptions may also be obtained for any group defined in terms of job-related variables such as grade, specialty, years of experience, or specialized training. Other programs compute and generate tables showing group similarities and group differences, thus providing a condensed picture of interrelationships or revealing dissimilarities among job types or other groups. And finally, a program selects and arranges the job descriptions, tabular outputs, and explanatory text materials in any desired order and publishes the complete job analysis survey report.

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