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Determining the consumer image of the Malmstrom Air Force Base Exchange

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The University of Montana

DETERMINING THE CONSUMER IMAGE OF THE

MALMSTROM AIR FORCE BASE EXCHANGE

By

James J. Folz

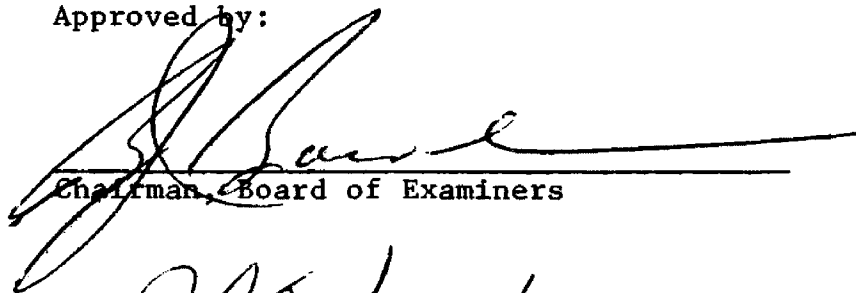B.S., Oregon State University, 1968

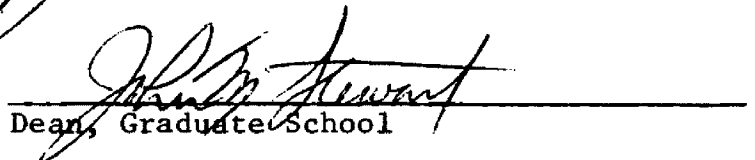Presented in partial fulfillment of the requirements
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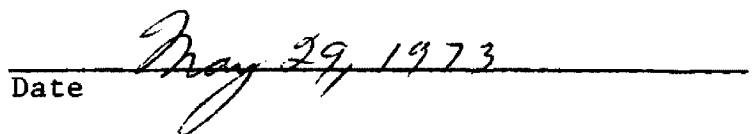UNIVERSITY OF MONTANA

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CHAPTER I

INTRODUCTION

Before proceeding with the main subject of this paper, it is necessary to present some background information on the Army and Air Force Exchange Service (AAFES) of which the Malmstrom Base Exchange is a member.

The primary function of the Base Exchange (BX) is to provide a merchandising service to the military family. The BX was initially established to provide necessities, however, the concept of "necessities" today is a much debated issue between the BX and retail establishments, and is not essential to this paper. Suffice it to say that the BX offers a vast variety of products and services.

In addition to its normal sales outlets, the BX supports such services as theaters, libraries, bowling alleys, cafeterias, and hobby shops, many of which do not generate profits. In order to provide these services the BX must make profits on its merchandising operations. Its means of doing so are limited by its own primary objective of providing a service, and by legislation.

Many profit-generating tactics employed by normal business enterprises are not available to the BX. Prices are set by regulation, not by the management. Powerful civilian lobbying continues to restrict product mix. The BX, for example, is prohibited from selling high priced, high turnover items such as stereo components and cameras. Normal advertising is also prohibited.

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The imposition of these restrictions, among others, demands that the BX take full advantage of allowable marketing practices. The major purpose of this study was to determine, through its consumer image, which areas of its marketing mix might be improved.

The decision to make this study resulted from casual conversations with fellow combat crewmembers. One recurring topic of conversation concerned a lack of satisfaction with BX facilities. Whether the problem was stock-outs, inadequate price advantages, lack of variety, bad service, or a myriad of other complaints, the conversation was usually curtly dismissed with, "What's new!" A second purpose of this study was to determine the extent of this dissatisfaction, or more properly, to determine if it were just idle complaining.

A vast amount of research has been undertaken in the consumer behavior area of store image. Previous research has revealed six major criteria with which the consumer forms his image of a store, (1) location, (2) product mix, (3) price, (4) advertising, (5) store personnel, and (6) services offered.[1] Store selection is then a result of the process of comparing these criteria with the perceived characteristics of the individual store.

As summarized by Engel, et al,[2] the following general conclusions are presented. Work by Stonier and Johnson revealed that distance and parking convenience were the main reasons people preferred to shop outside of the central city. Alderson and Sessions indicated that a store offering a wide variety or a deep assortment of product lines would be preferred

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[1] James F. Engel, David T. Kollat, and Roger D. Blackwell, Consumer Behavior, (New York: Holt, Rinehart and Winston, Inc., 1968), p. 452.

[2] Ibid., pp. 452-453.

over those having medium depth or breadth of assortment. Research in the affect of price was inconclusive but Rich and Portis, among others, indicated that it ranked far down on the list of reasons for shopping at a particular store.

The perceived characteristics with which the consumer compared the foregoing criteria fell into the same general categories. The formation of the required images is not described by well-developed theory, however, the following are suggested as major determinants.[3]

a. Price - the consumer's perceived price may differ from the actual price. Many factors influence this perception, among which are advertisements, displays, specials, etc.

b. Advertising - advertising is quite important, yet it is often misdirected. Without visiting a store, the consumer must rely on advertising to form an image. Class appeal, price, etc., are all reflected in advertising.

c. Product and Service Mix - a store must offer the products and services that a consumer desires in order to create a favorable image.

d. Store Personnel - the consumer will transfer his image of the personnel waiting on him into his image of the entire store.

e. Physical Attributes - quality of construction materials, displays, etc., are perceived as qualities of the store.

f. Store Clientel - the image of other shoppers represents the class appeal of the store.

A third purpose of this study, then, was to determine the relative importance of these evaluative criteria, and more importantly to offer contradictory evidence to the low ranking of price.

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[3]Ibid., pp. 454-455.

CHAPTER II

PROJECT DESIGN

The Malmstrom Air Force Base Exchange may face a different con-
sumer image than local retail outlets. The null hypothesis chosen for
the purposes of this analysis, however, is that the Malmstrom Air Force
Base Exchange (BX) faces the same consumer image as local retail outlets.

Hypothesis

The Survey

The data for this survey were gathered using a written question-
naire employing a six-point semantic differential scale (see Appendix 1).
The semantic differential was selected as a measuring device because of
its basic simplicity. Both the questionnaire and the analysis are less
expensive and time consuming than other methods such as the Q Sort, Likert
scale, Thurstone scale, and cummulative scale. The semantic differential
does not sacrifice effectiveness at the expense of simplicity.

The semantic differential, developed by Osgood, Suci, and
Tannenbaum,[1] has been widely used in marketing research for determining
consumer images. The selection of the number of cues (six-point in this
case) is dependent on the type of research being performed and the accur-
acy required for determining significance. The six-point scale was

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[1]G. David Hughes, Attitude Measurement for Marketing Strategies,
(Glenview, Illinois: Scott, Foresman and Company, 1971), p. 91.

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selected because it has enough cues to assume interval quality data, yet it does not have so many that it confuses or irritates the respondent.

The intent of the survey was to measure consumer images toward shopping in general (Question 4) and toward shopping at the BX (Question 5). The test of the hypothesis would then be a comparison of these images. The last four factors in Question 6 were used for control purposes, as was the advertising factor in Question 5. This simple control was used to void responses that circled the same end scale cues for opposite factors, for example, strongly agreeing with the statements that the BX has too many and too few product lines. Similarly, responses selecting advertising as the most important factor for shopping at the BX were voided, except as indicated above.

Demographic data were obtained in Questions 1 - 3. These data were necessary in order to break the sample into subgroups for further analysis.

The Sample

The population under consideration included all military personnel assigned to Malmstrom Air Force Base. At the time the survey was accomplished this population consisted of 5600 individuals, 970 of whom were officers and 4630 of whom were enlisted.

The sample was obtained by distributing questionnaires at twenty locations on the same day. The questionnaires were filled out immediately so assistance could be rendered if necessary and the control questions could be monitored. The presence of responses in the upper levels of the advertising factor under Question 5 represent individuals who shopped only at the BX when encouraged by word of mouth advertising.

The survey yielded 155 usable, completed questionnaires. This represented 2.77 percent of the total population, 6.19 percent of the officers and 2.05 percent of the enlisted personnel.

CHAPTER III

METHODS OF ANALYSIS

The initial step in the analysis of the data was determination of the frequency distributions. The data from Questions 4 and 5 were logged for all categories. These distributions are presented in table form (Appendix II) and graphic form (Appendix III).

Relying on an assumption of normality, parametric methods of analysis such as the "t test" could be applied to determine the significance of the hypothesis. However, the application of the "t test" to non-normal data yields biased and unreliable results. The Chi-square test for normality allowed the assumption of normality by statistically testing for "goodness of fit" to be foregone.

The null hypothesis for the Chi-square test is that the samples are normally distributed. A value of Chi-square falling outside of the 95 percent confidence intervals would indicate rejection of this null hypothesis. The Chi-square test, however, is not conclusive. Therefore, further tests were applied to the data. Significant differences obtained with the Chi-square test may indicate a skewed distribution. Further tests are applied to determine additional properties of the skewness. The test for skewness determines the extent and direction of skewness. The test for kurtosis determines the nature of the skewness. An example of the application of these tests to sample data is given in Table 1. The large value of Chi-square (8.823) falls well outside the 95 percent

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confidence interval. Assuming that the sample was drawn from a normal population, this value would be exceeded only 3.4 percent of the time. The Chi-square value represents the amount that the sample distribution deviates from a perfectly normal distribution. This value indicates initial rejection of the null hypothesis which assumes normality. The test for skewness (g_1) verifies positive skewness through the large ratio $g_1/S.D.g_1$. The test for kurtosis (g_2) indicates a distribution with a flatter top than the normal distribution.

TABLE 1

TESTS FOR NORMALITY

x	Freq (f)	Freq (F)	$(f-F)^2/F$	$\bar{x}$	$(x-\bar{x})^2$	$(x-\bar{x})^3$	$(x-\bar{x})^4$
1	14	7.75	5.03		123.49	366.77	1089.34
2	18	17.45	0.02		69.86	137.63	271.12
3	24	30.94	1.56		22.58	21.91	21.26
4	33	39.07	0.94		0.03	0.00	0.00
5	32	31.71	0.003		33.95	34.98	36.03
6	33	27.13	1.27		135.99	276.08	560.44
TOTAL	154	154.05	8.823	3.97	385.91	837.37	1978.19

$$m_2 = (x-\bar{x})^2/f = 385.91/154 = 2.51$$

$$m_3 = (x-\bar{x})^3/f = 837.37/154 = 5.44$$

$$m_4 = (x-\bar{x})^4/f = 1978.19/154 = 12.85$$

$$g_1 = m_3/(m_2 \sqrt{m_2}) = 0.92$$

$$S.D.g_1 = \sqrt{(6/154)} = 0.197$$

$$g_2 = (m_4/m_2^2)-3 = -0.96$$

$$S.D.g_2 = \sqrt{(24/154)} = 0.395$$

The result of this test is a rejection of the assumption of normality. In addition, the negative value of g_2 rejects the "t" distribution and other distributions derived from the normal distribution.

With the rejection of normality, the standard parametric methods of analysis could not be applied with any degree of reliability. While non-parametric methods do not lend themselves to sophisticated computations, they do enable one to test for significant differences without introducing unnecessary bias.

Of the several non-parametric tests available, the Wilcoxon signed rank test was selected for this analysis because it attaches importance to the magnitude of differences rather than merely accounting for the number of differences. This test is a non-parametric approximate of the "t" test. While the "t" test analyzes differences between means, the signed rank test is an analysis of the differences between medians.

An example of the signed rank test is given in Table 2. The differences between each response to Questions 4 and 5 are determined using Question 4 as the base point. The differences are then ranked, with the lowest rank (zero differences are not counted) being assigned to the smallest absolute difference. When differences are tied, each pair is assigned the average rank. When all differences are ranked, the sign of the difference is restored to the rank. The positive and negative ranks are then summed separately, yielding two rank sums. The smaller of these rank sums (T) is then used in the analysis to determine an approximate Z score with a correction factor for the discrete population (-1/2).

TABLE 2

WILCOXON SIGNED RANK TEST

PAIR	DIFF	RANK +	RANK -
1	-2		9.0
2	-4		14.0
3	-1		3.5
4	3	13.0	
5	2	9.0	
6	-3		13.0
7	-1		3.5
8	-2		9.0
9	1	3.5	
10	1	3.5	
11	-1		3.5
12	-3		13.0
13	-1		3.5
14	-5		16.0
15	-2		9.0
16	2	9.0	
TOTAL		38.0	97.0

T (smaller rank sum) = 38

$Z = (1\mu-T1-1/2)/\sigma$ where $\mu = n(n+1)/4$ and $\sigma = (2n+1)/6$

$Z = (68-38-1/2)/19.3 = 1.528$ since 1.528 is less than 1.96 the null hypothesis is not rejected at the 0.05 level of significance.

Applying the 95 percent significance level, the Z score to be used for comparison with the result of the test is 1.96. Computed values greater than 1.96 indicate rejection of the null hypothesis. These values do not indicate acceptance of the hypothesis outright, but they do attach

great reliability to the probability of correctness in accepting the hypothesis. The 95 percent significance level simply states that in 95 out of 100 samples the obtained values will be less than 1.96.

The results of the Wilcoxon signed rank test are given in Appendix IV. Where tables were used to determine significance (sixteen pairs or less) the approximate Z score is replaced by S, for significant, and I, for insignificant. For the example given in Table 2 the table indicates that for sixteen pairs, a T of twenty-nine or less is required for significance.

CHAPTER IV

RESULTS

The null hypothesis was rejected. The hypothesis is accepted at the 0.05 level of significance. The Malmstrom Air Force Base Exchange does face a different consumer image than local retail stores.

A factor by factor analysis yields more specific results:

Location. Only two major categories (OFFICER and MARRIED) indicate rejection of the null hypothesis. In both cases location was a more important factor in selecting a retail store than in shopping at the BX. Review of the medians (Appendix IV) for all categories supported the direction of this difference. Subjectively, it would seem that location would be a very important factor on the BX side. The fact that the population was always in contact with the BX could be one reason for the difference. Another reason could be a trade-off with the price factor.

Parking. All major categories (except SINGLE and ENLISTED) rejected the null hypothesis. Once again, this was a more important factor for retail shopping than for BX shopping.

Product Lines. Four major categories rejected the null hypothesis (TOTAL, OFFICER, SINGLE, and ON BASE). This factor was also more important for retail shopping.

Variety in Product Lines. All major categories rejected the null hypothesis. Again, this factor was more important in selecting a retail store.

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Price. Only the OFFICER category rejected the null hypothesis. A review of the medians quickly showed why. In all cases, this was the most important factor for both retail and BX shopping. There was a difference in favor of the BX, but it was very small. This finding is contradictory to the findings of Rich and Portis[1] and intuitively rejects their conclusion.

Advertising. All major categories rejected the null hypothesis. All categories report this was more important for retail shopping. This finding is consistent with the fact that the BX cannot advertise in the normal sense. The inclusion of several responses on the top end of the scale for Question 5 are the result of these respondents reporting word of mouth advertising as a very important factor in shopping at the BX. Several responses were not included due to the control factor of the question.

Appearance. All major categories except OFF BASE rejected the null hypothesis. Again, the difference was in favor of retail shopping.

Store Personnel. Four major categories (TOTAL, OFFICER, MARRIED, and OFF BASE) rejected the null hypothesis. This factor, too, was more important for retail shopping. Question 6 from the questionnaire is being submitted to the BX for further analysis of this factor.

Services Offered. TOTAL, OFFICER, MARRIED, SINGLE, and ON BASE rejected the null hypothesis. Again the findings indicate more importance for retail shopping.

The relative rankings of the evaluative criteria for both retail and BX shopping are shown in Table 3. These rankings were obtained using

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[1]Engel, Consumer Behavior, p. 452.

the median as the determinant of importance. (It should be noted that the same relative rankings were obtained using the mean.) The significance of these rankings are reflected in the magnitude of the medians. It is on the basis of these magnitudinal differences that the null hypothesis is rejected.

TABLE 3

MEDIAN RANKING OF EVALUATIVE CRITERIA

<u>Retail</u>	<u>BX</u>
1. Price (5.8)	1. Price (5.8)
2. Variety within product lines (5.4)	2. Variety within product lines (5.1)
3. Product lines (5.4)	3. Product lines (5.0)
4. Services (5.2)	4. Services (5.0)
5. Personnel (4.7)	5. Personnel (4.5)
6. Parking (4.6)	6. Parking (4.4)
7. Location (4.2)	7. Location (4.1)
8. Appearance (4.2)	8. Appearance (3.9)
9. Advertising (3.2)	9. Advertising (2.2)

These same rankings are obtained using the means for the TOTAL category, except that no ties are noted.

CHAPTER V

CONCLUSIONS

Several conclusions can be drawn from the results of this study. The difference in consumer image is one of magnitude, unless there are other important factors of store selection that have not been reported. The reasons for this difference could be several, however, two possibilities stand out. First, the responses to Question 5 of the survey could be a means of showing general dissatisfaction with the BX. The importance of this factor has a carry-over effect on the importance of the other factors. The second conclusion was that the population is readily aware of the offerings of the BX. People do not have to rely on any evaluations other than price since they know what is available. On the basis of the data obtained by this survey, acceptance of either one of these conclusions cannot be made with any objective reliability.

Limitations

The success of this study can be judged by the extent in which it accomplished the three major purposes as set forward in the preface. To summarize, it identified which areas of marketing mix need improvement, it established the relative importance of the evaluative factors, and it indicated a possible general dissatisfaction with the BX.

The inconclusive evidence on this final factor is due to the limited amount of information available from the questionnaire. The

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inclusion of more questions of the good-bad and agree-disagree variety would probably have remedied this problem.

The major limitation of this study was the limited population. Waiving the restrictions of time and money, the population could be extended to include wives and dependents. Since wives generally do most of the shopping, though not necessarily most of the buying, this would be a logical extension. The exclusion of wives could be partly responsible for the high ranking of PRICE revealed by the survey. To a man, shopping normally implies looking. Since the questionnaire did not offer a definition of shopping, the contradiction to Rich and Portis cannot be viewed as completely significant.

Also without the time and money restrictions, the sample could become a completely stratified random sample. A computer listing of Social Security Numbers, for example, could be obtained and random number selection used in mailing questionnaires.

Another major limitation was the limited definition of the BX. It is very difficult to visualize the BX as just one store (as directed in the questionnaire). The inclusion of all facilities and services would require many more categories to identify peculiarities in certain areas, i.e., determine any differences in consumer image among the BX facilities.

Correcting these limitations would undoubtedly lead to more significant research. However, this significance must be weighed against the additional costs and time involved. In light of this, the only real limitation of this study was the questionnaire.

The Questionnaire

This survey is being conducted to gather information which can be used by the Base Exchange to determine areas in which the BX can improve its services to you, the military family of MAFB. Your patience in answering the questions will be greatly appreciated.

DEFINITIONS

The BX, as defined in this survey, is limited to the Malmstrom Main Exchange only, NOT the Four Seasons and Outdoor Store.

"Product lines" are the different types of products carried, i.e., men's clothing, women's clothing, jewelry, uniforms and accessories.

"Variety within product lines" is the availability of different price ranges among similar products, i.e., men's pants ranging from $5 to $30.

DIRECTIONS

When answering Questions 4, 5, and 6, use the following guidelines. If you feel the concept is very closely related to one end of the scale or the other, circle either (1) or (6). If you feel it is closely related, circle either (2) or (5). If you feel it is only slightly related, circle either (3) or (4). DO NOT MARK BETWEEN THE NUMBERS.

SURVEY QUESTIONNAIRE

1. What is your marital status?   Married _____   Single _____

2. Do you live on base _____ or off base _____?

3. What is your rank? _____

4. When selecting a store to shop in which factors do you consider most important?

	unimportant				important	
Services offered	1	2	3	4	5	6
Store personnel	1	2	3	4	5	6
Physical appearance	1	2	3	4	5	6
Advertisements	1	2	3	4	5	6
Price	1	2	3	4	5	6
Variety within product lines	1	2	3	4	5	6
Number of product lines	1	2	3	4	5	6
Parking	1	2	3	4	5	6
Location	1	2	3	4	5	6

5. When deciding to shop at the BX which factors are most important?

Services offered	1	2	3	4	5	6
Store personnel	1	2	3	4	5	6
Physical appearance	1	2	3	4	5	6
Advertisements	1	2	3	4	5	6
Price	1	2	3	4	5	6
Variety within product lines	1	2	3	4	5	6
Number of product lines	1	2	3	4	5	6
Parking	1	2	3	4	5	6
Location	1	2	3	4	5	6

6. Express your opinion on the following statements.

	disagree				agree	
BX personnel are friendly	1	2	3	4	5	6
BX personnel are efficient	1	2	3	4	5	6
BX personnel are polite	1	2	3	4	5	6
BX personnel are helpful	1	2	3	4	5	6
The BX has too many product lines	1	2	3	4	5	6
The BX has too few product lines	1	2	3	4	5	6
The BX has too much product variety	1	2	3	4	5	6
The BX has too little product variety	1	2	3	4	5	6

SURVEY QUESTIONNAIRE

1. What is your marital status? Married _____ Single _____

2. Do you live on base _____ or off base _____?

3. What is your rank? _____

4. When selecting a store to shop in which factors do you consider most important?

	important					unimportant
Location	6	5	4	3	2	1
Parking	6	5	4	3	2	1
Number of product lines	6	5	4	3	2	1
Variety within product lines	6	5	4	3	2	1
Price	6	5	4	3	2	1
Advertisements	6	5	4	3	2	1
Physical appearance	6	5	4	3	2	1
Store personnel	6	5	4	3	2	1
Services offered	6	5	4	3	2	1

5. When deciding to shop at the BX which factors are most important?

	important					unimportant
Location	6	5	4	3	2	1
Parking	6	5	4	3	2	1
Number of product lines	6	5	4	3	2	1
Variety within product lines	6	5	4	3	2	1
Price	6	5	4	3	2	1
Advertisements	6	5	4	3	2	1
Physical appearance	6	5	4	3	2	1
Store personnel	6	5	4	3	2	1
Services offered	6	5	4	3	2	1

6. Express your opinion on the following statements.

	agree					disagree
BX personnel are friendly	6	5	4	3	2	1
BX personnel are efficient	6	5	4	3	2	1
BX personnel are polite	6	5	4	3	2	1
BX personnel are helpful	6	5	4	3	2	1
The BX has too many product lines	6	5	4	3	2	1
The BX has too few product lines	6	5	4	3	2	1
The BX has too much product variety	6	5	4	3	2	1
The BX has too little product variety	6	5	4	3	2	1

FREQUENCY DISTRIBUTIONS
TOTAL

	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2
Question 4										
LOC	33	32	33	24	18	14	154	3.97	385.90	2.52
PAR	40	42	34	22	11	6	155	4.39	298.78	1.94
PRO	70	50	19	6	3	7	155	5.01	241.34	1.57
VAR	73	53	17	5	3	4	155	5.14	198.16	1.29
PRI	109	30	11	2	2	1	155	5.54	116.48	0.76
ADV	14	24	30	26	33	26	153	3.23	380.99	2.51
APP	23	45	31	28	15	12	154	3.98	332.94	2.18
PER	37	50	33	15	13	7	155	4.45	303.20	1.97
SER	64	50	29	5	3	5	156	4.97	219.90	1.42
Question 5										
LOC	34	30	28	14	22	24	152	3.79	477.26	3.16
PAR	36	37	26	22	15	16	152	4.06	415.73	2.75
PRO	60	42	18	20	7	5	152	4.74	291.00	1.93
VAR	53	55	16	16	7	6	153	4.74	282.88	1.86
PRI	115	29	4	2	3	1	154	5.61	116.85	0.76
ADV	10	9	24	22	30	53	148	2.57	364.33	2.48
APP	24	28	26	32	21	24	155	3.55	433.39	2.81
PER	38	38	29	17	17	16	155	4.10	417.55	2.71
SER	54	43	26	14	7	9	153	4.63	321.77	2.12

OFFICER

	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2
Question 4										
LOC	5	13	17	9	11	6	61	3.57	128.92	2.15
PAR	4	19	17	13	5	2	60	3.96	85.94	1.46
PRO	18	28	10	3	1	1	61	4.91	64.59	1.08
VAR	21	26	10	2	1	1	61	5.00	64.00	1.07
PRI	42	16	2	1	0	0	61	5.62	24.33	0.41
ADV	2	8	10	11	16	13	60	2.83	134.10	2.27
APP	3	15	15	14	9	4	60	3.61	104.19	1.77
PER	9	20	14	7	9	2	61	4.11	116.20	1.94
SER	17	20	19	1	2	2	61	4.70	84.69	1.41

	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2

OFFICER

Question 5

	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2
LOC	3	13	13	6	12	13	60	3.16	156.03	2.64
PAR	2	17	12	14	6	9	60	3.46	126.94	2.15
PRO	17	18	6	14	5	1	61	4.40	118.76	1.98
VAR	12	25	7	12	4	1	61	4.42	98.92	1.65
PRI	48	13	0	0	0	0	61	5.78	10.23	0.17
ADV	0	1	4	6	16	33	60	1.73	125.14	2.12
APP	2	9	11	15	14	10	61	3.04	119.02	1.98
PER	7	15	12	8	10	9	61	3.59	160.93	2.68
SER	11	19	13	10	5	3	61	4.19	117.64	1.96

ENLISTED

Question 4

	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2
LOC	28	19	16	15	7	8	93	4.23	240.80	2.62
PAR	36	23	17	9	6	4	95	4.65	195.54	2.08
PRO	52	22	9	3	2	6	94	5.07	186.48	2.01
VAR	52	27	7	3	2	3	94	5.22	132.31	1.42
PRI	68	14	9	1	1	1	94	5.53	79.40	0.85
ADV	12	16	20	15	16	13	93	3.48	237.04	2.58
APP	20	30	16	14	6	8	94	4.21	215.75	2.32
PER	27	31	19	8	4	5	94	4.57	176.98	1.90
SER	47	30	10	4	1	3	95	5.14	127.94	1.36

Question 5

	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2
LOC	31	17	15	8	10	11	92	4.19	284.48	3.13
PAR	34	20	14	8	9	7	92	4.44	244.73	2.69
PRO	43	24	12	6	2	4	91	4.96	160.91	1.79
VAR	41	30	9	4	3	5	92	4.94	172.73	1.90
PRI	67	16	4	2	3	1	93	5.49	99.25	1.08
ADV	10	8	19	17	14	20	88	3.13	233.63	2.69
APP	22	19	15	17	7	14	94	3.89	278.57	3.00
PER	30	23	17	9	8	7	94	4.37	232.49	2.50
SER	43	24	13	4	2	6	92	4.91	185.31	2.04

ON BASE

Question 4

	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2
LOC	23	16	19	15	7	9	89	4.13	231.94	2.64
PAR	26	22	20	10	6	5	89	4.35	190.00	2.16
PRO	46	25	6	5	2	4	88	5.09	153.27	1.76
VAR	43	28	8	5	2	3	89	5.08	136.45	1.55
PRI	62	16	7	2	1	0	88	5.56	59.84	0.60
ADV	9	14	17	15	19	14	88	3.28	221.90	2.55
APP	16	28	15	15	8	6	88	4.13	191.63	2.20
PER	21	32	15	7	7	6	88	4.40	191.08	2.20
SER	40	28	14	2	1	3	88	5.02	80.60	0.93

	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2

ON BASE

Question 5

	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2
LOC	22	19	13	8	13	12	87	3.80	275.68	3.21
PAR	24	19	12	15	7	9	86	4.13	237.59	2.80
PRO	40	18	8	10	5	4	85	4.78	192.75	2.29
VAR	37	24	8	9	4	3	85	4.85	163.01	1.94
PRI	61	17	4	2	2	0	86	5.55	65.32	0.77
ADV	9	4	9	13	24	26	85	2.62	221.95	2.64
APP	16	15	12	19	12	14	88	3.56	255.60	2.94
PER	25	23	11	11	9	8	87	4.23	242.65	2.82
SER	37	21	15	7	1	5	86	4.83	166.39	1.96

OFF BASE

Question 4

	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2
LOC	10	16	14	9	11	5	65	3.85	152.46	2.38
PAR	14	20	14	12	5	1	66	4.35	108.99	1.68
PRO	24	24	13	2	1	3	67	4.88	91.75	1.39
VAR	30	25	8	1	1	1	66	5.20	64.44	0.99
PRI	48	14	4	0	0	1	67	5.60	44.12	0.67
ADV	5	10	14	10	14	12	65	3.17	159.14	2.49
APP	7	18	16	12	7	6	66	3.82	137.82	2.12
PER	15	19	18	8	6	1	67	4.39	106.05	1.61
SER	24	21	15	3	2	2	67	4.84	99.20	1.50

Question 5

	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2
LOC	12	11	14	6	9	12	64	3.61	199.23	3.16
PAR	12	18	13	7	8	7	65	3.97	167.94	2.62
PRO	20	24	10	9	2	1	66	4.73	95.09	1.46
VAR	16	31	8	6	3	3	67	4.63	113.67	1.72
PRI	53	12	0	0	1	1	67	5.69	46.42	0.72
ADV	1	5	15	8	7	26	62	2.50	146.00	2.39
APP	8	14	14	11	9	10	66	3.56	170.26	2.62
PER	12	16	18	4	9	8	67	3.91	175.46	2.66
SER	19	22	9	7	5	4	66	4.47	146.44	2.25

	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2

MARRIED

Question 4

	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2
LOC	18	20	23	14	11	8	94	3.96	221.83	2.39
PAR	19	28	25	14	6	4	96	4.29	169.83	1.79
PRO	37	33	13	4	2	6	95	4.85	177.94	1.89
VAR	40	35	11	4	1	4	95	5.02	139.96	1.49
PRI	66	20	5	1	2	1	95	5.52	83.73	0.89
ADV	4	10	22	15	24	19	94	2.91	197.32	2.12
APP	9	24	23	21	10	8	95	3.76	187.43	1.99
PER	23	30	21	7	10	4	95	4.39	190.50	2.03
SER	35	33	18	3	2	5	96	4.84	160.66	1.69

Question 5

	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2
LOC	18	19	18	6	17	17	95	3.62	304.36	3.24
PAR	18	26	18	14	9	11	96	3.97	246.91	2.60
PRO	37	23	13	16	4	2	95	4.71	173.77	1.85
VAR	28	36	9	13	5	4	95	4.60	182.80	1.94
PRI	73	18	1	1	2	1	96	5.63	74.50	0.78
ADV	4	4	13	12	22	38	93	2.30	193.57	2.10
APP	12	15	17	21	17	14	96	3.40	217.36	2.36
PER	22	22	19	9	10	13	95	3.98	275.96	2.94
SER	30	29	15	9	5	7	95	4.52	215.73	2.30

SINGLE

Question 4

	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2
LOC	15	12	10	10	7	6	60	4.00	164.00	2.78
PAR	21	14	9	8	5	2	59	4.54	126.64	2.18
PRO	33	17	6	2	1	1	60	5.27	67.73	1.15
VAR	33	18	6	1	2	0	60	5.32	54.98	0.93
PRI	43	10	6	1	0	0	60	5.58	32.58	0.55
ADV	10	14	8	11	9	7	59	3.73	159.66	2.75
APP	14	21	8	7	5	4	59	4.34	133.22	2.30
PER	14	20	12	8	3	3	60	4.42	112.58	1.91
SER	29	17	11	2	1	0	60	5.18	54.98	0.93

Question 5

	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2
LOC	16	11	10	8	5	7	57	4.07	165.72	2.96
PAR	18	11	8	8	6	5	56	4.21	157.43	2.86
PRO	23	19	5	4	3	3	57	4.81	116.85	2.09
VAR	25	19	7	3	2	2	58	4.97	94.06	1.65
PRI	42	11	3	1	1	0	58	5.59	36.07	0.63
ADV	6	5	11	10	8	15	55	3.02	152.98	2.83
APP	12	13	9	11	4	10	59	3.80	175.56	3.03
PER	16	16	10	8	7	3	60	4.28	138.18	2.34
SER	24	14	11	5	2	2	58	4.81	102.88	1.80

	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2

OFFICER/ON BASE/MARRIED

Question 4

	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2
LOC	1	5	10	5	2	3	26	3.58	44.35	1.77
PAR	0	9	9	5	1	2	26	3.85	35.39	1.42
PRO	6	13	2	2	2	1	26	4.62	46.15	1.85
VAR	7	9	5	2	2	1	26	4.54	48.46	1.94
PRI	19	5	1	1	0	0	26	5.62	14.15	0.57
ADV	0	2	5	6	8	5	26	2.65	37.89	1.52
APP	1	6	7	7	4	1	26	3.62	38.15	1.53
PER	4	10	5	2	3	2	26	4.15	57.39	2.30
SER	9	9	7	0	0	1	26	4.92	31.85	1.27

Question 5

	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2
LOC	1	7	5	2	6	5	26	3.23	66.62	2.66
PAR	1	7	5	7	2	4	26	3.62	55.11	2.20
PRO	7	7	3	6	2	1	26	4.31	55.54	2.22
VAR	6	8	4	5	2	1	26	4.31	51.53	2.06
PRI	22	4	0	0	0	0	26	5.85	3.39	0.14
ADV	0	0	1	2	11	12	26	1.69	15.54	0.62
APP	1	3	4	7	8	3	26	2.96	44.96	1.80
PER	3	8	4	3	4	4	26	3.65	71.89	2.88
SER	5	8	6	3	2	2	26	4.19	56.00	2.24

ENLISTED/ON BASE/MARRIED

Question 4

	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2
LOC	10	3	4	2	2	1	22	4.64	53.10	2.53
PAR	9	6	3	2	1	1	22	4.77	43.87	2.07
PRO	14	4	1	0	0	2	21	5.24	45.82	2.27
VAR	12	6	1	1	0	2	22	5.05	48.96	2.33
PRI	14	4	2	0	1	0	21	5.43	21.15	1.06
ADV	1	1	5	3	6	5	21	2.71	42.23	2.11
APP	3	6	3	4	3	2	21	3.81	51.25	2.56
PER	7	7	3	1	1	2	21	4.57	51.14	2.56
SER	8	9	1	1	1	2	22	4.73	52.36	2.49

Question 5

	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2
LOC	7	4	3	1	3	4	22	3.95	80.96	3.86
PAR	7	7	2	2	2	2	22	4.41	59.32	2.82
PRO	14	2	1	2	1	1	21	5.10	47.81	2.37
VAR	12	5	0	2	1	1	21	5.05	44.95	2.25
PRI	13	6	1	1	1	0	22	5.32	24.77	1.18
ADV	3	0	2	3	5	8	21	2.71	61.97	3.10
APP	4	2	3	6	3	4	22	3.36	63.09	3.00
PER	8	5	2	3	1	2	21	4.48	57.24	2.86
SER	9	5	3	2	0	2	21	4.71	50.29	2.51

	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2

OFFICER/OFF BASE/MARRIED

Question 4

LOC	1	5	5	2	6	2	21	3.38	44.95	2.25
PAR	1	6	7	6	1	0	21	3.81	20.76	1.04
PRO	7	7	6	1	0	0	21	4.95	16.95	0.85
VAR	8	9	4	0	0	0	21	5.19	11.24	0.56
PRI	14	7	0	0	0	0	21	5.67	4.67	0.23
ADV	1	3	4	3	5	5	21	2.90	49.81	2.49
APP	2	4	4	6	3	2	21	3.52	43.24	2.16
PER	3	7	5	1	5	0	21	4.10	44.76	2.24
SER	5	7	7	0	1	1	21	4.57	33.14	1.66

Question 5

LOC	1	2	5	3	5	5	21	2.86	46.55	2.33
PAR	0	6	5	5	2	3	21	3.43	39.14	1.96
PRO	6	5	3	6	1	0	21	4.43	35.14	1.76
VAR	4	9	2	5	1	0	21	4.48	29.24	1.46
PRI	16	5	0	0	0	0	21	5.76	3.81	0.19
ADV	0	1	2	2	4	12	21	1.86	30.57	1.53
APP	1	3	4	5	4	4	21	3.05	45.04	2.25
PER	2	5	5	2	3	4	21	3.48	57.27	2.86
SER	3	8	4	4	1	1	21	4.24	35.81	1.79

ENLISTED/OFF BASE/MARRIED

Question 4

LOC	6	8	4	4	1	2	25	4.32	55.44	2.31
PAR	9	8	6	1	2	1	27	4.67	50.00	1.92
PRO	10	8	4	1	1	3	27	4.59	70.09	2.70
VAR	13	10	1	1	0	1	26	5.23	32.58	1.30
PRI	20	4	2	0	0	1	27	5.52	28.43	1.09
ADV	2	4	8	3	5	4	26	3.35	59.84	2.39
APP	3	8	9	4	0	3	27	4.04	50.96	1.96
PER	9	6	8	3	1	0	27	4.70	36.12	1.39
SER	13	8	3	2	0	1	27	5.07	39.85	1.53

Question 5

LOC	9	6	5	0	3	3	26	4.35	77.89	3.12
PAR	10	6	6	0	3	2	27	4.52	68.74	2.64
PRO	10	9	6	2	0	0	27	5.00	24.00	0.92
VAR	6	14	3	1	1	2	27	4.63	50.30	1.93
PRI	22	3	0	0	1	1	27	5.56	38.34	1.47
ADV	1	3	8	5	2	6	25	3.12	54.64	2.77
APP	6	7	7	2	2	3	27	4.15	67.41	2.59
PER	9	5	8	0	2	3	27	4.37	72.30	2.78
SER	13	8	2	0	2	2	27	4.89	64.67	2.49

	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2

OFFICER/ON BASE/SINGLE

Question 4

LOC	2	2	0	1	0	0	5	5.00	6.00	1.50
PAR	1	3	1	0	0	0	5	5.00	2.00	0.50
PRO	2	2	1	0	0	0	5	5.20	2.80	0.70
VAR	2	3	0	0	0	0	5	5.40	1.20	0.30
PRI	2	3	0	0	0	0	5	5.40	1.20	0.30
ADV	1	2	0	0	2	0	5	4.00	14.00	3.50
APP	0	3	2	0	0	0	5	4.60	1.20	0.30
PER	2	1	1	0	1	0	5	4.60	11.20	2.80
SER	2	2	1	0	0	0	5	5.50	2.80	0.70

Question 5

LOC	0	2	1	1	1	0	5	3.80	6.80	1.70
PAR	0	1	2	2	0	0	5	3.80	2.80	0.70
PRO	1	2	0	1	1	0	5	4.20	10.80	2.70
VAR	1	2	0	2	0	0	5	4.40	7.20	1.80
PRI	2	3	0	0	0	0	5	5.40	1.20	0.30
ADV	0	0	0	2	1	2	5	2.00	4.00	1.00
APP	0	1	2	1	0	1	5	3.40	9.20	2.30
PER	2	0	1	1	1	0	5	4.20	9.56	2.39
SER	2	1	1	1	0	0	5	4.80	6.80	1.70

ENLISTED/ON BASE/SINGLE

Question 4

LOC	10	7	5	6	3	5	26	4.00	110.00	3.14
PAR	16	5	7	3	3	2	36	4.61	88.55	2.53
PRO	24	6	2	2	1	1	36	5.31	55.64	1.59
VAR	22	9	3	1	1	0	36	5.39	32.56	0.93
PRI	27	4	4	1	0	0	36	5.58	22.75	0.65
ADV	7	9	6	7	3	4	36	3.94	91.89	2.63
APP	12	12	3	5	1	3	36	4.56	84.89	2.43
PER	8	14	6	4	2	2	36	4.44	68.89	1.97
SER	21	9	5	1	0	0	36	5.39	24.56	0.70

Question 5

LOC	14	6	5	4	3	3	35	4.43	98.57	2.90
PAR	16	4	4	4	3	3	34	4.50	102.50	3.11
PRO	18	7	4	2	1	2	34	4.97	70.97	2.15
VAR	18	9	4	1	1	1	34	5.15	50.27	1.52
PRI	25	4	3	1	1	0	34	5.50	32.50	0.98
ADV	6	4	6	7	6	5	34	3.47	94.47	2.86
APP	11	8	3	7	1	6	36	4.08	116.75	3.34
PER	13	9	4	6	2	2	36	4.53	82.97	2.37
SER	19	7	7	1	0	1	35	5.17	44.97	1.32

	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2

OFFICER/OFF BASE/SINGLE

Question 4

	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2
LOC	1	2	2	0	3	1	9	3.44	24.22	3.03
PAR	2	2	0	2	2	0	8	4.00	20.00	2.85
PRO	3	5	1	0	0	0	9	5.22	3.56	0.45
VAR	4	4	1	0	0	0	9	5.33	4.00	0.50
PRI	7	1	1	0	0	0	9	5.67	4.00	0.50
ADV	0	1	1	2	1	3	8	2.50	16.10	2.30
APP	0	2	2	1	2	1	8	3.25	14.70	2.10
PER	0	2	3	4	0	0	9	3.78	6.56	0.82
SER	1	2	4	1	1	0	9	4.11	12.47	1.56

Question 5

	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2
LOC	1	2	2	0	0	3	8	3.38	29.88	4.27
PAR	1	3	0	0	2	2	8	3.38	29.88	4.27
PRO	3	4	0	1	1	0	9	4.78	15.57	1.95
VAR	1	6	1	0	1	0	9	4.67	10.00	1.25
PRI	8	1	0	0	0	0	9	5.89	0.89	0.11
ADV	0	0	1	0	0	7	8	1.38	7.95	1.14
APP	0	2	2	1	2	2	9	3.00	20.00	2.50
PER	0	3	2	1	2	1	9	3.44	18.22	2.28
SER	1	2	2	2	2	0	9	3.78	15.56	1.95

ENLISTED/OFF BASE/SINGLE

Question 4

	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2
LOC	2	1	3	3	1	0	10	4.00	16.00	1.78
PAR	2	4	1	3	0	0	10	4.50	12.50	1.37
PRO	4	4	2	0	0	0	10	5.20	5.60	0.62
VAR	5	2	2	0	1	0	10	5.00	16.00	1.78
PRI	7	2	1	0	0	0	10	5.60	4.40	0.49
ADV	2	2	1	2	3	0	10	3.80	23.60	2.62
APP	2	4	1	1	2	0	10	4.30	20.10	2.23
PER	3	4	2	0	0	1	10	4.70	20.10	2.23
SER	5	4	1	0	0	0	10	5.40	4.40	0.60

Question 5

|	6	5	4	3	2	1	n	$\bar{x}$	$(x-\bar{x})^2$	s^2
LOC	1	1	2	3	1	1	9	3.44	18.22	2.28
PAR	1	3	2	2	1	0	9	4.11	12.89	1.61
PRO	1	6	1	0	0	1	9	4.56	16.22	2.03
VAR	5	2	2	0	0	1	10	4.90	22.90	2.54
PRI	7	3	0	0	0	0	10	5.70	2.10	0.23
ADV	0	1	4	1	1	1	8	3.38	11.88	1.70
APP	1	2	2	2	1	1	9	3.67	20.00	2.50
PER	1	4	3	0	2	0	10	4.20	15.60	1.73
SER	2	4	1	1	0	1	9	4.44	20.22	2.53

APPENDIX III

FREQUENCY DISTRIBUTIONS (GRAPHIC)

TOTAL

Question 4
Question 5 — — —

LOCATION

PARKING

28

APPEARANCE

PERSONNEL

SERVICES
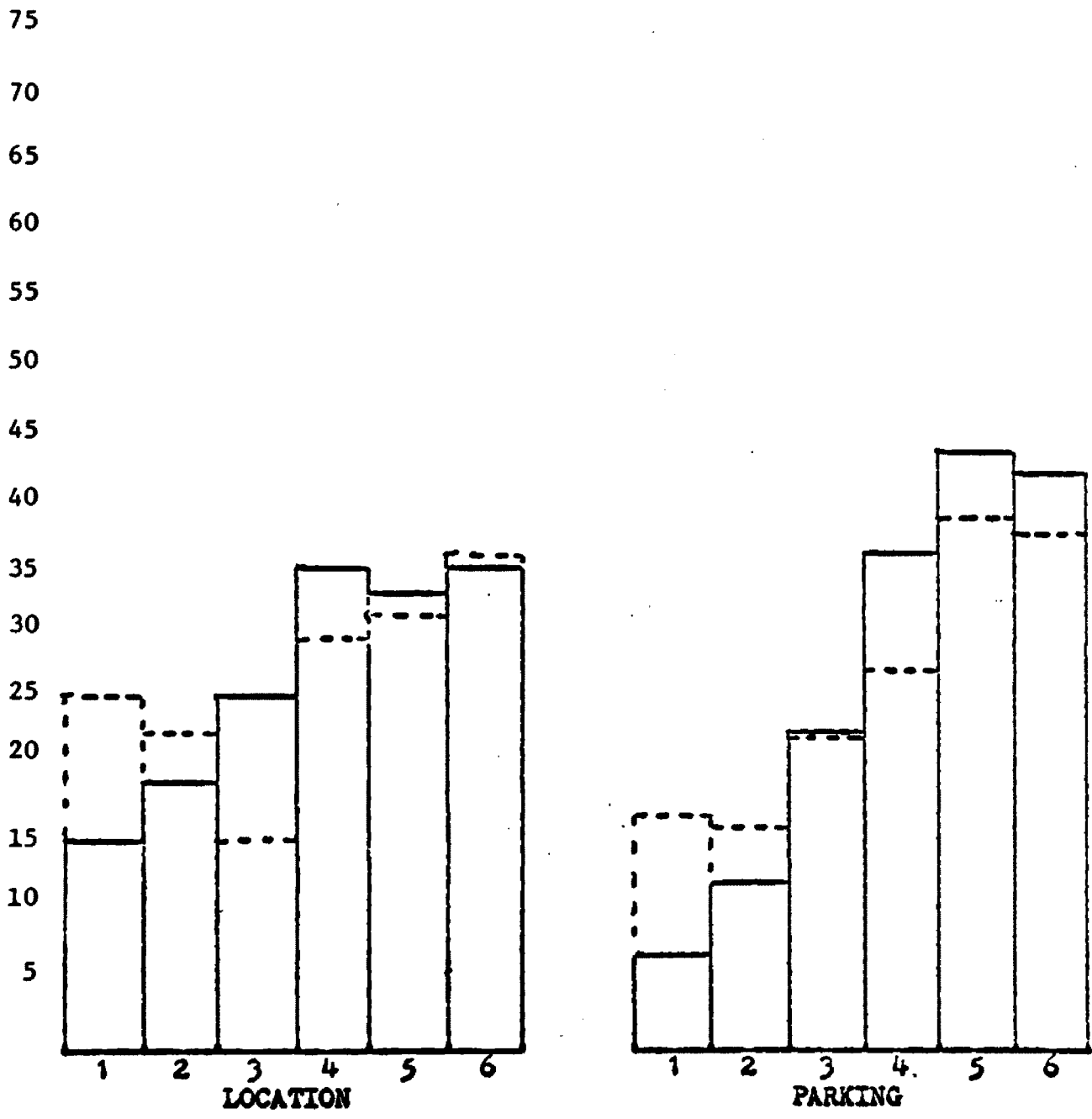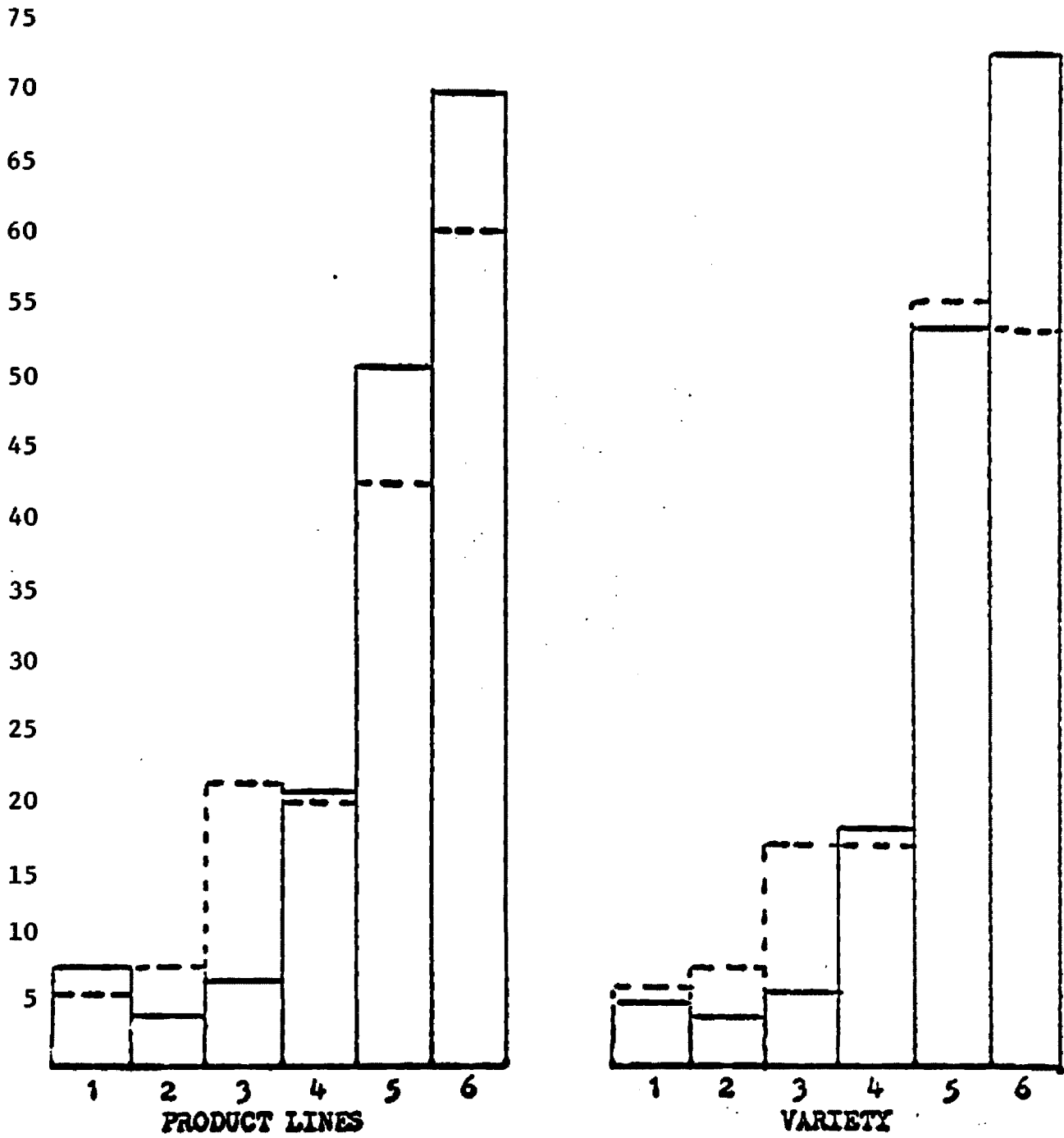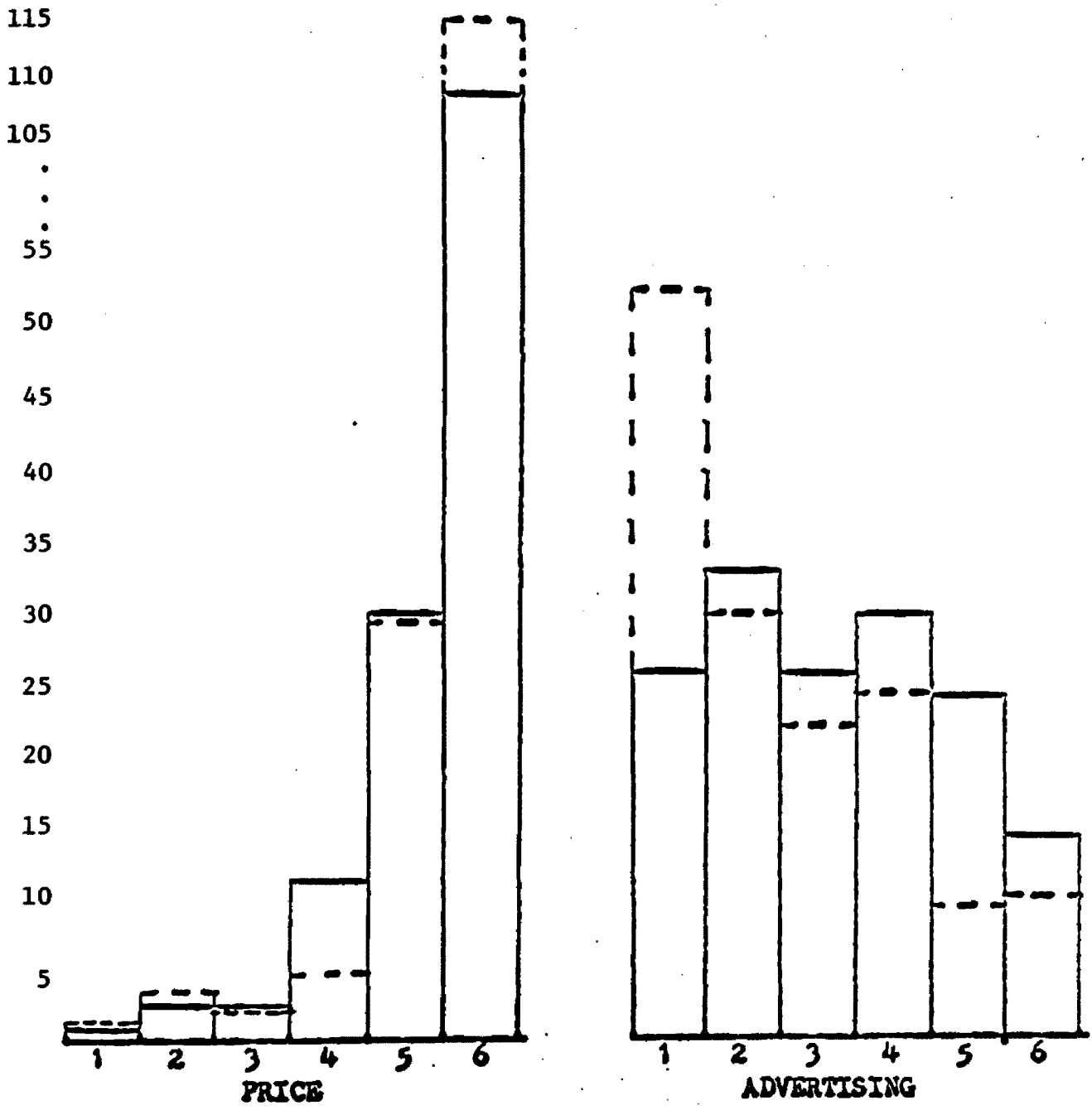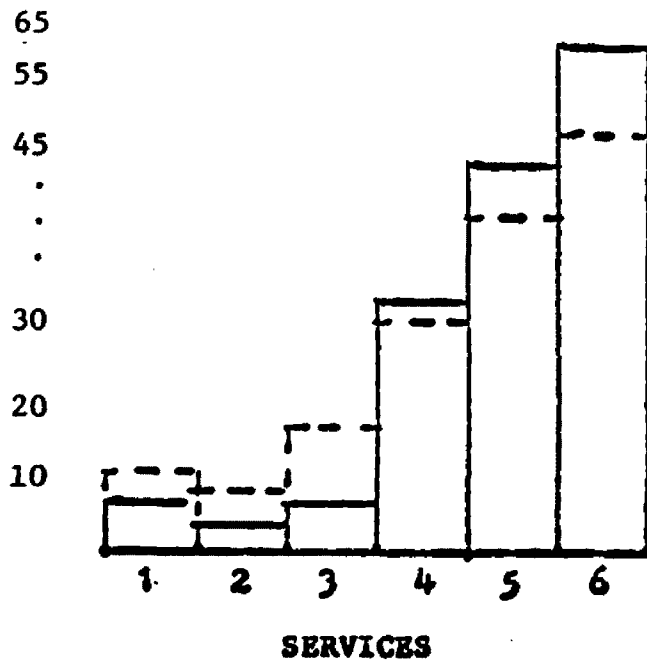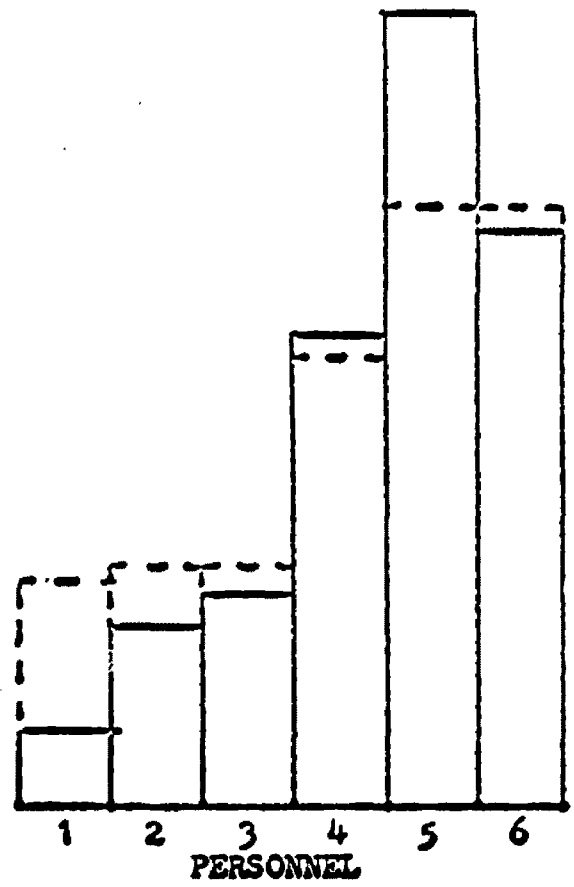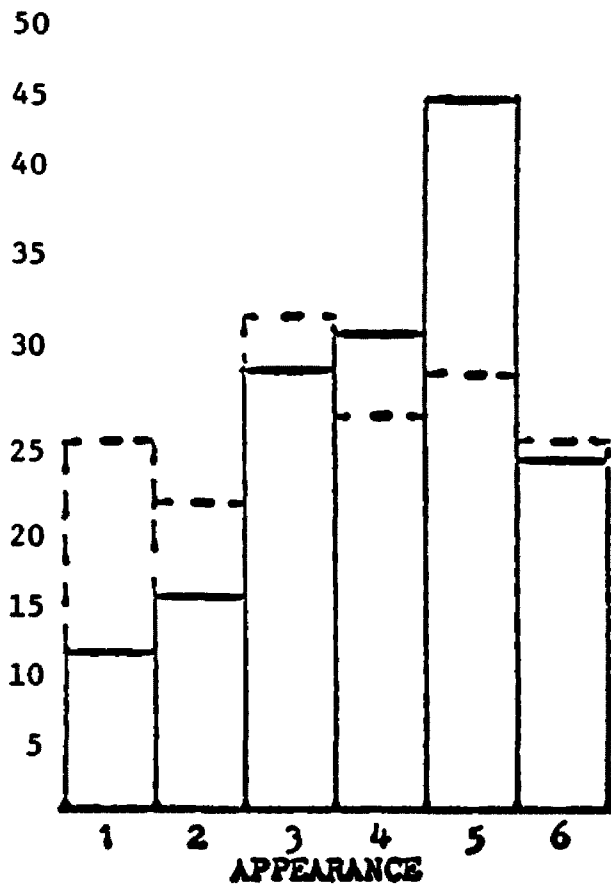
APPENDIX IV

APPROXIMATE Z SCORES FOR SIGNED RANK TEST

	LOC	PAR	PRO	VAR	PRI	ADV	APP	PER	SER
TOTAL	1.67	3.06	2.31	4.07	1.24	4.65	3.98	2.84	3.62
OFFICER	2.59	3.35	2.94	2.99	S	4.89	3.91	3.15	3.00
ENLISTED	0.07	1.61	0.66	2.84	0.88	2.02	2.12	1.23	1.85
ON BASE	1.12	2.20	2.16	2.62	I	2.95	3.68	1.78	2.96
OFF BASE	0.43	2.15	1.04	3.25	I	3.17	1.59	2.44	1.39
MARRIED	2.33	2.65	1.19	2.67	I	3.62	3.20	2.64	2.71
SINGLE	0.19	1.50	2.09	2.53	I	3.04	2.36	1.17	1.98
OFFICER/ON BASE/ MARRIED	I	I	I	I	I	S	S	S	S
ENLISTED/ON BASE/ MARRIED	S	I	I	I	I	I	I	I	I
OFFICER/OFF BASE/ MARRIED	S	I	I	I	I	S	I	S	I
ENLISTED/OFF BASE/ MARRIED	I	I	I	S	I	I	I	I	I
OFFICER/ON BASE/ SINGLE	I	I	I	I	I	I	I	I	I
ENLISTED/ON BASE/ SINGLE	I	I	I	I	I	I	I	I	I
OFFICER/OFF BASE/ SINGLE	I	I	I	I	I	I	I	I	I
ENLISTED/OFF BASE/ SINGLE	I	I	I	I	I	I	I	I	I

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APPENDIX V

MEDIANS

Question 4

	LOC	PAR	PRO	VAR	PRI	ADV	APP	PER	SER
TOTAL	4.2	4.6	5.4	5.4	5.8	3.2	4.2	4.7	5.2
OFFICER	3.8	4.1	5.1	5.2	5.8	2.6	3.7	4.4	4.9
ENLISTED	4.6	5.0	5.6	5.6	5.8	3.7	4.6	4.8	5.5
ON BASE	4.2	4.7	5.6	5.5	5.8	3.5	4.5	4.8	5.4
OFF BASE	4.1	4.6	5.1	5.4	5.8	3.2	4.0	4.6	5.1
MARRIED	4.1	4.5	4.9	5.0	5.8	2.8	3.9	4.7	5.1
SINGLE	4.3	4.9	5.6	5.6	5.8	3.9	4.9	4.7	5.5
OFFICER/ON BASE/ MARRIED	3.9	4.1	5.0	4.9	5.8	2.6	3.7	4.7	5.1
ENLISTED/ON BASE/ MARRIED	5.3	5.3	5.8	5.6	5.8	2.5	4.2	5.1	5.2
OFFICER/OFF BASE/ MARRIED	3.7	4.1	5.1	5.3	5.8	2.8	3.5	4.5	4.8
ENLISTED/OFF BASE/ MARRIED	4.8	5.0	5.1	5.5	5.9	3.7	4.3	4.8	5.5
OFFICER/ON BASE/ SINGLE	5.5	5.1	5.5	5.5	5.5	5.0	4.8	5.5	5.5
ENLISTED/ON BASE/ SINGLE	4.4	5.2	5.8	5.7	5.9	4.3	5.0	4.5	5.7
OFFICER/OFF BASE/ SINGLE	4.0	4.0	5.3	5.5	5.9	3.0	4.0	3.8	4.3
ENLISTED/OFF BASE/ SINGLE	4.0	4.9	5.4	5.6	5.9	4.0	4.9	5.1	5.6

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Question 5

	LOC	PAR	PRO	VAR	PRI	ADV	APP	PER	SER
TOTAL	4.1	4.4	5.0	5.1	5.8	2.2	3.9	4.5	5.0
OFFICER	3.4	3.5	4.8	4.8	5.9	1.4	3.0	3.7	4.5
ENLISTED	4.6	4.9	5.4	5.3	5.8	3.1	4.1	4.8	5.4
ON BASE	4.3	4.5	5.4	5.3	5.8	2.2	3.5	5.0	5.2
OFF BASE	3.9	4.3	5.0	5.0	5.9	2.3	3.8	4.2	5.3
MARRIED	3.9	4.3	5.1	5.0	5.9	1.9	3.3	4.3	4.9
SINGLE	4.3	4.7	5.2	5.3	5.8	3.0	4.1	4.7	5.2
OFFICER/ON BASE/ MARRIED	3.6	3.6	4.7	4.7	5.9	1.6	2.9	4.1	4.6
ENLISTED/ON BASE/ MARRIED	4.6	5.0	5.8	5.7	5.7	2.2	3.3	5.1	5.3
OFFICER/OFF BASE/ MARRIED	2.8	3.7	4.7	4.8	5.9	1.4	3.1	3.9	4.5
ENLISTED/OFF BASE/ MARRIED	4.9	5.0	5.2	5.0	5.9	3.5	4.5	4.7	5.5
OFFICER/ON BASE/ SINGLE	4.5	4.0	5.0	5.0	5.5	2.5	4.0	4.5	5.5
ENLISTED/ON BASE/ SINGLE	5.0	5.4	5.6	5.6	5.8	3.4	4.7	5.0	5.6
OFFICER/OFF BASE/ SINGLE	4.3	4.6	5.3	5.0	6.0	1.2	3.5	4.0	4.0
ENLISTED/OFF BASE/ SINGLE	3.5	4.5	5.0	5.6	5.9	3.9	4.0	4.3	5.0

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