

TECHNICAL REPORT

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CONSUMER REACTION TO THE FORT LEWIS CAFe SYSTEM

by

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and

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UNITED STATES ARMY
NATICK LABORATORIES
Natick, Massachusetts 01760



Pioneering Research
Laboratory

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FOREWORD

On 14 August 1971 a new Centralized Army Feeding System (CAFe) was put into experimental operation at Fort Lewis, Washington. The CAFe system consisted of a central food processing plant and scullery which serviced satellite dining halls and specialty food facilities. Previous surveys, conducted by the Pioneering Research Laboratory (PRL) and the Operations Research and Systems Analysis (OR/SA) Office of the United States Army Natick Laboratories, Natick, Massachusetts, had defined the existing feeding system at Fort Lewis (Smith *et al.*, 1972), specified many customer likes and dislikes toward the entire system (Kiess *et al.*, 1972), evaluated food preferences and desired frequency of serving for all food items in the existing Army Master Menu (Meiselman, *et al.*, 1972), and evaluated the potential increase in attendance as a function of implementing proposed changes in the food service system and established the maximum possible attendance which could be expected (Hertweck and Bryne, 1972).

The CAFe system attempted to provide troops with the foods and services they wanted within certain monetary and nutritional constraints. This system affected most, if not all, aspects of the military food service system. Specifically, a new menu provided more variety; the consumers were given opportunity to eat at special dining facilities; unlimited helpings and self-service were instituted; food quality was controlled through the central preparation of many of the foods. The present report deals with customer response to the CAFe system. Between 14 August 1971 and 29 October 1971, 2471 interviews were conducted within the CAFe system and in control dining halls for comparison purposes. Detailed information was obtained on: (1) what customers liked and did not like about the traditional feeding system and the new CAFe system and (2) the acceptability of the food served in CAFe and existing control facilities. The data obtained not only measure the Fort Lewis CAFe system objectively, but also provide the basis for guidelines for future food system planners. The customer was given the opportunity to speak his mind on what he liked and disliked about the military food service system. The food system planners will be able to reap considerable profit from their comments.

This work was part of Task 03, Project 15662713AJ45, Systems Studies in Military Feeding, and Task 06, Project 1J662713A034, Military Food Service and Subsistence Technology.

The interview data were gathered by the Institutional Education Office of the University of Washington under contract DAAG17-72-0-0009 P0002.

Each military service, Army, Navy, Air Force, and Marine Corps, has its representative at the Natick Laboratories. Inquiries concerning this report, or other matters in the Department of Defense Food RDT&E Program, should be directed to the appropriate Service Representative, as for example:

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INTRODUCTION

Fort Lewis, Washington, was chosen in 1969 by the DoD Facilities and Equipment Planning Board as the site of a project to study, define, and implement a new food service system. Beginning in November, 1970, surveys were undertaken to define the problems of the current food service system and suggest changes which would become part of a new system.

The Pioneering Research Laboratory of the United States Army Natick Laboratories conducted two surveys at Fort Lewis, a Consumer Attitude Survey (Kiess, *et al.*, 1972) and a Food Preference Survey (Meiselman, *et al.*, 1972). The Consumer Attitude Survey attempted to identify what the troops liked and disliked about the existing food service system. The survey indicated a general dissatisfaction with the feeding system, with emphasis on the variety, quality, and quantity of the food. Among other things, military consumers expressed a liking for the convenience of the company size dining hall within their living quarter area. These and other considerations led the garrison food service system planners to suggest central food preparation to maintain quality, and service in the traditional company dining hall. The strong preference expressed for more varied types of foods led the planners to suggest specialized eating facilities to supplement the traditional A-ration dining halls.

The Food Preference Survey had two aims-the objective measurement of food likes and dislikes at Fort Lewis, and the development of new techniques for food preference measurement. Almost 700 troops gave ratings to 416 foods, indicating how much they liked each food and how often they wanted to eat them. The survey results demonstrated customer dissatisfaction with certain classes of menu items, i.e., salads, vegetables, and certain combination main dishes. The customers showed enthusiasm for Italian foods, Mexican foods, and seafoods on both the Food Preference Survey and the Consumer Attitude Survey, and these items became the basis for a "Specialty Cafe" menu, where customers could eat in the evening hours. The preferences for short order items like hamburgers and chili formed the basis for a Short Order Cafe, which served these popular items from lunchtime until late evening.

A Proposed Changes Questionnaire (Hertweck and Bryne, 1972) was designed by the Operations Research and Systems Analysis Office and administered with the two other surveys. This questionnaire attempted to measure the effect of proposed system changes

on attendance in the dining hall. Low attendance rates had been one of the factors which originally focused concern on military feeding systems. Did the customers think that changing various aspects of the dining system would increase their attendance? Results indicated that increases in attendance could be expected from improvement in the quality, variety, and quantity of food offered and from the type of service provided, thus confirming the Consumer Attitude Survey.

With this background, and with the knowledge gained from investigation of many existing high volume food service systems, the CAFe system at Fort Lewis was planned and put into operation. The planning, designing, and managing of the system was done in large part by the Operations Research and Systems Analysis Office which coordinated the efforts of other groups at the United States Army Natick Laboratories.

The CAFe system offered the consumer different foods served in a different eating environment. Among the important changes in the new system were the following:

- central preparation of a majority of the food
- increased variety of foods in each company dining hall
- opportunity to eat in short order and specialty facilities
- unlimited portions and seconds on all foods
- self-service
- ice cream and carbonated beverages
- improved dining hours
- civilian mess attendants

A complete description of the new CAFe system will be presented in a forthcoming report to be prepared by the Operations Research and Systems Analysis Office. Table 1 presents a condensed description of some aspects of each facility included in the CAFe system.

The present report deals with the effort to objectively measure the customer reaction of the CAFe system.

Table 1

**Summary of Characteristics of Dining Facilities in
the 11 Week Fort Lewis CAFe System**

FEATURE:	FACILITY NUMBER:						
	3114	3218	3122	3224	3279	3161	3566
CAFe Food	X	X	X	X	X	X	
Food Type:							
Short Order	X	X					
A-Ration	X		X	X	X		X
Specialty						X	
Redecorated (carpeting, drapes, and painting)	X	X					
Music System	X	X					
Mobile Serving Line	X						
Bone China Dishes						X	
Plastic Compartmental Trays	X		X	X	X		X
Disposable Trays		X					
Mess Attendants	X	X	X	X	X	X	
Self-Service	X	X	X	X	X	X	
Unlimited Seconds	X	X	X	X	X	X	
Special Uniforms for Cooks		X				X	
Operating Hours:							
Normal meal hours	X		X	X	X		X
1100-1330;1500-2330 hrs		X					
1630-2200 hrs						X	

NOTE: "X" indicate the presence of the feature in that Facility.

METHOD

On 14 August 1971, an 11 week operational evaluation of the model food service system developed by the OR/SA Office of NLABS was initiated at Fort Lewis, Washington. The major criterion of the effectiveness of this model food service system was the reaction of the user or the consumer. To this end 2471 personal interviews were collected during the test. Of these, 2279 interviews were consumer reactions from participants in the model CAFe system and 192 control interviews served as the basis of comparison in analyzing the effectiveness of the implementation of the CAFe system.

The Schedule of Collecting the Interviews. Table 2 presents the schedule of the collection of the interviews, indicating the weekly numbers of interviews obtained from each dining facility at each meal. Each day of the week was equally represented during the collection of the interviews. All interviews represented below or to the left of the bold line through Table 2 comprised the reactions of consumers to the traditional food service system, which in the following pages will be referred to as the Control system; all other interviews provided feedback to the model CAFe system.

As Table 2 indicates, one dining facility was converted to the CAFe system during the first week of the field test. During this first week, then, interviews were obtained from CAFe consumers in that dining facility and from non-CAFe consumers who ate their meals in a facility which was subsequently incorporated into the CAFe system. During the second week of the test, a second facility was added to the CAFe system. Thus, consumer reactions to the CAFe system were obtained from two facilities at this time, while reaction to the traditional food service system continued to be obtained in facilities which were yet to be converted to the CAFe system. This same pattern of incorporating additional dining facilities into the CAFe system continued for the first six weeks of the field test, until a total of six facilities were in the experimental system. During weeks seven through eleven of the test, these six facilities were serviced by the CAFe system and no additional dining facilities were incorporated. Likewise, this same pattern of obtaining reaction to the traditional food service system from facilities which would eventually be incorporated into the CAFe system continued during the first four weeks of the test. During week five, no control interviews were obtained; during weeks six through the end of the test, the control interviews continued to be gathered from an additional facility which was never incorporated into the CAFe system but which was similar to the other facilities which did participate.

Table 2

The Schedule of Obtained Interviews at Fort Lewis During the
11 Week Test of the CAFe Feeding System

Dining Facility	Type	Dining Period	Week	1	2	3	4	5	6	7	8	9	10	11	Subtotals	Totals
#3114 ^a	A-ration	Breakfast		22	21	23	21	20	18	0	21	0	15	21	182	504
		Noon		14	13	14	15	15	14	0	22	0	15	17	139	
		Evening		21	21	16	20	21	21	0	21	0	21	21	183	
#3114 ^b	Short Order	Noon		14	15	15	13	13	14	0	6	0	13	7	110	110
#3218 ^c	Short Order Cafe	Noon			21	6 ^g	21	21	21	0	21	0	15	16	142	386
		After Noon			8	4 ^g	8	9	8	0	8	0	7	7	59	
		Evening			21	10 ^g	22	21	21	0	21	0	14	17	147	
		After Evening			8	4 ^g	5	7	4	0	4	0	4	2	38	
#3224 ^d	A-ration	Breakfast		0	0	22	21	16	24	0	22	0	21	18	144	455
		Noon		10	15	19	20	21	21	0	15	0	21	17	159	
		Evening		10	14	14	15	21	21	0	20	0	19	18	152	
#3279 ^d	A-ration	Breakfast			0	6	21	20	21	21	0	21	0	15	125	396
		Noon			9	6	21	21	21	21	0	21	0	20	140	
		Evening			9 ^h	9	15	20	18	21	0	18	0	21	131	
#3122 ^d	A-ration	Breakfast					9	21	22	15	21	14	0	18	120	379
		Noon					9	22	19	21	21	21	0	18	131	
		Evening					9	19	21	20	21	20	0	18	128	

-----continued-----

Table 2 (Continued)

Dining Facility	Type	Dining Period	Week 1	2	3	4	5	6	7	8	9	10	11	Subtotals	Totals
#3161 ^e	Specialty Cafe	Evening						22	19	22	19	22	18	122	
		After Evening						6	9	6	9	6	6	42	164
#3566 ^f	A-ration	Breakfast						0	0	0	0	6	3	9	
		Noon						4	7	8	6	6	6	37	
		Evening						4	9	7	6	5	0	31	77
	Total Test Interviews	Breakfast	22	21	45	63	77	85	36	64	35	36	72	556	
		Noon	28	49	54	90	113	110	42	85	42	64	95	772	
		After Noon	0	8	4	8	9	8	0	8	0	7	7	59	
		Evening	21	42	40	72	102	124	60	105	57	76	113	812	
		After Evening	0	8	4	5	7	10	9	10	9	10	8	80	2279
g	Total Control Interviews	Breakfast	0	0	6	9	0	0	0	0	0	6	3	24	
		Noon	10	24	6	9	0	4	7	8	6	6	6	86	
		Evening	10	23	9	9	0	4	9	7	6	5	0	82	192

- a. — This dining facility contained both the standard A-rations and short order foods because of additional serving capabilities provided by a mobile Lincoln serving line. These interviews were restricted to those consumers who selected the standard A-rations.
- b. — These interviews were restricted to those consumers who had taken the short order foods.
- c. — This facility was converted into a Short Order Cafe, serving only short order foods between 1100-1300 hours and 1500-2330 hours.
- d. — These three facilities were typical dining facilities serving A-ration foods within the CAFe system.
- e. — This facility was converted into a Specialty Cafe, serving only Seafoods, Italian foods, and Mexican foods between 1630 hours and 2200 hours.
- f. — This facility was a typical dining facility serving A-ration foods outside of the CAFe system.
- g. — The number of interviews collected during this week was lessened by the closing of the facility for renovation during part of the week.
- h. — The evening interviews on one day were collected at a facility at which the #3279-consumers had been requested to eat because their own facility was inoperative.

NOTE: All interviews to the left or below the solid line within the table were from non-CAFe or control consumers; all interviews to the right or above the solid line were from CAFe or test consumers.

Table 2 also indicated that no control interviews were obtained in buildings #3114; #3218; and #3161. The latter two facilities had not been used as dining facilities prior to their entrance into the CAFe system; thus, no consumer reaction to the traditional food service system could be obtained from them. However, these latter two facilities were remodeled and served as a Short Order Cafe and Specialty Cafe, respectively, a feature which is not typical of the Army food service system.

Table 2 also indicates that building #3114 was the source of consumer reaction to two types of food service. Some consumers in #3114 provided feedback to standard A-ration meals at noon and in the evening, while other consumers provided feedback to short order meals which were available at this facility in addition to the standard CAFe meal. This short order capability was necessitated by the rather long distance from this facility to the Short Order Cafe.

The Behavioral Sciences Division of PRL devised a structured interview protocol and the schedule of interviews. The Office of Institutional Educational Research (OIER) of the University of Washington was awarded a contract (DAAG17-72-0-0009 P0002) to collect the interviews. OIER then announced part-time employment availability for military dependents at various locations within Fort Lewis. Of 17 qualified female applicants who responded, 12 attended the training program and were assigned data collection responsibilities. One was dropped during the first week. Attrition during the course of the study due to husbands' transfers and the like made the addition of two more interviewers necessary by mid-September. These two women were trained and collected interviews until the end of the test. On-site supervision and control of the interviewers was exercised by a local supervisor working directly under OIER.

The interviewer went to the assigned mess hall at the beginning of the meal period or at pre-arranged times in those facilities which served food continuously. The interviewer was instructed to select her respondents with regard to a balance of races, ages, and number of men sitting together in order to avoid a biased selection pattern.

The interviews were conducted at the dining tables with consumers who had just completed their meal or were nearly finished. Each respondent was interviewed separately, and an effort was made to prevent others from suggesting responses. While it was not always possible to prevent table-mates or visitors to the facility from influencing comments, the interviewers emphasized that the individual response was important. The cooperation of the consumers was described by the interviewers as excellent, and a good deal of interest was expressed in the purpose and success of the test.

The interviewers were systematically rotated over all days, meals, and dining facilities. Unanticipated changes in the hours of operation of a given dining facility caused some inconvenience in obtaining the interviews, and in a few instances resulted in interviews not being obtained. This was reflected in the varying numbers of interviews indicated in Table 2.

OIER reported that the interviewers' personal characteristics were seen as encouraging candid responses. Because the interviewers were family members of men stationed at Fort Lewis, they were treated as such by the respondents. There was, however, one flaw in the selection of interviewers. Despite the large number of black men stationed at Fort Lewis, OIER was unable to recruit any black women to interview. Three black applicants who initially showed interest in the task failed to appear for the training session; in one case because more regular employment was found elsewhere. Later attempts to hire black interviewers were also unsuccessful. It is conceivable that black servicemen may have responded differently to black interviewers.

Interviewing and Data Reduction. Each interview required eight to ten minutes to complete. Each interviewer conducted five or six interviews during a single meal period in a specific dining facility. About 1200 military personnel were authorized to eat at the six CAFe facilities at any given weekday meal. Hence, the collection of 2471 interviews required the repeated interviewing of some of the consumers. To obviate any negativism which could become serious as a result of repeated interviewing, no interviews were collected from certain facilities during some weeks, as indicated in Table 2.

The two forms of the interview protocol are given in Appendix A. The first form in Appendix A was administered to all the respondents on their first interview; the second form (Q2) was administered to each respondent on his second or subsequent interview during the 11 week test period. On both forms, questions 1, 2, and 3 were purposely unstructured to allow the consumers to react to any aspect of the food service system. The interviewers were instructed to record consumer responses verbatim and not to edit the response in the interviewer's own style. These responses were then forwarded to the Behavioral Sciences Division for reduction and analysis. Three doctoral-level staff members of the Behavioral Sciences Division reviewed the comments of the same sample of 200 interviews. Each staff member then devised appropriate categories for tallying the responses with the constraint to minimize information loss even if the remaining set of categories was too detailed for use by most interested readers. These detailed categories were then fused into a common list which drew on the strengths of each individual list.

For both forms, questions 5, 6, 7, and 8 were identical.

On the second form, questions 9, 10, 11, and 12 of the first form were omitted. Question 9 was omitted because it was not providing additional information over and above what was contained in question 8. Questions 10, 11, and 12 were omitted because this information was obtainable for any given subject from his first interview.

For both forms, question 4 was essentially the same, except for the item on carbonated drinks (4b) present on the first questionnaire and experience with the categories present on the second form. Since the respondents were already providing hedonic ratings of the carbonated beverages in connection with item 6, this category (4b) was eliminated on the second questionnaire. On the first questionnaire, each respondent was asked his reaction to the list of existing or proposed changes. Thus, an indication of the acceptability of the change both prior to its introduction and subsequent to its introduction could be obtained. However, on the second and subsequent interviews, it was assumed that repeated queries about changes with which he did not have experience could produce negativism. Therefore, on the second questionnaire each respondent was first asked whether or not he had experience with the specific change. If he answered "no", this was tallied and the interviewer went on to the next part of the question. If he answered "yes", the interviewer asked the rest of the question for the category.

When reducing these data, the authors noted certain ambiguities. For example, the interviewers recorded that one CAFe consumer rated french toast in the Specialty Cafe. Because french toast was never on the menu in the Specialty Cafe, the problem then becomes: (1) did the interviewer inadvertently check the wrong dining facility for this consumer, or even less probably, (2) did the customer ask for something special and the cooks comply with the request. Because there was no method of accurately determining the solution to this type of problem, the data is presented as it was recorded. Another such example is six instances of vegetables being rated in the Short Order House (4 scalloped tomatoes and 2 other vegetables not specifically listed). Again, either the interviewer might have miscoded the source of the interview or the Short Order House might have opened up a can of tomatoes under their own initiative, but there is no method of accurately determining this.

RESULTS AND DISCUSSION

Because of the large volume of data which this in-depth survey has generated, there are undoubtedly as many different methods of presentation as there are interested parties. Furthermore, the information can be analyzed in nearly as many ways as there are specific questions to be answered. Therefore, the information will be presented solely as a data-base for decision makers who plan food service systems, with little emphasis on interpretation. This should allow each interested user to form his own conclusions on the basis of accurate information.

Data from this survey is presented in three parts: (1) information obtained from structured questions concerning the FOOD in the CAFe system is presented first, with the general information (questions 7 and 8 of Appendix A) presented in the text and the specific information (question 6) presented in Appendix B; (2) the responses to the structured questions concerning the NON-FOOD aspects of the CAFe system are presented second with the specific information (question 4) preceding the overall impression of CAFe (question 5); and (3) the pattern of responses to the unstructured questions (questions 1, 2, and 3) are presented last, with the specific responses presented in Appendix C.

Consumer Reaction to the FOOD in the CAFe System As Expressed in Structured Questions.

Table 3 presents the mean hedonic rating of the overall meal (question 7, Appendix A) as judged by CAFe and control consumers for each dining facility during each week of the Fort Lewis study. It is apparent that the Specialty Cafe (#3161) served food which was rated higher on the 9-point hedonic scale across all the weeks than any other facility. The Short Order Cafe (#3218) served food which was rated the second highest on the 9-point scale; dining facility #3114 served food which was rated third highest on the scale. The three other A-ration dining facilities served foods which were rated similarly. The mean rating across all the weeks for all CAFe facilities was between the scale categories "like moderately" and "like very much." The food served in the three A-ration only facilities was rated just above the "like moderately" category while the Speciality House had its food rated just below the "like very much" category.

Table 3

CAFe and Control Consumers Responses to the Question:

Overall, how would you rate the meal you just ate?

Dining Facility	Type	Week 1	2	3	4	5	6	7	8	9	10	11	Totals Across Controls	All Weeks CAFe
#3114 ^a	A-ration	7.34 (56)	7.38 (52)	7.23 (53)	7.38 (55)	6.67 (55)	6.92 (52)		7.13 (64)		7.31 (51)	6.88 (59)		7.13 (497)
#3114	Short Order	7.21 (14)	6.73 (15)	7.07 (15)	7.38 (13)	7.73 (11)	7.43 (14)		8.00 (6)		7.54 (13)	7.29 (7)		7.31 (108)
#3218	Short Order Cafe		7.74 (58)	7.46 (24)	7.38 (55)	7.68 (56)	7.38 (53)		7.13 (54)		7.03 (39)	7.40 (42)		7.41 (381)
#3224	A-ration	5.10 (20)	5.17 (29)	7.11 (55)	7.16 (56)	7.10 (58)	7.14 (66)		7.14 (57)		6.66 (61)	7.30 (53)	5.14 (49)	7.08 (406)
#3279	A-ration		5.11 (18)	4.81 (21)	6.91 (57)	6.57 (60)	7.08 (60)	7.40 (63)		7.43 (60)		7.07 (56)	4.95 (39)	7.08 (356)
#3122	A-ration				5.96 (27)	7.16 (62)	6.93 (61)	7.18 (56)	7.15 (62)	6.87 (55)		7.15 (53)	5.96 (27)	7.07 (349)
#3161	Specialty Cafe						8.11 (28)	7.86 (28)	8.14 (28)	7.57 (28)	8.00 (28)	7.96 (24)		7.94 (164)
#3566	A-ration						5.25 (8)	6.50 (16)	6.33 (15)	6.25 (12)	6.06 (17)	6.78 (9)	6.23 (77)	
Totals Across Dining Facilities:													5.66 (192)	7.22 ^b (2261)

a. — See the key and the note from Table 2

b. — There were 18 cases in which the interviewer erred in recording the consumer's response, and hence the discrepancy from the total group of 2279

NOTE: The number in parentheses below the hedonic mean is the number of consumers interviewed.

Table 3 does not reveal any consistent trend across time of a decrease in the hedonic ratings or any notable decrease in ratings during any specific week of the test. Hence, there was no evidence that the CAFe system failed to consistently prepare foods of high acceptability during the survey period. Table 3 did reveal, however, that during certain weeks the food which was served in specific facilities noticeably declined in acceptability. For example, the A-rations served in dining facility #3114 during week 5 and week 11 of the test were rated 0.71 points and 0.43 points lower than week 4 and week 10 respectively. Because this decrement occurred only at one facility during specific time periods, it is thought that an aspect of the CAFe system other than food preparation was responsible.

The information presented in Table 3 documents the higher acceptability of food served in the CAFe system compared to the traditional military food service system.

Table 4 presents the comparison of the overall meal served during the test to other Army meals as judged by the CAFe consumers and by the users of the traditional dining system (question 8, Appendix A). As in Table 3, this information is a general expression of consumer reactions to the food served during the Fort Lewis study. Similar to the pattern with the hedonic rating of the overall meal, the Specialty Cafe had the highest percentage of consumers rating the meal as "much better" than the typical Army meal. The Short Order Cafe again had the second highest percentage of consumers rating the meal "much better", with facility #3114 having the third highest percentage in this category. Likewise, the three solely A-ration facilities had their meals rated with high uniformity.

The summary information of ratings across all the weeks of the test and across all the facilities contained in Table 4 is presented in Figure 1 for closer inspection. The distribution of ratings of the control consumers is similar to the normal distribution with a large clustering of responses at the middle and small percentages at the extremes; whereas the distribution of the CAFe consumer responses was skewed as follows: (1) over half indicated the meal just consumed was much better than other Army meals, (2) over three-quarters indicated it was at least better than other Army meals, and (3) only 5% indicated it was not as good as other Army meals. This was further substantiation that the food prepared by the CAFe system was highly acceptable and much better received than other Army food with which the consumer has had experience.

Table 4

Consumers Responses to the Question:

How did this meal compare to other Army meals you have had?

Dining Facility	Type	Response	Week											Totals Across Weeks:	
			1	2	3	4	5	6	7	8	9	10	11	Control	CAFe
#3114 ^a	A-ration	Much Better	61%	73%	49%	55%	48%	49%		50%		29%	32%		50%
		Little Better	21%	18%	28%	27%	21%	25%		22%		33%	29%		25%
		Same	18%	9%	17%	14%	20%	11%		20%		24%	25%		18%
		Little Worse	0%	0%	6%	4%	5%	8%		2%		10%	14%		5%
		Much Worse	0%	0%	0%	0%	5%	8%		6%		4%	0%		3%
#3114	Short Order	Much Better	71%	87%	47%	62%	46%	50%		67%		38%	29%		56%
		Little Worse	29%	13%	40%	31%	23%	36%		17%		31%	29%		28%
		Same	0%	0%	7%	8%	23%	7%		17%		23%	29%		11%
		Little Worse	0%	0%	7%	0%	8%	7%		0%		8%	14%		5%
		Much Worse	0%	0%	0%	0%	0%	0%		0%		0%	0%		0%
#3218	Short Order Cafe	Much Better		69%	58%	70%	74%	65%		38%		55%	50%		61%
		Little Better		22%	25%	23%	14%	22%		32%		28%	12%		22%
		Same		7%	17%	7%	10%	13%		23%		12%	28%		14%
		Little Worse		0%	0%	0%	2%	0%		4%		2%	10%		2%
		Much Worse		2%	0%	0%	0%	0%		4%		2%	0%		1%
#3224	A-ration	Much Better	0%	10%	56%	41%	36%	45%		49%		34%	30%	6%	42%
		Little Better	15%	17%	27%	27%	34%	26%		21%		33%	26%	16%	28%
		Same	45%	55%	16%	27%	26%	24%		21%		31%	40%	51%	26%
		Little Worse	20%	10%	0%	5%	3%	5%		7%		2%	4%	14%	4%
		Much Worse	20%	7%	0%	0%	0%	0%		2%		0%	0%	12%	0%
#3279	A-ration	Much Better		6%	10%	47%	38%	50%	49%		53%		43%	8%	47%
		Little Better		28%	10%	28%	28%	27%	25%		20%		21%	18%	25%
		Same		28%	43%	18%	31%	15%	24%		23%		23%	36%	22%
		Little Worse		33%	19%	5%	3%	7%	2%		3%		7%	26%	4%
		Much Worse		6%	19%	2%	0%	2%	0%		0%		5%	13%	1%

---continued---

Table 4 Continued

Consumers Responses to the Question?

How did this meal compare ot other Army meals you have had?

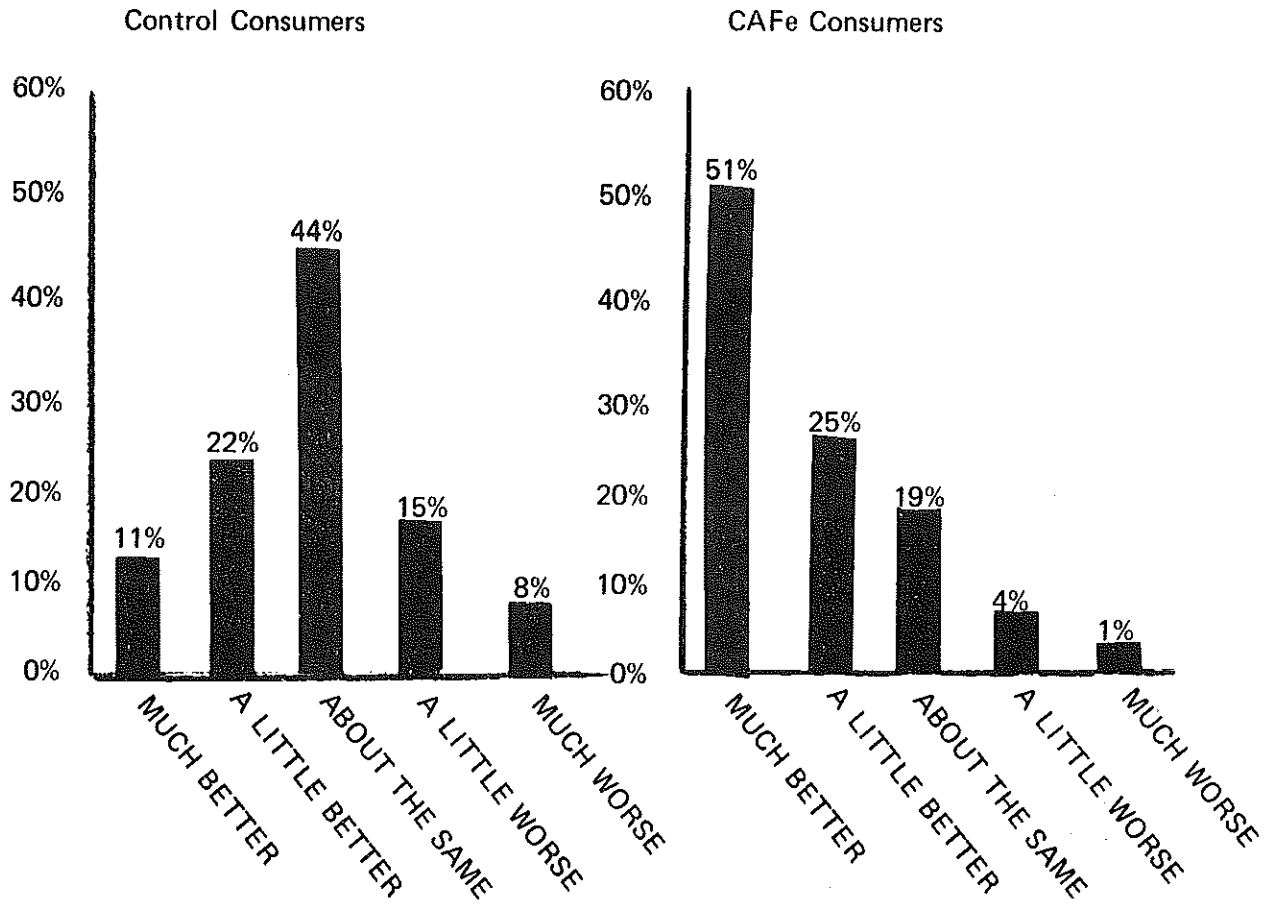
Dining Facility	Type	Response	Week												Totals Across Weeks:	
			1	2	3	4	5	6	7	8	9	10	11	Control	CAFe	
#3122	A-ration	Much Better					11%	37%	42%	54%	51%	38%		25%	11%	41%
		Little Better					33%	27%	23%	21%	19%	22%		55%	33%	27%
		Same					44%	32%	26%	18%	25%	29%		17%	44%	25%
		Little Worse					7%	3%	8%	7%	3%	7%		2%	7%	5%
		Much Worse					4%	0%	2%	0%	2%	4%		2%	4%	1%
#3161	Specialty Cafe	Much Better							86%	82%	79%	82%	71%	67%		78%
		Little Better							11%	14%	11%	11%	21%	21%		15%
		Same							4%	4%	11%	7%	7%	12%		7%
		Little Worse							0%	0%	0%	0%	0%	0%		0%
		Much Worse							0%	0%	0%	0%	0%	0%		0%
14 #3566	A-ration	Much Better							12%	25%	13%	8%	18%	22%	17%	
		Little Better							12%	31%	27%	33%	18%	11%	23%	
		Same							38%	38%	47%	50%	35%	56%	43%	
		Little Worse							12%	0%	13%	8%	24%	11%	12%	
		Much Worse							25%	6%	0%	0%	6%	0%	5%	
Totals Across Dining Facilities:															11%	51%
															22%	25%
															44%	19%
															15%	4%
															8%	1%

a. — See key and note from Table 2.

NOTE: The discrepancy from a total of 100% for any week reflects rounding differences.

Figure 1

**Distribution of Consumer Responses to the question:
How did this meal compare with other Army meals you have had?**



The customer's hedonic ratings of the individual foods served in the CAFe system (question 6, Appendix A) are presented in a detailed manner in Appendix B. However, a summary of the hedonic values across all the food items within a food class is presented in Table 5. Each food class is entered according to the facility in which the food items were served and according to the location of preparation. Note that hedonic values for fruits are very similar across all facilities, which might be expected because these items are not cooked or processed in any way by either the CAFe system or the traditional food service system. The extent to which the CAFe system consumers rated fruits slightly higher on the hedonic scale was evidence that consumers tend to rate all foods higher within the CAFe system regardless of the extent to which improvements have been achieved. These increased ratings of CAFe foods could reflect: (1) a pure "Hawthorne effect," everything is perceived "better" by the consumer because someone is paying attention to him; (2) a transference effect - other foods on the plate were improved; therefore, the fruit was also more acceptable; (3) other non-food, eating environment changes; or (4) a combination of the first three factors. This increase in the rating of food items such as fruit which do not require any preparation should not be confused with the increase in ratings of on-site prepared food within CAFe.

The summary values of noon and evening soups listed in Table 5 should also be noted. Soups are another example of an acceptance problem in military food service systems as evidenced by the 5.00 hedonic rating given to all soups in the control system. The CAFe system greatly reduced the frequency and variety of soups offered in the experimental test (11% of the non-CAFe noon and evening consumers interviewed rated soups as compared to 4% of the CAFe noon and evening customers). This reduction of frequency and variety of soups in the CAFe system allowed the menu planners and recipe formulators to suggest soups which can be highly acceptable to the military consumer. Their success is evidenced by the higher hedonic values for soups in the CAFe facilities.

Consumer Reaction to the NON-FOOD Features Of The CAFe System Expressed in Structured Questions

Data is presented in Table 6 concerning the non-food features of the CAFe system. Each consumer was asked to indicate whether he liked, disliked, or was indifferent to each of 15 changes within the CAFe system. Table 6 presents the consumers' responses to 13 of these changes according to dining facility and according to when the change

Table 5

The Hedonic Values of Food Classes: The Fort Lewis Test

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161		#3218		#3114		#3224; #3279; #3122	
		Spec'ty Site	Cafe Central	S.O. Site	Cafe Central	Site	Central	Site	Central
Breakfast: Main Dishes	5.93 (42)					7.39 (188)	6.92 (118)	7.53 (396)	6.90 (228)
Breakfast: Starches	5.62 (8)		6.00 (1)			6.93 (29)	6.49 (41)	7.06 (77)	6.98 (87)
Breakfast: Breads	5.40 (5)		8.00 (1)		8.00 (2)	8.67 (3)	7.52 (42)	8.00 (5)	7.23 (106)
Breakfast: Beverages	6.44 (9)			7.40 (5)		7.64 (42)		7.75 (105)	
17 Fruits	7.48 (31)	9.00 (2)		8.50 (2)		7.67 (124)		7.65 (230)	
Short Order	5.49 (41)	7.61 (49)		7.04 (318)	7.24 (49)	7.13 (123)	7.00 (1)	6.55 (49)	6.73 (11)
Noon and Evening: Main Dishes	5.50 (137)	7.74 (174)	7.33 (82)	6.98 (224)	8.00 (8)	6.76 (169)	6.72 (252)	6.69 (375)	6.74 (514)
Noon and Evening: Soups	5.00 (7)					9.00 (1)	6.88 (8)	6.57 (7)	6.77 (31)
Noon and Evening: Salads	7.07 (67)	9.00 (1)	6.97 (30)	6.00 (4)	7.00 (13)	7.12 (8)	7.24 (145)	7.49 (39)	7.09 (213)
Noon and Evening: Starches	5.63 (136)	7.73 (90)	8.00 (1)	7.08 (342)	6.33 (3)	6.81 (286)	6.58 (90)	6.48 (446)	6.29 (168)

---continued---

Table 5 Continued

The Hedonic Values of Food Classes: The Fort Lewis Test

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spec'ty Cafe		#3218 S.O. Cafe		#3114		#3224; #3279; #3122	
		Site	Central	Site	Central	Site	Central	Site	Central
Noon and Evening: Vegetables	6.03 (73)			6.00 (6)		6.89 (140)	6.17 (12)	6.70 (375)	6.47 (45)
Noon and Evening: Breads	6.87 (108)	7.45 (69)		7.54 (13)	6.53 (15)	7.31 (233)	6.55 (56)	7.45 (535)	6.08 (140)
Noon and Evening: Desserts	5.96 (116)	8.41 (27)		8.45 (51)	7.15 (108)	8.30 (50)	7.27 (234)	8.08 (100)	7.19 (433)
Noon and Evening: Beverages	7.28 (180)	8.21 (179)		8.15 (396)		8.05 (659)		8.18 (1164)	

a. — Refer to Table 1 for a description of the dining facilities.

NOTE: The number of cases upon which the mean was determined is presented in parentheses underneath the mean value.

Table 6

Consumer Reactions to 13 Proposed and Implemented Changes Within the CAFe System

Question ^a	Dining Facility No. ^b	Before Introduction				After Introduction			
		Response: Like	Indifferent	Dislike	No Response	Like	Indifferent	Dislike	No Response
Carbonated drinks	3114					88%	8%	4%	
	3114					91%	9%		
	3218					92%	6%	3%	
	3224	94%	6%			86%	10%	4%	
	3279	97%	3%			87%	8%	5%	
	3122	100%				90%	6%	4%	
	3161					91%	5%	4%	
	3566	92%	6%	3%					
	Total	94%	4%	1%		89%	7%	4%	
Extended hours of operation	3114					87%	8%	3%	2%
	3114					90%	4%	6%	
	3218					93%	4%	2%	1%
	3224	81%	11%	9%		88%	4%	5%	4%
	3279	92%	3%	5%		85%	6%	5%	4%
	3122	88%	4%	8%		89%	5%	4%	2%
	3161					96%	2%	2%	
	3566	81%	11%	8%					
	Total	84%	8%	8%		89%	5%	4%	2%
Continental breakfast served after regular hours	3114					73%	18%	6%	2%
	3114					81%	15%	4%	
	3218	82%	13%	3%	1%				
	3224	76%	12%	7%	5%				
	3279	81%	9%	5%	5%				
	3122	78%	12%	7%	2%				
	3161	81%	14%	5%					
	3566	86%	10%	4%					
	Total	80%	12%	5%	3%	75%	18%	6%	2%

---continued---

Table 6 Continued

Consumer Reactions to 13 Proposed and Implemented Changes Within the CAFe System

Question ^a	Dining Facility No. ^b	Before Introduction				After Introduction			
		Response: Like	Indifferent	Dislike	No Response	Like	Indifferent	Dislike	No Response
Jukebox or music	3114	82%	7%	8%	3%				
	3114	94%	3%	3%					
	3218					92%	4%	3%	1%
	3224	83%	6%	7%	4%				
	3279	86%	4%	5%	3%				
	3122	84%	7%	7%	2%				
	3161					93%	5%	2%	
	3566	96%	3%	1%					
	Total	85%	6%	6%	3%	93%	4%	3%	1%
20 Use of plastic trays	3114					63%	21%	14%	2%
	3114					69%	17%	15%	
	3218					64%	20%	15%	1%
	3224	31%	27%	42%		60%	23%	14%	2%
	3279	31%	36%	33%		59%	20%	18%	3%
	3122	36%	32%	32%		57%	22%	20%	2%
	3161	40%	28%	31%					
	3566	49%	29%	22%					
	Total	40%	29%	31%		61%	21%	16%	2%
Use of china dishes	3114	29%	23%	46%	2%				
	3114	37%	22%	42%					
	3218	20%	18%	60%	1%				
	3224	38%	20%	37%	4%				
	3279	36%	18%	42%	4%				
	3122	44%	19%	35%	2%				
	3161					72%	17%	12%	
	3566	28%	25%	46%					
	Total	34%	20%	44%	3%	72%	17%	12%	

---continued---

Table 6 Continued

Consumer Reactions to 13 Proposed and Implemented Changes Within the CAFe System

Question ^a	Dining Facility No. ^b	Before Introduction				After Introduction			
		Response:							
		Like	Indifferent	Dislike	No Response	Like	Indifferent	Dislike	No Response
New uniforms for mess personnel	3114	38%	51%	8%	2%				
	3114	36%	61%	3%					
	3218	36%	52%	12%		60%	34%	4%	2%
	3224	42%	46%	9%	3%				
	3279	47%	38%	10%	4%				
	3122	49%	40%	8%	2%				
	3161	69%	29%	2%		61%	35%	4%	
	3566	31%	59%	10%					
	Total	43%	46%	9%	2%	60%	34%	4%	1%
Civilian mess attendants	3114					94%	3%	1%	2%
	3114					96%	3%	1%	
	3218					92%	6%	1%	1%
	3224	98%	2%			93%	4%	1%	2%
	3279	97%	3%			92%	3%	1%	3%
	3122	88%	12%			95%	3%		2%
	3161					97%	2%	1%	
	3566	94%	4%	1%					
	Total	95%	4%	1%		94%	4%	1%	2%
Specialty houses to serve Mexican, Italian, and sea foods	3114	81%	16%	4%		89%	4%	1%	6%
	3114	84%	11%	4%		92%	8%		
	3218	87%	10%	3%		84%	11%	3%	3%
	3224	86%	10%	4%		83%	3%	4%	10%
	3279	85%	11%	4%		82%	6%	4%	8%
	3112	88%	9%	4%		90%	4%	4%	2%
	3161					97%	1%	1%	1%
	3566					87%	10%	3%	
	Total	85%	12%	4%		88%	5%	3%	4%

—continued—

Table 6 Continued

Consumer Reaction to 13 Proposed and Implemented Changes Within the CAFe System

Question ^a	Dining Facility No. ^b	Before Introduction				After Introduction			
		Response: Like	Indifferent	Dislike	No Response	Like	Indifferent	Dislike	No Response
Separate short order houses	3114	84%	12%	4%		83%	5%	4%	8%
	3114	95%	4%	1%		79%	16%	6%	
	3218					95%	3%	1%	1%
	3224	91%	7%	2%		90%	4%	3%	3%
	3279					91%	4%	3%	3%
	3122	80%	16%	4%		85%	7%	6%	2%
	3161					91%	5%	3%	
	3566	86%	11%	3%					
	Total	86%	10%	3%		90%	4%	3%	3%
22 Short order line in the regular mess facility	3114					83%	9%	5%	2%
	3114					91%	4%	6%	
	3218	61%	13%	25%	1%				
	3224	66%	9%	21%	4%				
	3279	54%	14%	27%	5%				
	3122	64%	13%	21%	2%				
	3161	73%	8%	19%					
	3566	80%	4%	16%					
	Total	64%	11%	23%	3%	85%	8%	6%	2%
Soft-serve ice cream	3114					89%	6%	2%	2%
	3114					94%	6%		
	3218					95%	3%	1%	1%
	3224	77%	21%	2%		89%	7%	2%	3%
	3279	84%	11%	5%		86%	7%	3%	3%
	3122	75%	12%	13%		93%	4%	1%	2%
	3161					93%	3%	4%	
	3566	83%	15%	3%					
	Total	81%	15%	4%		91%	5%	2%	2%

---continued---

Table 6 Continued

Consumer Reactions to 13 Proposed and Implemented Changes Within the CAFe System

Question ^a	Dining Facility No. ^b	Like	Indifferent	Dislike	No Response	Like	Indifferent	Dislike	No Response
Unlimited second helpings	3114					88%	8%	1%	2%
	3114					95%	5%		
	3218					92%	5%	3%	1%
	3224	91%	9%			84%	9%	4%	3%
	3279	87%	8%	5%		87%	6%	3%	4%
	3122	80%	16%	4%		91%	5%	2%	2%
	3161					95%	4%	1%	
	3566	85%	14%	1%					
	Total	86%	11%	2%		89%	6%	2%	2%

a. — Refer to Appendix A, question 4, for the exact phrasing of these questions to which the consumers actually responded.

b. — Refer to Table 1 for a brief description of the dining facilities.

had been implemented. Item 4e from the questionnaire (Appendix A), "cold snacks (sandwiches) in the evening", and item 4o, "quick hot meals available any time on weekends", were excluded from the table because neither of these changes were implemented by CAFe during the 11 weeks of interviewing.

Table 6 shows that virtually every change implemented by the CAFe system was highly desirable both before and after introduction. Two particularly interesting entries in Table 6 should be noted: First, total consumer reaction to the use of china dishes before introduction was 34% like, 20% indifferent, 44% dislike, and 3% no response; while the response after introduction was 72% like, 17% indifferent, and 12% dislike. One interpretation of this outcome is that the consumer may have originally thought the use of china dishes in the dining facilities would present serious problems (they may well have thought they would have to wash them with extra care), but after seeing the actual dishes procured for the system, more than twice the proportion of consumers indicated their liking of the change compared to the "before" response (and they did not have to wash them).

Second, consumer reaction to the use of plastic trays also provides important information for food service system planners. It should first be pointed out that this item was not a change in the system in the same sense that the other twelve aspects were. The use of plastic trays was originally programmed to become a bonafide change through the procurement of a new type of plastic tray for all of the dining facilities except the specialty cafe, but for a variety of reasons the existing plastic trays were used for the duration of the study in all facilities except the Short Order Cafe and the Specialty Cafe. The consumers reactions to the use of plastic trays is nevertheless tallied according to dining facility and the heading of "before introduction" and "after introduction," but in this instance "before introduction" refers to reactions by control consumers and "after introduction" refers to reactions after the initiation of CAFe. Table 6 shows that before introduction the consumer reaction was 40% like, 29% indifferent, and 31% dislike to the use of plastic trays; while the response after introduction of CAFe was 61% like, 21% indifferent, 16% dislike, and 2% no response. This rather remarkable change in consumer reaction in the absense of any substantive change is yet another item of information which points to the interpretation that the real changes implemented by CAFe render the whole food service system much more acceptable to the consumer.

Table 6 demonstrated that in 10 out of 13 categories, the percentage of consumers who liked the change increased after introduction of the actual change. Hence, not only were the non-food changes in the CAFe system well received by users of the dining facilities, but also it appears that pre-change information was a conservative estimate of the reaction to the change when it was made. This would be an important point for planners making decisions based on interview data of this kind.

Table 7 summarizes the consumers' overall reactions to the CAFe system. The totals across both facilities and weeks indicated that 93% of the CAFe consumers liked the system, 5% were indifferent, 1% disliked it, and the remainder (1%) did not respond. The totals across both facilities and weeks for non-CAFe consumers also indicated that the general reaction to the new feeding system was extremely favorable, even for those not dining in CAFe facilities (91% liked it, 6% were indifferent, and 3% stated they disliked the system).

Consumer Reaction To The CAFe System Expressed In Open-Ended Questions

Table 8 presents a quantitative summary of all the responses to the open-ended questions (questions 1, 2, and 3; Appendix A) which convey the tenor of the consumers' free responses. Table 8 should be studied in light of the following commentary:

(1) Table 8 also provides an interesting comparison between the non-CAFe and CAFe consumer. Under the traditional military food service system, consumers volunteered an average of 5.3 responses per interview. Of these, nearly half were directed toward the food (49%) and half toward the facilities (51%). Furthermore, they were extremely critical in general (73% of all responses expressed "dislike" or suggested a change). They were even more critical of the food in the traditional system (81% "dislikes" or suggested changes) than of the facilities (65% "dislikes" or suggested changes).

(2) The reaction changed after introduction of the CAFe system. Consumers within the CAFe system averaged 3.9 responses per interview (down from 5.3), with a greater proportion of responses being directed to facilities (57%) than to food (43%). Furthermore, CAFe consumers were less critical in general (44% were "dislikes" or suggested changes, down from 73%). They were less critical of the food (32% were "dislikes" or suggested changes, down from 81%) than of the facilities (52% were "dislikes" or suggested changes,

Table 7

Consumers Responses to the Question:
Overall, do you like, dislike, or are you indifferent to this new CAFE system?

Dining Facility	Response	Week											Totals across weeks:		Totals across facilities:	
		1	2	3	4	5	6	7	8	9	10	11	Control	CAFe	Control	CAFe
26	3114 ^a	Like	96%	96%	91%	95%	96%	90%	86%		88%	95%		93%	91%	93%
		Indifferent	4%	4%	8%	5%	4%	8%	5%		8%	5%		5%	6%	5%
		Dislike			2%		2%				4%			1%	3%	1%
		No Response							9%					1%		1%
	3114	Like	93%	100%	93%	100%	92%	100%	100%		100%	100%		97%		
		Indifferent	7%		7%		8%							3%		
		Dislike														
		No Response														
	3218	Like		98%	100%	91%	100%	93%	100%		100%	98%		97%		
		Indifferent				9%		4%				2%		2%		
		Dislike		2%				4%						1%		
		No Response														
	3224	Like	100%	86%	91%	96%	93%	97%	89%		90%	94%	92%	93%		
		Indifferent		7%	7%	2%	7%	3%	9%		8%	6%	4%	6%		
		Dislike		2%	2%	2%					2%		4%	1%		
		No Response														
	3279	Like		100%	86%	95%	89%	85%	89%	98%		78%	92%	89%		
		Indifferent			9%	5%	8%	12%	5%			15%	5%	7%		
		Dislike			5%		3%	3%	2%			2%	3%	2%		
		No Response							5%	2%		6%		2%		
	3122	Like				85%	95%	95%	88%	89%	93%	91%	85%	92%		
		Indifferent				15%	5%	5%	11%	8%	5%	7%	15%	7%		
		Dislike								3%	2%	2%		1%		
		No Response							2%							
	3161	Like						100%	100%	93%	93%	100%	100%	98%		
		Indifferent								7%	7%			2%		
		Dislike														
		No Response														
	3566	Like						88%	94%	93%	83%	94%	100%	92%		
		Indifferent						12%	6%		8%	6%		5%		
		Dislike								7%	8%			3%		
		No Response														

a. — Refer to Table 1 for a brief description of the facilities.

Table 8

A Quantitative Summary of the Unstructured
Responses During the Fort Lewis Test

THE TOTAL NUMBER OF RESPONSES TO THE UNSTRUCTURED QUESTIONS:
10,508

Of these, 603 responses (5.7%) were excluded from further reduction. (23 indicated that they were too new to the facility to make a judgment; 129 are presented in a separate table; 322 were either inappropriate or could not be comprehended; 24 had only the word "hungry"; 71 solely named a specific food; 18 indicated a weight or dieting response; and 16 referred to data collection procedures.)

OF THE REMAINING 9,905 RESPONSES, THE REDUCTION WAS AS FOLLOWS:

For the CAFe System:

There were 8,882 responses, averaging 3.9 responses per interview.

Of these, 963 were nondescript responses (i.e., everything, nothing, no etc.). Therefore, of the 7,919 reducible comments, 3,447 (44%) were "dislikes" or suggested changes.

Of these 7,919 reducible comments, 4,503 (57%) were concerned with facilities and 3,416 (43%) were concerned with food.

Of the 4,503 facility-responses, 2,361 (52%) were "dislikes" or suggested changes.

Of the 3,416 food-responses, 1,086 (32%) were "dislikes" or suggested changes.

For the Controls:

There were 1,023 responses, averaging 5.3 responses per interview.

Of these, 45 were nondescript responses.

Therefore, of the 978 reducible comments, 714 (73%) were "dislikes" or suggested changes.

Of these 978 reducible comments, 498 (51%) were concerned with facilities and 480 (49%) were concerned with food.

Of the 498 facility-responses, 323 (65%) were "dislikes" or suggested changes.

Of the 480 food-responses, 391 (81%) were "dislikes" or suggested changes.

down from 65%). An overall impression was that consumers using the traditional system were quite open about the negative features of the entire system; however, following introduction of CAFe, the same respondents criticized the food less frequently, but did, however, continue to be critical of the facilities. Thus this could be an indication that consumers were more concerned about the food quality than with facilities (81% "dislikes" or suggested changes for the former compared to 65% for the latter).

An additional point from Table 8 is that only 18 responses concerning weight or dieting were registered by all the consumers during the entire test, and this was unexpectedly low because a previous survey (Hertweck and Bryne, 1972; p.39) indicated that the proposed change of "providing low calorie meals" was ranked seventh in order of importance on attendance rate out of 16 changes proposed ("eliminating lines" had been ranked sixth; "eliminating KP" was ranked eighth).

A complete listing of all the consumers responses to the open-ended questions is presented in Appendix C. Therein the responses are tallied according to specific categories, month, dining facility, and question, which can provide planners with much additional information by which to suggest alteration in the food service system.

Appendix A

The original and second (Q2) interview format used in the interviews within the CAFe system at Fort Lewis are contained in the Appendix. In each format, the first three questions are open-ended, and the interviewers wrote down the interviewees comments. Question 4 asked troops response to specific aspects of the CAFe system. The Q2 form of question 4 determined whether the interviewee has been exposed to the change. Question 5 asked for an overall impression of the CAFe system. Question 6 and question 7 asked for food item acceptance ratings and meal acceptance rating respectively. Question 8 asks for a comparison of the meal being served with previous Army meals. This completed the Q2 format. The original format asked several more questions pertaining to other experience with institutional food (question 9), length of eating in dining hall (question 10), length of time in service (question 11), and age (question 12).

Sixteen proposed features of the CAFe system were originally surveyed, but the item on soft drink dispensers was dropped since consumer evaluation of the beverages had already been determined.

University of Washington
Office of Institutional Educational Research

Date _____

Mess Hall _____

Meal: Circle One

Br Lunch Sup

1. What specific things do you like about eating here?

- | | |
|----------|----------|
| a. _____ | b. _____ |
| c. _____ | d. _____ |

2. What specific things do you dislike about eating here?

- | | |
|----------|----------|
| a. _____ | b. _____ |
| c. _____ | d. _____ |

3. What changes would you like to see in the eating system here?

- | | |
|----------|----------|
| a. _____ | b. _____ |
| c. _____ | d. _____ |

4. I am going to read a list of some changes which have been made or could be made in the eating system here. For each of them, will you tell me if you would like it, dislike it, or whether it wouldn't make any difference to you.

	Like	Dislike	No Difference
a. New ID Card system of head counts	_____	_____	_____
b. Carbonated drinks	_____	_____	_____
c. Extended hours of operation	_____	_____	_____
d. Continental breakfast (Rolls and Coffee) served after regular hours	_____	_____	_____
e. Cold snacks (sandwiches) in the evenings	_____	_____	_____
f. Jukebox (or music)	_____	_____	_____
g. Use of plastic trays	_____	_____	_____
h. Use of china dishes	_____	_____	_____
i. New uniforms for mess personnel	_____	_____	_____
j. Civilian mess attendants	_____	_____	_____
k. Specialty houses to serve Mexican, Italian, and sea foods	_____	_____	_____
l. Separate short-order houses	_____	_____	_____
m. Short-order line in the regular mess facility	_____	_____	_____
n. Soft-serve ice cream	_____	_____	_____
o. Quick hot meals available any time on weekends	_____	_____	_____
p. Unlimited second helpings	_____	_____	_____

5. Overall, do you like, dislike, or are you indifferent to this new cafe system?

_____ Like _____ Dislike _____ Indifferent

6. Now I am going to ask you to rate the food you just ate. For each food, will you tell me if you liked it extremely, liked it very much, liked it moderately, liked it slightly, neither liked nor disliked it, disliked it slightly, disliked it moderately, disliked it very much, or disliked it extremely. This card has a list of these ratings. (Interviewer circle number.)

a. What main dish?

_____ 1 2 3 4 5 6 7 8 9

b. Any other main dish?

_____ 1 2 3 4 5 6 7 8 9

c. Vegetable(s)?

_____ 1 2 3 4 5 6 7 8 9

_____ 1 2 3 4 5 6 7 8 9

d. Drink(s)?

_____ 1 2 3 4 5 6 7 8 9

_____ 1 2 3 4 5 6 7 8 9

e. Breads or cereals?

_____ 1 2 3 4 5 6 7 8 9

_____ 1 2 3 4 5 6 7 8 9

f. Potatoes or starches?

_____ 1 2 3 4 5 6 7 8 9

g. Salads?

_____ 1 2 3 4 5 6 7 8 9

_____ 1 2 3 4 5 6 7 8 9

h. Soup?

_____ 1 2 3 4 5 6 7 8 9

i. Desserts?

_____ 1 2 3 4 5 6 7 8 9

_____ 1 2 3 4 5 6 7 8 9

(For breakfast, ask only for main dishes, beverages, breads and cereals, and fruits.)

7. Overall, how would you rate the meal you just ate? (Circle)

1 2 3 4 5 6 7 8 9

8. How did this meal compare with other Army meals you have had? Was it

_____ Much better? _____ A little worse?
_____ A little better? _____ Much worse?
_____ About the same?

9. Have you eaten other institutional meals, such as in schools, camps, factories, etc.?

_____ No
_____ Yes → What type of institution was it? _____
_____ How did this meal compare with other institutional meals?
_____ Much better? _____ A little worse?
_____ A little better? _____ Much worse?
_____ About the same?

10. How long have you been eating in this mess hall? _____ Months

11. How long have you been in the service? _____ Months

12. How old are you? _____ Years

Respondent's Name _____

Social Security Number _____

Interviewer _____

8/16/71

University of Washington
Office of Institutional Educational Research

Q 2

Date _____ Mess Hall _____ Meal (Circle) Br Lunch Supper

1. Now that some changes have been made in this mess hall, what do you like about eating here?

a. _____ c. _____
b. _____ d. _____

2. Do you dislike any of the changes?

_____ No

_____ Yes - Which ones? _____

3. What further changes would you like to see made in the eating system?

a. _____ b. _____

4. I am going to read a list of some of the changes which have been made or could be made in the eating system here. For each, will you tell me if you have had experience with it, and if you like or dislike it? (Note: do not read items which have been mentioned in questions 1, 2, or 3.)

	Experience?		Like	Dislike	No Difference
	Yes	No			
a. New ID Card system of head counts	_____	_____	_____	_____	_____
b. Extended hours of operation	_____	_____	_____	_____	_____
c. Continental breakfast (rolls and coffee) served after regular hours	_____	_____	_____	_____	_____
d. Cold snacks (sandwiches) in the evenings	_____	_____	_____	_____	_____
e. Jukebox (or music)	_____	_____	_____	_____	_____
f. Use of plastic trays	_____	_____	_____	_____	_____
g. Use of china dishes	_____	_____	_____	_____	_____
h. New uniforms for mess personnel	_____	_____	_____	_____	_____
i. Civilian mess attendants	_____	_____	_____	_____	_____
j. Specialty houses to serve Mexican, Italian, and sea foods	_____	_____	_____	_____	_____
k. Separate short-order houses	_____	_____	_____	_____	_____
l. Short-order line in the regular mess facility	_____	_____	_____	_____	_____
m. Soft-serve ice cream	_____	_____	_____	_____	_____
n. Quick hot meals available any time on week-ends	_____	_____	_____	_____	_____
o. Unlimited second helpings	_____	_____	_____	_____	_____

5. Overall, do you like, dislike, or are you indifferent to this new cafe system?

_____ Like

_____ Dislike

_____ Indifferent

6. Now I am going to ask you to rate the food you just ate. For each food, will you tell me if you liked it extremely, liked it very much, liked it moderately, liked it slightly, neither liked nor disliked it, disliked it slightly, disliked it moderately, disliked it very much, or disliked it extremely. This card has a list of these ratings. (Interviewer circle number.)

a. What main dish?	1	2	3	4	5	6	7	8	9

b. Any other main dish?	1	2	3	4	5	6	7	8	9

c. Vegetable(s)?	1	2	3	4	5	6	7	8	9

_____	1	2	3	4	5	6	7	8	9
d. Drink(s)?	1	2	3	4	5	6	7	8	9

_____	1	2	3	4	5	6	7	8	9
e. Breads or cereals?	1	2	3	4	5	6	7	8	9

_____	1	2	3	4	5	6	7	8	9
f. Potatoes or starches?	1	2	3	4	5	6	7	8	9

_____	1	2	3	4	5	6	7	8	9
g. Salads?	1	2	3	4	5	6	7	8	9

_____	1	2	3	4	5	6	7	8	9
h. Soup?	1	2	3	4	5	6	7	8	9

_____	1	2	3	4	5	6	7	8	9
i. Desserts?	1	2	3	4	5	6	7	8	9

_____	1	2	3	4	5	6	7	8	9

(For breakfast, ask only for main dishes, beverages, breads and cereals, and fruits.)

7. Overall, how would you rate the meal you just ate, using the same scale? (Circle)

1 2 3 4 5 6 7 8 9

8. How did this meal compare with other Army meals you have had?

Much better? About the same? A little worse?
 A little better? Much worse?

Respondent's Name _____ Number _____

Interviewer _____

Appendix B

The three sets of tables presented in this appendix serve as a wholly complete compilation of the consumers' reactions to the individual food items served during the time frame of this project. Again, minimal discussion accompanies each of the tables because it would be an endless task to try to anticipate all the questions which food service system planners might ask. These data do allow such planners to evaluate the acceptability of food items prepared in the central kitchens of CAFe compared to on-site prepared foods within CAFe; to evaluate the food items of any particular dining facility in comparison to any other facility; and to evaluate individual foods within the entire system. Food service system planners are advised, however, not to make decisions on the basis of minimal feedback. The evaluation of food items which clearly have insufficient cases for reliable feedback are placed in a separate set of tables.

The following three sets of tables (Table 9-1 through 9-12, table 10-1 through 10-12, and Table 11-1 through 11-12) provide specific information about the food items served during the 11 week test. Tables 9-1 through 9-12 provide a complete listing of the foods served according to categories (breakfast foods; fruits; short order selections; noon and evening main dishes; noon and evening soups; noon and evening salads; etc.).

Those entries in Tables 9-1 through 9-12 marked with the superscript "b" were included on the 11 week test menu and listed in the interviewers' coding sheet, but were never rated by consumers. These items, therefore, do not appear on other Tables 10 and 11. Among the probable reasons that certain food items were never rated in the consumer interviews were: (1) the items were served infrequently; (2) consumers chose them infrequently; or (3) the consumer sample was too small to assure the rating of every item. Although the reasons are not definitive, the effect remained that the "b" superscript foods were not rated.

A food in tables 9-1 through 9-12 marked with the superscript "c" was rated less than 10 times during the 11 week interviewing period. These entries have been placed in Tables 11-1 through 11-12, with both mean hedonic ratings and the number of interviews from which the means were computed. Furthermore, ratings of these items are entered according to their place of preparation in the CAFe system (central kitchens or on site) and to the dining facility in which served. Note that 11 foods prepared outside the CAFe system have been grouped under the "Control" heading. Likewise, the three

facilities (#3224, 3279, and 3122) which served A-ration foods only were categorized into one column because the consumer reaction to the food served in these separate facilities showed virtually no variation (see Table 3 and Table 4).

It is emphasized that inclusion of the data contained in Tables 11-1 through 11-12 was dictated solely by the desire to present the complete interview findings. Extreme caution must be exercised in making inferences about acceptability of these food items because the number of interviews upon which the means were based was too small to be considered as reliable evidence of consumer evaluations.

Entries in Tables 9-1 through 9-12 marked with superscript "a" were listed on the test menu in that form, but were unfortunately listed on the interviewers' coding sheet under a more general heading (e.g.) both butterfly rolls and pecan rolls were coded by the interviewers as "Other buns, doughnuts, coffee cakes not mentioned". Therefore, when looking for the consumer reaction to these items in Tables 10 and 11, the reader is advised that the entry will not be found under its own specific name.

To recapitulate the use of Tables 9, 10, and 11, the reader should proceed as follows: (1) first determine in Tables 9-1 through 9-12 whether or not the food item was included in the 11 week test; (2) if yes, items marked with superscript "a" are listed under a more general category in Tables 10 and 11; (3) items marked with superscript "b" were never rated in any of the interviews and therefore are *not* entered in Tables 10 and 11; (4) items marked with superscript "c" have hedonic values presented in Tables 11-1 through 11-12, remembering that any inference about the acceptability of these foods would be based on an insufficient number of consumer responses; and finally, (5) food items listed in Tables 9-1 through 9-12 without any superscripts have their hedonic rating presented in Tables 10-1 through 10-12 in accordance with source of preparation and dining facility.

Tables 10-1 through 10-12 suggest innumerable acceptance problems for future investigation. For example, Table 10-3 presents consumer reactions to both hamburgers and cheeseburgers, two short order selections which seem very highly acceptable to the young military consumer. Hamburgers and cheeseburgers were rated 5.21 and 5.67, respectively on the 9-point hedonic scale by consumers in non-CAFe facilities; whereas these site-prepared items were rated 7.24 and 6.22 respectively by consumers in the CAFe Short Order House. Cheeseburgers prepared in the Short Order House, while considerably

higher rated in the CAFe system than in the traditional food service system, are clearly not as well received as hamburgers. It is speculated that the cheese component lowers the acceptance of cheeseburgers through a problem of food quality, food preparation or a combination of these factors.

Decision makers planning food service systems who are concerned with the acceptability of foods prepared on-site in the CAFe system can find many examples in Tables 10-1 through 10-12 to investigate. Another example is fishsticks (Table 10-4). Fishsticks were rated at 5.00 in the non-CAFe facilities, while they were rated 7.25 in the Specialty Cafe, 7.56 in the Short Order Cafe, 7.11 in No. 3114, and 7.09 in the other three A-ration facilities in the CAFe system. These ratings are further demonstration that even on-site prepared foods within CAFe are much higher rated than in the traditional system. This phenomenon is probably a reflection of increased supervision by food technologists in CAFe.

Table 9-1

BREAKFAST FOODS: The Fort Lewis Test

I. Main Dishes

Bacon slices
Breakfast steaks
Creamed ground beef on bisquit or toast
Ham slices
Sausage links^C
Eggs, fried
Eggs, omelette
Eggs, scrambled
Eggs, soft boiled or poached^C
Eggs, others not mentioned

II. Starches

Cereal, Cold
Farina^b
French toast
Griddle cakes
Hominy grits^C
Oatmeal^C
Waffles^C
Whole wheat cereal, hot^C
Other griddle cake-type foods not mentioned^C
Other breakfast cereals not mentioned^C

III. Breads

Blueberry muffins^C
Butterfly rolls^a
Cake muffins^C
Cinnamon raisin rolls or cinnamon rolls
Coffee cake (either plain, french quick, glazed nut, or twist)
Crumb cake^a
Danish pastry
Doughnuts
Pecan rolls^a
Raisin bread or toast^C
Sugar rolls^a
Swedish tea rings^a
Other muffins not mentioned^C
Other buns, doughnuts, coffee cakes not mentioned^C

---continued---

Table 9-1 (Continued)

IV. Beverages

Apple juice
Grape juice
Grapefruit juice
Grapefruit and orange juice^c
Grapefruit and pineapple juice^b
Orange juice
Pineapple juice
Tomato juice
Other juices not mentioned^c

- a. — For all entries in tables 9-1 through 9-12, the superscript "a" indicates that the particular item was listed on the menu under that heading, but was unfortunately listed on the interviewer's coding sheet under a more inclusive heading (i.e., both butterfly rolls and pecan rolls were coded by the interviews as "Other buns, doughnuts, coffee cakes not mentioned."
- b. — For all entries in tables 9-1 through 9-12, the superscript "b" indicated that the item was both listed on the menu and listed on the interviewers' coding sheet, but was not rated. These items, therefore, will not appear on any other tables.

This phenomenon probably has multiple causes (i.e., the item was served only infrequently; the consumers chose it only infrequently; the consumer sample was too small to assure the rating of every item), but the present study is unable to ascertain the cause.

- c. — For all entries in tables 9-1 through 9-12, the superscript "c" indicates that the particular item was rated less than 10 times during the entire course of the study. All such items are listed in tables 11-1 through 11-12.

Table 9-2

FRUITS: The Fort Lewis Test

Apples, canned^C
Apples, fresh
Applesauce
Apricots, canned^C
Bananas, fresh
Cantaloupes, fresh
Cherries, sweet, canned^C
Figs, canned^C
Fruit cocktail^d
Grapes, fresh^C
Grapefruit, fresh^C
Honeydew melons, fresh^b
Oranges, fresh
Peaches, canned
Peaches, fresh
Pineapples, canned^C
Pears, canned
Plums, fresh
Prunes, canned^C
Tangerines, fresh^C
Watermelon, fresh
Other fruits not mentioned

NOTE: Refer to the legend on Table 9-1.

d. — This item was also served chilled as a dessert on occasion.

Table 9-3

SHORT ORDER SELECTIONS: The Fort Lewis Test

Bacon, lettuce, and tomato sandwich
Bar B Q beef on a bun^c
Cheeseburger
Chili dog
Cold cuts, ham
Cold cuts, luncheon sausage meats
Cold cuts, turkey or chicken^c
Enchiladas
Fishwich^c
Grilled cheese sandwich
Grilled cheese and bacon sandwich^a
Grilled ham on a bun^a
Ham and cheese sandwich, grilled or cold
Ham sandwich, cold
Hamburger
Hot corned beef sandwich^a
Hot pork sandwich^a
Hot roast beef sandwich^c
Hot turkey sandwich^c
Hot tamales^c
Liverwurst sandwich^c
Meatball sandwich^a
Sloppy Joe sandwich
Submarine sandwich^c
Tacos
Tortillas^c
Tuna sandwich
Western sandwich^b
Other sandwiches or short orders not mentioned

NOTE: Refer to legend on Table 9-1.

Table 9-4

NOON AND EVENING MAIN DISHES: The Fort Lewis Test

Beef, baked Spanish patties^a
Beef, Bar B Q cubes
Beef, chipped creamed
Beef, cold platter^a
Beef, corned^c
Beef, pot pie
Beef, roast
Beef, stew
Chicken, Bar B Q^a
Chicken country style
Chicken, oven fried
Chili con carne
Chili macaroni^c
Chow mein^c
Eggs, hard cooked
Fishsticks
Fish portions
Frankfurters
Hash, corned beef
Ham, roast or baked slices
Hamburg plate
Lasagna
Macaroni and cheese, baked
Meatballs, Swedish
Meatloaf
Hungarian goulash^c
Pizza
Pork, baked or breaded slices^c
Pork, Bar B Q loins^c
Pork chops
Pork, chop suey^c
Pork roast
Pork roast with gravy^c
Pork, sweet and sour^c
Pot roast^c
Ravioli
Seafood platter^a
Salmon loaf^a
Scallops, fried^a

---continued---

Table 9-4 Continued

NOON AND EVENING MAIN DISHES: The Fort Lewis Test

Shrimp
Spareribs, Bar B Q^a
Spareribs, braised^a
Spaghetti, with meatballs and grated cheese
Steak, grilled
Steak, pepper^a
Steak, Salisbury
Steak, Swiss
Stew, el rancho^b
Tuna and noodles, baked^c
Tuna salad plate
Turkey
Turkey with brown gravy^c
Turkey or chicken pot pie
Turkey salad plate^a
Veal burgers^b
Veal loaf^a
Veal parmesan
Veal roast^c
Veal steak, breaded
Other noon and evening fish and seafoods not mentioned
Other noon and evening meats not mentioned
Other noon and evening stews and casseroles not mentioned

NOTE: Refer to legend on Table 9-1.

Table 9-5

NOON AND EVENING SOUPS: The Fort Lewis Test

Bean soup^c
Beef barley soup^c
Beef noodle soup^b
Beef rice soup^b
Chicken noodle soup
Knickerbocker soup^b
Minestrone soup^b
Onion soup^c
Pea soup^b
Tomato soup^b
Tomato-vegetable soup^c
Turkey noodle soup^b
Turkey rice soup^b
Vegetable soup
Other soups not mentioned^c

NOTE: Refer to legend on Table 9-1.

Table 9-6

NOON AND EVENING SALADS: The Fort Lewis Test

Banana salad^b
Cabbage and sweet pepper salad^b
Carrot and pineapple salad^a
Carrot salad^c
Chef's salad^c
Cole slaw and vinegar salad^a
Cole slaw and cream cheese salad^a
Cottage cheese^a
Cottage cheese and apricot salad^a
Cottage cheese and peach salad^a
Cottage cheese and tomato salad^a
Cucumbers sliced with onions^c
Garden cottage cheese
Garden vegetable salad^a
Golden glow^a
Jellied banana fruit^a
Jellied fruit
Jellied fruit cocktail^a
Jellied pear^a
Jellied spiced cherries^a
Jellied vegetable salad^c
Lettuce salad
Lettuce and tomato salad
Meat salad^c
Mixed fruit salad^c
Perfection salad^a
Pineapple and cheese salad^c
Spring salad^a
Three bean salad^c
Tomatoes, sliced fresh
Tossed green salad
Tossed vegetable salad
Other fruit salad not mentioned^c
Other vegetable salad not mentioned

NOTE: Refer to legend on Table 9-1.

Table 9-7

NOON AND EVENING STARCHES: The Fort Lewis Test

Beans, baked
 Beans with pork and tomatoes^c
 Beans, refried^c
 Other beans not mentioned^c
 Corn chips^c
 Fritters^c
 Noodles, buttered
 Onion rings, french fried
 Potatoes au gratin^a
 Potatoes, baked
 Potato chips
 Potatoes, cottage fried^d
 Potatoes, Franconia^a
 Potatoes, french baked^a
 Potatoes, french fried
 Potatoes, glazed or candied sweet
 Potatoes, grilled cakes^a
 Potatoes, hash brown^d
 Potatoes, home fried^{ad}
 Potatoes, lyonnaise^a
 Potatoes, mashed
 Potatoes, O'Brien^a
 Potatoes, oven browned
 Potatoes, paprika buttered^a
 Potatoes, parsley buttered^a
 Potatoes, Rissole^a
 Potato salad
 Potato salad, hot^c
 Potatoes, scalloped
 Other potatoes not mentioned
 Rice
 Rice, fried^c
 Rice, Spanish
 Rice, steamed^a
 Turkey dressing

NOTE: Refer to legend on Table 9-1.

d. — These items also served at BREAKFAST.

Table 9-8

NOON AND EVENING VEGETABLES: The Fort Lewis Test

Asparagus
Beans, green
Beans, green with mushrooms^a
Beans, lima^c
Beans, wax^c
Beets, Harvard^c
Broccoli
Brussels sprouts^c
Cabbage
Carrots, cooked
Cauliflower^c
Corn
Corn on the cob
Corn, creamed style
Greens, southern style^b
Mixed vegetables
Mushrooms^c
Onions, cooked^c
Onions, baked with tomatoes^a
Onions, Spanish^a
Peas
Peas, black eyed
Peas and carrots^c
Peas and mushrooms^a
Peas with onions^a
Sauerkraut
Spinach
Spinach with bacon^a
Spinach with hard cooked egg^a
Squash, creole^a
Squash, zucchini^c
Succotash^c
Tomatoes, scalloped
Tomatoes, stewed^c
Other vegetables not mentioned

NOTE: Refer to legend on Table 9-1.

Table 9-9

NOON AND EVENING BREADS: The Fort Lewis Test

Biscuits, baking powder^a
Biscuits, cheese^a
Bread, corn^c
Bread, french
Bread, toasted garlic^c
Bread, rye^c
Bread, white
Bread, whole wheat^c
Bread, toasted
Crackers
Hot cross buns^c
Rolls, coverleaf^a
Rolls, pan^a
Rolls, parkerhouse^a
Rolls and buns, hot or cold
Other rolls and breads not mentioned

NOTE: Refer to legend on Table 9-1.

Table 9-10

NOON AND EVENING DESSERTS: The Fort Lewis Test

Brownies, chocolate
 Brownies, butterscotch^c
 Cake, angel food^c
 Cake, applesauce^c
 Cake, banana^c
 Cake, chocolate cream^c
 Cake, devil's food
 Cake, fruitcake^c
 Cake, gingerbread
 Cake, marble
 Cake, peanutbutter^b
 Cake, peach shortcake^c
 Cake, pineapple upside-down
 Cake, raspberry shortcake^c
 Cake, spice^c
 Cake, strawberry shortcake
 Cake, yellow^c
 Cake, white
 Other cakes not mentioned
 Cake-pudding, cherry^a
 Cake-pudding, chocolate^a
 Cake-pudding, lemon^a
 Cookies, butternut refrigerator^c
 Cookies, chocolate chip
 Cookies, chocolate drop^b
 Cookies, chocolate raisin drop^c
 Cookies, coconut drop^b
 Cookies, crisp drop^a
 Cookies, ginger molasses^c
 Cookies, hermits^b
 Cookies, nut bar^b
 Cookies, oatmeal^c
 Cookies, peanut-butter^c
 Cookies, peanut wafers^a
 Cookies, spice refrigerator^a
 Cookies, sugar
 Cookies, vanilla wafers^c
 Other cookies not mentioned
 Crisp, apple or cheese-apple^c
 Crisp, apricot^c
 Crisp, cherry^c
 Crisp, peach^c

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Table 9-10 Continued

NOON AND EVENING DESSERTS: The Fort Lewis Test

Gelatin, orange^a
Gelatin, raspberry^a
Gelatin, strawberry^c
Ice cream (both regular and soft serve)
Other ice cream deserts not mentioned^c
Pie, apple
Pie, apricot^c
Pie, banana cream^c
Pie, blackberry^c
Pie, blueberry
Pie, boysenberry^c
Pie, cherry
Pie, chocolate cream^c
Pie, Lemon chiffon^b
Pie, lemon meringue^c
Pie, peach
Pie, pineapple
Pie, pumpkin^c
Pie, strawberry chiffon^b
Other pie not mentioned
Pudding, chocolate^c
Pudding, vanilla cream^c
Sherbet^c
Banana split^c
Butterscotch sauce^c
Sundae, butterscotch^a
Sundae, chocolate^a
Sundae, chocolate-nut^a
Tort, applesauce^a
Turnovers^c
Other deserts not mentioned^c

NOTE: Refer to legend on Table 9-1.

Table 9-11

NOON AND EVENING BEVERAGES: The Fort Lewis Test

Beer^c
Coffee
Cola
Float, root beer
Float, coke
Fruit punch
Grapeade^c
Grape-lemonade^b
Lemonade^b
Limeade^b
Milk
Milk, chocolate
Milk, shakes and malts
Other milk products not mentioned^c
Orangeade
Other fruit drinks not mentioned^c
Root beer
Soda, cherry or strawberry^c
Soda, grape^c
Soda, lemon-lime; Sprite; 7-up
Soda, orange
Other carbonated beverages not mentioned^c
Tea, hot
Tea, iced^c

NOTE: Refer to legend on Table 9-1.

Table 9-12

ACCESSORY ITEMS: The Fort Lewis Test

Butter and/or jelly
Cranberry
Pickles
Radishes^c
Relishes, fresh (cucumbers, carrot sticks, etc.)
Salad dressing

NOTE: Refer to legend on Table 9-1.

Table 10-1 Continued

The Hedonic Values of Breakfast Foods: The Fort Lewis Test

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spec'ty Cafe Site Central	#3218 S.O. Cafe Site Central	#3114 Site Central	#3224; #3279; #3122 Site Central
III. Breads					
Cinnamon raisin rolls or cinnamon rolls	6.00 (4)	8.00 (1)	8.00 (2)	7.60 (15)	7.48 (61)
Coffee cake (either plain, french quick, glazed nut, or twist)				7.25 (12)	6.91 (11)
Danish pastry	3.00 (1)			7.40 (5)	6.56 (9)
Doughnuts				8.00 (6)	7.06 (16)
IV. Beverages					
Apple juice	6.00 (1)				7.67 (9)
Grape juice	6.00 (4)			7.00 (9)	8.29 (17)
Grapefruit juice	8.00 (1)			7.75 (8)	7.40 (10)
Orange juice	6.00 (2)		7.00 (4)	7.67 (15)	7.50 (48)
Pineapple juice	8.00 (1)			8.17 (6)	7.80 (5)
Tomato juice				9.00 (1)	8.15 (13)

NOTE: In tables 10-1 through 10-12, the number of cases upon which the mean hedonic value was determined is contained within the parentheses underneath the mean value.

- a. — For Tables 10-1 through 10-12, refer to the legend of Table 1 for a brief description of each of these facilities.
- b. — The interviewers' coding category for this item was "other breakfast meats not mentioned," but this item was the only possible item which could be included therein.

Table 10-2

The Hedonic Values of Fruits: The Fort Lewis Test

(Dining Facility): (Location of Preparation)	Controls Site Only	#3161 Spec'ty Cafe		#3218 S.O. Cafe		#3114		#3224 #3279; #3122	
		Site	Central	Site	Central	Site	Central	Site	Central
Apples, fresh	4.00 (2)	9.00 (1)				8.22 (9)	8.09	8.09 (23)	
Applesauce	8.00 (2)					8.00 (16)		7.61 (23)	
Bananas, fresh	7.33 (3)			8.50 (2)		6.38 (8)		7.74 (31)	
Cantaloupes, fresh	8.00 (4)					8.17 (18)		8.19 (27)	
Fruit cocktail	8.00 (2)					7.43 (14)		7.98 (47)	
Oranges, fresh	8.00 (1)					7.50 (4)		7.27 (11)	
65 Peaches, canned	8.00 (3)					7.50 (6)		7.44 (9)	
Peaches, fresh						7.45 (11)		6.91 (22)	
Pears, canned	8.00 (4)					8.00 (5)		6.73 (11)	
Plums, fresh	8.00 (1)					6.94 (17)		7.60 (15)	
Watermelon, fresh	7.33 (3)					7.80 (5)		7.00 (2)	
Other fruits not mentioned	7.00 (1)					8.33 (6)		6.60 (5)	

Table 10-3

The Hedonic Values of Short Order Selections: The Fort Lewis Test

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spec'ty Cafe		#3218 S.O. Cafe		#3114		#3224 #3279; #3122	
		Site	Central	Site	Central	Site	Central	Site	Central
Bacon, lettuce, and tomato sandwich	3.00 (1)			6.46 (24)		6.00 (7)			
Cheeseburger	5.67 (18)			6.22 (59)		7.40 (48)		7.00 (1)	
Chili dog				7.70 (10)					
Cold cuts, ham	7.00 (1)			7.00 (1)		6.75 (4)		5.50 (4)	
Cold cuts, luncheon sausage meats	7.00 (1)			6.67 (3)		6.60 (5)		7.10 (10)	
Enchiladas		6.91 (11)							
Grilled cheese sandwich	5.00 (2)			7.14 (14)		7.29 (7)		7.17 (6)	
Ham and cheese sandwich, grilled or cold				7.22 (46)		7.50 (4)		6.00 (6)	
Ham sandwich, cold				7.40 (15)		1.00 (1)			
Hamburger	5.21 (14)			7.24 (25)		7.26 (34)		6.29 (7)	
Sloppy Joe sandwich	7.00 (1)				7.26 (47)		7.00 (1)		6.29 (7)
Tacos		7.79 (29)							
Tuna sandwich				7.67 (84)				7.00 (3)	
Other sandwiches or short orders not mentioned ^a	5.00 (1)	9.00 (2)		6.38 (26)		6.67 (6)		6.40 (10)	

a. — This category included at least grilled cheese and bacon sandwich, grilled ham on a bun, hot corned beef sandwich, hot pork sandwich, and meatball sandwich.

Table 10-4

The Hedonic Values of Noon and Evening Main Dishes: The Fort Lewis Test

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spec'ty Cafe		#3218 S.O. Cafe		#3114		#3224 #3279; #3122	
		Site	Central	Site	Central	Site	Central	Site	Central
Beef, Bar B Q cubes	6.00 (5)				7.67 (3)		5.13 (15)		6.64 (14)
Beef, chipped creamed	1.00 (1)						6.00 (2)		6.08 (12)
Beef, pot pie							6.25 (8)		7.30 (10)
Beef, roast	5.92 (24)					6.83 (47)		6.57 (97)	
Beef, stew ^a	4.00 (1)						6.81 (16)		6.93 (27)
Chicken, country style	5.78 (9)		7.30 (10)				6.95 (20)		6.79 (34)
57 Chicken, oven fried	5.86 (7)		7.25 (8)				6.55 (22)		6.81 (58)
Chili con carne	6.50 (6)	7.77 (39)		7.00 (103)		6.75 (12)		6.17 (6)	
Eggs, hard cooked							6.00 (3)		7.38 (8)
Fishsticks	5.00 (8)	7.25 (4)		7.56 (9)		7.11 (9)		7.09 (22)	
Fish portions	8.00 (1)	7.25 (12)		6.83 (6)		6.20 (5)		7.12 (26)	
Frankfurters	5.00 (12)			7.25 (80)		6.54 (26)		7.33 (3)	
Hash, corned beef							6.64 (11)		7.00 (13)
Ham, roast or baked slices	6.00 (1)			8.00 (2)		6.87 (15)		6.62 (29)	

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Table 10-4 Continued

The Hedonic Values of Noon and Evening Main Dishes: The Fort Lewis Test

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spec'ty Cafe		#3218 S.O. Cafe		#3114		#3224 #3279; #3122	
		Site	Central	Site	Central	Site	Central	Site	Central
Hamburg plate ^b				9.00 (1)				6.67 (3)	
Lasagna	5.33 (3)		7.50 (18)				7.25 (12)		6.06 (17)
Macaroni and cheese, baked	4.67 (6)						6.33 (3)		7.33 (18)
Meatballs, Swedish	7.00 (1)		8.50 (2)		6.00 (1)		7.31 (29)		7.06 (31)
Meatloaf	5.00 (5)						6.43 (23)		7.32 (50)
Pizza	3.67 (3)	7.58 (31)		5.06 (17)		5.50 (4)		6.39 (18)	
Pork chops	6.50 (2)						7.33 (6)		5.50 (16)
Pork roast	6.20 (5)					7.33 (6)		6.89 (9)	
Ravioli		7.33 (30)						4.00 (4)	
Shrimp		8.30 (47)						7.82 (38)	
Other noon and evening fish and seafoods not mentioned ^d	6.00 (1)	7.83 (6)				8.00 (1)		6.20 (5)	
Spareribs ^c							6.79 (24)		6.77 (39)
Spaghetti, with meatballs and grated cheese	4.89 (9)		7.36 (33)				6.86 (7)		6.80 (15)
Steak, grilled	6.18 (11)					7.18 (17)		6.85 (68)	

—continued—

Table 10-4 Continued

The Hedonic Values of Noon and Evening Main Dishes: The Fort Lewis Test

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spec'ty Cafe		#3218 S.O. Cafe		#3114		#3224 #3279; #3122	
		Site	Central	Site	Central	Site	Central	Site	Central
Steak, Salisbury	6.00 (1)					8.00 (1)		5.82 (11)	
Steak, Swiss	6.40 (5)					6.78 (9)		6.76 (17)	
Tuna salad plate					8.75 (4)	6.13 (8)		7.29 (21)	
Turkey	3.75 (4)					6.75 (20)		6.29 (56)	
Turkey or chicken pot pie						5.33 (3)		6.73 (11)	
Veal parmesan			7.11 (9)			7.00 (1)		4.00 (1)	
Veal steak, breaded			5.50 (2)					6.70 (20)	
Other noon and evening meats not mentioned ^e	6.50 (2)	7.25 (4)		6.80 (5)		6.48 (25)		5.50 (24)	
Other noon and evening stews and casseroles not mentioned	1.00 (1)	7.00 (1)				6.00 (1)		6.55 (11)	

a. — The interviewers' coding category for this item was "stew, beef or plain."

b. — The interviewers' coding category for this item was "hamburger patties."

c. — This category included both braised and bar B Q spareribs.

d. — This category included at least the seafood platter, salmon loaf, and scallops, fried.

e. — This category included at least beef, baked Spanish patties; beef, cold platter; chicken, bar B Q; steak, pepper; turkey salad plate, and veal loaf.

Table 10-5

The Hedonic Values of Noon and Evening Soups: The Fort Lewis Test

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spec'ty Cafe		#3218 S.O. Cafe		#3114		#3224 #3279; #3122	
		Site	Central	Site	Central	Site	Central	Site	Central
Chicken noodle soup						7.25 (4)		7.83 (6)	
Vegetable soup	5.33 (3)					7.00 (1)		6.87 (15)	

Table 10-6

The Hedonic Values of Noon and Evening Salads: The Fort Lewis Test

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spec'ty Cafe Site Central		#3218 S.O. Cafe Site Central		#3114 Site Central		#3224 #3279; #3122 Site Central	
Cole slaw ^a	6.80 (5)		7.25 (4)				6.52 (23)		6.59 (17)
Garden cottage cheese	6.17 (6)				8.50 (2)		8.20 (5)		7.94 (16)
Jellied fruit ^b			7.33 (3)		6.43 (7)		7.76 (25)		7.57 (30)
Lettuce salad	6.92 (13)		7.33 (3)		7.00 (2)		7.46 (28)		6.63 (43)
Lettuce and tomato salad	8.00 (1)		7.25 (4)				7.86 (14)		7.67 (12)
Tomatoes, sliced fresh	7.67 (6)			6.00 (4)		7.00 (5)		8.12 (17)	
Tossed green salad	7.50 (2)		8.00 (1)		7.00 (1)		7.00 (1)		7.14 (7)
Tossed vegetable salad	7.13 (23)		7.27 (15)		8.00 (1)		6.88 (43)		6.98 (83)
Other vegetable salad not mentioned ^c	7.33 (3)	9.00 (1)				8.00 (1)		7.44 (9)	

a. — This category included both cole slaw and vinegar salad and cole slaw and cream cheese salad.

b. — This category included jellied banana fruit, jellied fruit cocktail, jellied pear, and jellied spiced cherries in addition to just jellied fruit.

c. — This category included at least garden vegetable salad and spring salad.

Table 10-7

The Hedonic Values of Noon and Evening Starches: The Fort Lewis Test

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spec'ty Cafe		#3218 S.O. Cafe		#3114		#3224 #3279; #3122	
		Site	Central	Site	Central	Site	Central	Site	Central
Beans, baked	6.00 (3)		8.00 (1)		5.00 (2)		7.13 (8)		6.00 (8)
Noodles, buttered	3.33 (3)							5.42 (19)	
Onion rings, french fried				7.05 (84)		7.13 (46)		7.07 (56)	
Potatoes, baked	6.18 (11)						7.24 (21)		7.16 (31)
Potato chips				7.12 (26)		6.80 (5)		5.00 (2)	
Potatoes, cottage fried ^a	6.86 (7)						6.09 (22)		6.39 (44)
3 Potatoes, french fried	5.78 (36)	7.87 (68)		7.11 (228)		7.07 (151)		6.66 (179)	
Potatoes, glazed or candied sweet							7.00 (4)		7.30 (10)
Potatoes, hash browned ^a	4.00 (4)						3.50 (2)		6.09 (11)
Potatoes, mashed	5.27 (37)					6.26 (58)		6.47 (133)	
Potatoes, oven browned	5.83 (6)					7.00 (1)		6.26 (19)	
Potatoes, boiled ^b	5.08 (12)						6.75 (12)		5.78 (23)
Potato salad	8.00 (2)					5.38 (8)		3.56 (9)	
Potatoes, scalloped							5.67 (12)		5.40 (15)

continued

Table 10-7 Continued

The Hedonic Values of Noon and Evening Starches: The Fort Lewis Test

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spec'ty Cafe		#3218 S.O. Cafe		#3114		#3224 #3279; #3122	
		Site	Central	Site	Central	Site	Central	Site	Central
Other potatoes not mentioned ^c	1.00 (1)				9.00 (1)		7.00 (2)		6.00 (20)
Riced	6.20 (10)	7.00 (1)				6.64 (11)		6.38 (13)	
Rice, Spanish	5.00 (1)	7.33 (18)				7.50 (2)		6.00 (1)	
Turkey dressing						4.75 (4)		5.80 (10)	

- a. — These items also serve at **Breakfast**.
- b. — This category included both paprika buttered potatoes and parsley buttered potatoes.
- c. — This category included at least au gratin potatoes, Franconia potatoes, french baked potatoes, grilled potato cakes, home fried potatoes, (these last two were also served at breakfast) lyonnaise potatoes, O'Brien potatoes, and Rissole potatoes.
- d. — This category also included steamed rice.

Table 10-8

The Hedonic Values of Noon and Evening Vegetables: The Fort Lewis Test

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spec'ty Cafe		#3218 S.O. Cafe		#3114		#3224 #3279; #3122	
		Site	Central	Site	Central	Site	Central	Site	Central
Asparagus	8.00 (1)					3.00 (3)		4.90 (10)	
Beans, green ^a	6.00 (10)					6.71 (14)		6.66 (58)	
Broccoli						6.14 (7)		6.26 (23)	
Cabbage	8.00 (3)						4.00 (1)		6.92 (12)
Carrots, cooked	2.00 (2)					7.50 (6)		6.76 (21)	
Corn	5.94 (17)					7.58 (38)		7.16 (61)	
64 Corn on the cob	6.33 (3)						6.36 (11)		6.33 (30)
Corn, creamed style						8.20 (5)		7.95 (19)	
Mixed vegetables	7.50 (2)					6.83 (6)		6.77 (35)	
Peas ^b	5.79 (14)					6.67 (40)		6.57 (67)	
Peas, black eyed	1.00 (1)					9.00 (1)		7.77 (13)	
Sauerkraut	7.00 (2)					6.20 (5)		6.29 (7)	
Spinach	7.25 (4)					5.33 (3)		6.50 (10)	
Tomatoes, scalloped	8.00 (1)			6.00 (4)		8.25 (4)		7.18 (11)	
Other vegetables not mentioned ^d	3.00 (1)			6.00 (2)		6.25 (4)		6.92 (13)	

a. — This category included also green beans with mushrooms.

b. — This category included also peas and mushrooms and peas with onions.

c. — This category included also spinach with bacon and spinach with hard cooked egg.

d. — This category included at least squash, creole.

Table 10-9

The Hedonic Values of Noon and Evening Breads: The Fort Lewis Test

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spec'ty Cafe		#3218 S.O. Cafe		#3114		#3224 #3279; #3122	
		Site	Central	Site	Central	Site	Central	Site	Central
Biscuits ^a							6.10 (20)		5.89 (56)
Bread, french	7.67 (3)	7.88 (8)				8.00 (1)			
Bread, white	7.00 (48)	7.22 (36)		8.00 (6)		7.42 (124)		7.34 (330)	
Bread, toasted	6.89 (19)	7.67 (12)				7.14 (88)		7.67 (185)	
Crackers	6.00 (2)	7.25 (4)				7.00 (2)		7.17 (6)	
Rolls and buns, hot or cold ^b	6.75 (16)				6.53 (15)		6.59 (32)		6.21 (84)
Other rolls and breads not mentioned	7.11 (9)	7.00 (3)		7.14 (7)		7.38 (16)		7.00 (8)	

a. — This category included both baking-powder biscuits and cheese biscuits.

b. — This category included at least cloverleaf rolls, pan rolls, and parkerhouse rolls.

Table 10-10

The Hedonic Values of Noon and Evening Desserts: The Fort Lewis Test

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spec'ty Cafe		#3218 S.O. Cafe		#3114		#3224 #3279; #3122	
		Site	Central	Site	Central	Site	Central	Site	Central
Brownies, chocolate	3.33 (3)				6.50 (4)		6.64 (11)		6.30 (10)
Cake, devil's food	7.14 (7)				6.00 (6)		7.35 (17)		6.89 (35)
Cake, marble	5.50 (2)				8.00 (1)		6.83 (12)		7.78 (9)
Cake, pineapple upside-down							7.88 (8)		7.00 (13)
Cake, strawberry shortcake	7.33 (9)				7.00 (2)		7.00 (7)		8.14 (7)
Cake, white	5.89 (27)				6.81 (21)		7.27 (26)		7.06 (65)
99 Other cakes not mentioned ^a	3.67 (3)				7.47 (15)		7.19 (16)		7.60 (30)
Cookies, chocolate chip	3.33 (3)				9.00 (1)		7.25 (8)		7.67 (21)
Cookies, sugar					6.00 (2)		6.00 (2)		8.14 (7)
Other cookies not mentioned ^b	5.56 (9)				6.56 (9)		6.93 (14)		7.00 (16)
Jello ^c	8.20 (5)				8.00 (1)		7.60 (15)		7.34 (32)
Ice cream (both regular and soft-serve)	5.92 ^d (13)	8.38 (26)		8.43 (47)		8.29 (49)		8.11 (99)	
Pie, apple	5.73 (11)				7.10 (10)		7.25 (24)		6.94 (48)

continued

Table 10-10 Continued

The Hedonic Values of Noon and Evening Desserts: The Fort Lewis Test

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spec'ty Cafe		#3218 S.O. Cafe		#3114		#3224 #3279; #3122	
		Site	Central	Site	Central	Site	Central	Site	Central
Pie, blueberry					7.00 (1)		8.00 (11)		6.71 (14)
Pie, cherry					7.60 (10)		7.93 (15)		7.11 (44)
Pie, peach					7.86 (7)		7.00 (16)		7.21 (24)
Pie, pineapple	8.00 (1)				6.33 (3)		7.80 (5)		7.40 (15)
Other pies not mentioned	7.00 (1)				8.67 (3)		7.17 (6)		7.71 (7)

- 67
- a. — This category included at least cherry cake-pudding, chocolate cake-pudding, and lemon cake-pudding.
 - b. — This category included at least crisp drop cookies, peanut wafer cookies, and spice refrigerator cookies.
 - c. — This category included both orange gelatin and raspberry gelatin.
 - d. — This rating is for regular ice cream only.

Table 10-11

The Hedonic Values of Noon and Evening Beverages: The Fort Lewis Test

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spec'ty Cafe		#3218 S.O. Cafe		#3114		#3224 #3279; #3122	
		Site	Central	Site	Central	Site	Central	Site	Central
Coffee	7.00 (9)	4.50 (2)		6.00 (1)		6.23 (61)		6.68 (117)	
Cola	7.87 (62)	8.20 (74)		8.22 (124)		8.16 (225)		8.32 (360)	
Float, root beer				8.88 (8)		7.00 (2)		8.53 (17)	
Float, coke		8.00 (1)		6.00 (1)		8.50 (2)		8.33 (6)	
Fruit punch				8.09 (34)				6.50 (2)	
Milk	7.97 (75)	8.27 (56)		8.64 (64)		8.45 (290)		8.43 (504)	
Milk, chocolate	7.83 (6)	8.00 (2)				8.33 (3)		8.00 (1)	
Milk, shakes and malts		8.37 (19)		7.77 (39)				8.00 (2)	
Orangeade				7.64 (14)					
Root beer	8.08 (13)	8.50 (8)		8.16 (51)		7.65 (43)		8.24 (63)	
Soda, lemon-lime; Sprite; 7-Up	6.63 (8)	7.80 (10)		8.11 (35)		7.79 (29)		8.08 (76)	
Soda, orange				8.00 (15)					
Tea, hot						7.00 (1)		8.89 (9)	

Table 10-12

The Hedonic Values of Accessory Items: The Fort Lewis Test

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spec'ty Cafe		#3218 S.O. Cafe		#3114		#3224 #3279; #3122	
		Site	Central	Site	Central	Site	Central	Site	Central
Butter and/or jelly	8.00 (2)	9.00 (3)				7.50 (2)		7.57 (7)	
Cranberry	6.00 (4)					8.25 (4)		8.14 (7)	
Pickles	8.00 (4)					9.00 (2)		7.22 (9)	
Relishes, fresh (cucumbers, carrot sticks, etc.)	6.60 (10)	8.50 (2)		8.00 (1)		8.33 (3)		7.33 (12)	
Salad dressing	6.38 (8)	8.33 (3)				7.00 (3)		6.64 (11)	

The Hedonic Values of Breakfast Foods Which Have Insufficient Cases for Comparisons

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Table 11-1 Continued

The Hedonic Values of Breakfast Foods Which Have Insufficient Cases for Comparisons

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spec'ty Cafe		#3218 S.O. Cafe		#3114		#3224; #3279; #3122	
		Site	Central	Site	Central	Site	Central	Site	Central
III. Breads (Continued)									
Raisin bread or toast						8.67 (3)		8.00 (5)	
Other muffins not mentioned									7.75 (4)
Other buns, doughnuts, coffee cakes not mentioned ^b							7.50 (4)		7.00 (1)
IV. Beverages									
Grapefruit and orange juice						7.67 (3)		8.33 (3)	
Other juices not mentioned					9.00 (1)				

NOTE: In tables 11-1 through 11-12, the number of cases upon which the mean hedonic value was determined is contained within the parentheses underneath the mean value.

a. — For tables 11-1 through 11-12 refer to the legend of Table 2 for a brief description of each of these facilities.

b. — This category included at least butterfly rolls, crumb cake, pecan rolls, sugar rolls, and Swedish tea rings.

Table 11-2

The Hedonic Values of Fruits Which Have Insufficient Cases for Comparisons

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spec'ty Cafe		#3218 S.O. Cafe		#3114		#3224; #3279; #3122	
		Site	Central	Site	Central	Site	Central	Site	Central
Apples, canned						8.00 (1)			
Apricots, canned						9.00 (1)		6.00 (1)	
Cherries, sweet, canned	7.00 (1)								
Figs, canned						9.00 (1)			
Grapes, fresh	8.00 (2)								
Grapefruit, fresh						9.00 (1)			
72 Pineapple, canned	7.00 (1)	9.00 (1)				8.00 (1)		9.00 (1)	
Prunes, canned								7.00 (2)	
Tangerines, fresh	7.00 (1)								

Table 11-3

The Hedonic Values of Short Order Selections Which Have Insufficient Cases for Comparisons

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spect'y Cafe		#3218 S.O. Cafe		#3114		#3224; #3279; #3122	
		Site	Central	Site	Central	Site	Central	Site	Central
Bar B Q beef on bun					7.00 (2)				7.50 (4)
Cold cuts, turkey or chicken				8.00 (1)				6.00 (1)	
Fishwich	8.00 (1)	8.00 (1)		7.33 (6)					
Hot roast beef sandwich	3.00 (1)					8.00 (1)			
Hot turkey sandwich								7.00 (1)	
Hot tamales		7.25 (4)							
73 Liverwurst sandwich				7.67 (3)					
Submarine sandwich				4.00 (1)		7.17 (6)			
Tortillas		8.00 (2)							

Table 11-4

**The Hedonic Values of Noon and Evening Main Dishes
Which Have Insufficient Cases for Comparisons**

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spect'y Cafe		#3218 S.O. Cafe		#3114		#3224; #3279; #3122	
		Site	Central	Site	Central	Site	Central	Site	Central
Beef, corned							9.00 (1)		7.50 (2)
Chili macaroni	2.00 (1)			9.00 (1)					
Chow mein						8.00 (1)		1.00 (1)	
Hungarian goulash								8.00 (1)	
Pork, baked or breaded slices ^a							8.33 (3)		
Pork, bar B Q loins								6.00 (9)	
Pork, chop suey ^b	6.50 (2)								2.00 (1)
Pork roast with brown gravy ^c									8.00 (2)
Pork, sweet and sour									7.00 (3)
Pot roast							7.00 (6)		
Tuna and noodles, baked									6.00 (2)
Turkey with brown gravy							7.50 (2)		6.00 (5)
Veal roast								4.00 (1)	

a. — The interviewers' coding category for this item was "pork steak."

b. — The interviewers' coding category for this item was "chop suey."

c. — The interviewers' coding category for this item was "pork slices baked in gravy."

Table 11-5

The Hedonic Values of Noon and Evening Soups Which Have Insufficient Cases for Comparisons

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spect'y Cafe		#3218 S.O. Cafe		#3114		#3224; #3279; #3122	
		Site	Central	Site	Central	Site	Central	Site	Central
Bean soup	2.00 (1)						6.50 (2)		6.60 (5)
Beef barley soup									5.00 (2)
Onion soup	6.00 (2)								5.67 (3)
Tomato-vegetable soup							6.00 (1)		
Other soups not mentioned	5.00 (1)					9.00 (1)		6.57 (7)	

Table 11-6

The Hedonic Values of Noon and Evening Salads Which Have Insufficient Cases for Comparisons

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spect'y Cafe		#3218 S.O. Cafe		#3114		#3224; #3279; #3122	
		Site	Central	Site	Central	Site	Central	Site	Central
Carrot salad	8.00 (1)								
Chef's salad							6.00 (3)		8.75 (4)
Cottage cheese and fruit salad ^a	6.00 (1)								
Cucumbers sliced with onion								7.00 (1)	
Jellied vegetable salad	7.00 (2)						8.33 (3)		4.00 (1)
Meat salad								6.67 (6)	
76 Mixed fruit salad	8.00 (1)					7.00 (1)		8.00 (2)	
Pineapple and cheese salad								7.00 (1)	
Three bean salad	6.50 (2)					7.00 (1)		5.67 (3)	
Other fruit salad not mentioned ^b	9.00 (1)								

a. — This category included cottage cheese and apricot salad, cottage cheese and peach salad, cottage cheese and tomato salad, and plain cottage cheese.

b. — This category included at least garden glow and perfection salad.

Table 11-7

The Hedonic Values of Noon and Evening Starches Which Have Insufficient Cases for Comparisons

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161		#3218		#3114		#3224; #3279; #3122	
		Spect'y Site	Cafe Central	S.O. Site	Cafe Central	Site	Central	Site	Central
Beans with pork and tomatoes	8.00 (1)					5.75 (4)		7.33 (3)	
Beans, refried		6.50 (2)							
Other beans not mentioned		9.00 (1)		7.50 (2)				6.00 (4)	
Corn chips				7.00 (2)					
Fritters								7.00 (1)	
Potato salad, hot						8.00 (1)			1.00 (1)
Rice, fried	7.50 (2)					6.50 (2)		4.00 (2)	

Table 11-8

The Hedonic Values of Noon and Evening Vegetables Which Have Insufficient Cases for Comparisons

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spect'y Cafe		#3218 S.O. Cafe		#3114		#3224; #3279; #3122	
		Site	Central	Site	Central	Site	Central	Site	Central
Beans, lima	6.00 (1)							3.83 (6)	
Beans, wax	7.00 (2)							8.33 (3)	
Beets, Harvard	8.00 (1)					7.00 (1)		5.33 (3)	
Brussels sprouts	7.00 (1)							2.50 (2)	
Cauliflower								7.00 (1)	
Mushrooms						3.00 (1)		6.75 (4)	
78 Onions, cooked ^a									7.00 (1)
Peas and Carrots						6.00 (1)		6.40 (5)	
Squash, zucchini						6.00 (1)		4.33 (3)	
Succotash	5.67 (6)								
Tomatoes, stewed	4.00 (1)								5.50 (2)

a. — This category also included onions baked with tomatoes and spanish onions.

Table 11-9

The Hedonic Values of Noon and Evening Breads Which Have Insufficient Cases for Comparisons

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spect'y Cafe		#3218 S.O. Cafe		#3114		#3224; #3279; #3122	
		Site	Central	Site	Central	Site	Central	Site	Central
Bread, corn	8.50 (2)								
Bread, toasted garlic	5.00 (3)	8.17 (6)							
Bread, rye	5.67 (3)							7.60 (5)	
Bread, whole wheat	6.33 (3)					8.00 (2)		8.00 (1)	
Hot cross buns							8.50 (4)		

Table 11-10

The Hedonic Values of Noon and Evening Desserts Which Have Insufficient Cases for Comparisons

(Dining Facility): (Location of Preparation):		#3161 Spect'y Cafe Site Central	#3218 S.O. Cafe Site Central	#3114 Site Central	#3224; #3279; #3122 Site Central
Brownies, butterscotch			2.00 (1)	7.00 (1)	7.33 (3)
Cake, angel food				7.00 (1)	7.33 (3)
Cake, applesauce			8.00 (1)	7.00 (1)	
Cake, banana				9.00 (1)	7.00 (2)
Cake, chocolate cream	5.33 (3)			6.00 (1)	8.00 (1)
Cake, fruitcake					8.00 (1)
Cake, gingerbread	6.00 (1)		9.00 (1)	8.00 (2)	6.50 (2)
Cake, peach shortcake	5.00 (1)				7.50 (2)
Cake, raspberry shortcake			9.00 (1)	9.00 (1)	
Cake, spice	8.00 (2)		6.00 (1)		8.00 (1)
Cake, yellow					6.50 (2)
Cookies, butternut refrigerator			8.00 (1)		
Cookies, chocolate raisin drop				7.00 (3)	5.00 (1)
Cookies, ginger molasses				7.00 (1)	
continued					

Table 11-10 Continued

The Hedonic Values of Noon and Evening Desserts Which Have Insufficient Cases for Comparisons

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spec'ty Cafe		#3218 S.O. Cafe		#3114		#3224; #3279; #3122	
		Site	Central	Site	Central	Site	Central	Site	Central
Cookies, oatmeal					8.00 (1)		4.50 (2)		5.00 (2)
Cookies, peanut butter									6.00 (2)
Cookies, vanilla wafers									7.00 (2)
Crisp, apple	9.00 (1)						6.00 (1)		
Crisp, apricot							7.00 (1)		
Crisp, cherry					7.00 (1)				
Crisp, peach							8.00 (1)		
Gelatin, strawberry	8.00 (1)								8.20 (5)
Pie, apricot	4.00 (1)				9.00 (1)				7.75 (4)
Pie, banana cream	5.00 (1)								
Pie, blackberry									9.00 (1)
Pie, boysenberry					9.00 (1)				
Pie, chocolate cream									7.00 (1)
Pie, lemon meringue					7.00 (1)				
Pie, pumpkin					9.00 (1)		8.00 (1)		
Puddings, chocolate	3.00 (1)								
Puddings, vanilla cream	5.00 (2)								

Table 11-10 Continued

The Hedonic Values of Noon and Evening Desserts Which Have Insufficient Cases for Comparisons

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spect'y Cafe		#3218 S.O. Cafe		#3114		#3224; #3279; #3122	
		Site	Central	Site	Central	Site	Central	Site	Central
Sherbert	5.17 (6)							5.00 (1)	
Banana split	8.00 (1)								
Butterscotch sauce				9.00 (1)					
Sundae ^b		9.00 (1)		8.00 (1)					
Other ice cream desserts not mentioned				9.00 (2)		9.00 (1)			
Turnovers							8.50 (2)		8.00 (1)
Other desserts not mentioned ^c	7.00 (1)						6.00 (1)		

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a. — The interviewers' coding category was "cookies, raisin drop."

b. — This category included at least butterscotch sundae, chocolate sundae, and chocolate-nut sundae.

c. — This category included at least applesauce torts.

Table 11-11

The Hedonic Values of Noon and Evening Beverages Which Have Insufficient Cases for Comparisons

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spec'ty Cafe		#3218 S.O. Cafe		#3114		#3224; #3279; #3122	
		Site	Central	Site	Central	Site	Central	Site	Central
Beer		8.86 (7)						9.00 (1)	
Grapeade	6.00 (1)								
Other milk products not mentioned				5.00 (3)		8.00 (1)		9.00 (1)	
Other fruit drinks not mentioned				7.67 (3)				5.00 (3)	
Soda, cherry or strawberry				6.67 (3)					
Soda, grape								9.00 (1)	
83 Other carbonated beverages not mentioned	8.50 (2)			9.00 (1)		9.00 (1)			
Tea, iced	3.50 (4)					5.00 (1)		9.00 (1)	

Table 11-12

The Hedonic Values of Accessory Items Which Have Insufficient Cases for Comparisons

(Dining Facility): (Location of Preparation):	Controls Site Only	#3161 Spec'ty Cafe		#3218 S.O. Cafe		#3114		#3224 #3279; #3122	
		Site	Central	Site	Central	Site	Central	Site	Central
Radishes								9.00 (1)	

Appendix C

Appendix C presents two tables which provide a composite of all the consumer responses to the open ended questions (questions 1, 2, and 3 of Appendix A) asking each what he likes, dislikes, and what he would change in the model food service system.

Table 12 presents a tally of responses to the unstructured questions by categories, month, and dining facility. First, an explanation regarding the process of categorization is needed. Each response was initially sorted into the broad areas of "food", "facilities", or "unclassifiable." (these latter are in the first paragraph of table 11). If a response referred to the general area of "food", it was then assigned to one of four categories: (1) quantity; (2) quality; (3) the variety of choice offered; or (4) method of serving. Finally, each comment was classified into a final specific category for counting (refer to the method section for more details on how these categories were formulated). For example, if a consumer responded "I get enough to eat now" to the question "What do you like about eating in this dining facility", his comment would be tallied under the broad area of "food", the general category of "quantity", and the specific category of "general". If the same consumer said "I get enough french fries now", his response would be tallied under "food-quantity-specific" because he mentioned a specific food.

Having determined the specific category to which a particular response belonged, it was tabulated under these headings: (1) whether the opinion was a response to question 1 of Appendix A (liking), question 2 (disliking), or question 3 (a suggestion for change); (2) the dining facility from which the response came; (3) the month during which the interview was conducted; and (4) whether the consumer was in the CAFe or traditional food service system. The format of the tallies in Table 12 is "x/y", with "x" referring to the number of responses from Control consumers and "y" to the number of CAFe consumers.

Under the broad area of "facilities", which comprises the "non-food" responses, five general categories were identified. The first, "decor", contained nine specific categories. A detailed description of three of these specific categories should indicate to the reader typical examples of the range of verbatim responses included in each. The category "tables and/or chairs" referred to any comment regarding the size, shape, color, etc., of tables or chairs or alternatives to tables and chairs then in use; the category "floor" included responses about rugs, tiles, or anything usually found on the floor; and the category "miscellaneous; redecorate" incorporated any comment about the general decorative state

of the dining facility environment (e.g., "brighten this place up", etc.). The attention of the reader is drawn to the pattern of responses of the consumers in both facility #3218 (Short Order Cafe) and #3161 (Specialty Cafe). Recall that in both of these facilities, carpeting, drapes, and a fresh coat of paint were provided. The consumer reaction demonstrates that even these minimal improvement are well received.

The second general category under "facilities" was "personnel", which contained specific categories of "cooks", "mess sergeant", and "miscellaneous." The "miscellaneous" category may require further clarification. Any statement directed toward workers in the facility other than cooks and mess sergeants was included; statements about the civilian attendants were excluded however.

The third general category was "rules and/or procedures". This heading was based on the authors' viewpoint that certain problem areas reflected by the 15 specific categories identified from the responses could be remedied by changes in administrative policy. Each of these 15 specific categories can be best interpreted by prefacing each with the phrase "these consumers are offering an opinion on the topic of —."

The fourth general category was "atmosphere," which included 8 specific categories. Each of the categories reflects consumer responses toward some aspect of the general environment of the dining hall, and each of these various aspects can in turn affect customer attitude toward the food service system. For example, whether or not the facility had music, crowds, the feeling of having to rush through a meal, the noise level, or a "military presence" (e.g., military courtesies or symbols), all these factors classified from the responses could have influenced overall satisfaction and were coded in Table 12.

The fifth and last general category identified under the area of "facilities" was "miscellaneous." Herein were included ten specific categories which were non-food related, but which nevertheless could not be classified under other headings.

Under the other main area "food", four categories were identified. The first, "quantity," was segmented into two specific categories. If a response dealt with quantity of the food served without specifying a particular food, it was tabulated under "general"; if the quantity of a *specific* food item was mentioned, it was counted under "specific."

The second category was "quality," which was divided into six categories. The first specific category was "general"; all responses which stated "the food is good now" or "the food tastes better" were tallied under this heading. The second category,

"procurement", was used for any responses alluding to the perceived quality of the food in its uncooked or unprocessed state, such as "they seem to be getting in a better grade of meat now." The third specific category was "preparation — general", which took into account any response about the prepared food quality without mention of a specific food, as "the food is prepared better now." The fourth specific category, "food cooked correctly or incorrectly", encompassed all general statements such as "the meat is not greasy now" which did not name specific menu items. The fifth specific category, "specific food cooked correctly or incorrectly," refers to all statements such as "the corn is cooked all the way through now", in which a specific food was named. The sixth specific category, "preparation — foods cooked to order," included all statements such as "they cook the meat the way you want it now."

The third general category under "food" was "variety or choice," which was further divided into seven specific categories. This general category included all comments about the variety of the foods offered. In this area, "general" meant that no specific food was mentioned, whereas "specific" meant a specific menu item was named. All comments concerning milk, soft drinks, alcoholic beverages (a request for beer and wines for the most part), and ethnic or specialty foods were listed in separate specific categories under "variety of choice."

The fourth general category was "serving," from which five specific categories were identified. All comments here referred to the method of serving — for example the food might have been dried out, too cold, too hot, and the like. It will be noted these comments were tabulated under their respective specific categories.

Even with this explanation of specific categories used in Table 12, an additional caveat is needed because, in certain categories, confusion is still possible. For example 94 CAFe consumers responded to the interviewer's question of "what do you like about eating here" with comments that were classified under the area of "facilities," the general category of "rules and/or procedures," and the specific category of "lines." This entry obviously does not mean that 94 soldiers liked to wait in lines; nevertheless their comments dealt with waiting lines and there was something about the situation they liked. Therefore what this entry meant was that for 94 CAFe consumers the problem was improved enough to merit mentioning. (Fifty-four of these consumers were from CAFe facility #3114, which did have the additional mobile serving system installed to serve as an environmental change designed to obviate the problem of lines. The solution was therefore apparently very well received.)

An inspection of Table 12 leads to several interesting observations. Under "facilities; rules and/or procedures; faster service", note that 155 CAFe consumers indicated a liking for the speed of the service in the CAFe system, 63 indicated they disliked the speed of the service, and 41 made suggestions. Note also however that under "facilities; rules and/or procedures; lines," 94 CAFe consumers responded that they liked something about the line-situation; 204 said they disliked it, and 122 offered suggestions about the lines. The distributions of responses suggested that the serving time problem had not been satisfactorily resolved by introduction of the CAFe system, except in #3114. The report entitled "Fort Lewis Dining Facilities Consumer Survey" (Kiess, *et al*, 1972) provided a detailed documentation of the waiting in line problem in the traditional food service system. This report pointed out that the irritant most frequently mentioned by traditional food service consumers was a dislike of waiting in line (73% of all the military consumers mentioned this; the second and third most frequently listed irritants were "no second helpings" and "food not very good," which were mentioned by 63%.) While the small scale CAFe system was not designed to solve the problem of lines (and in fact the self-service aspect aggravates it), the expanded systems design is addressing this problem.

Also under "rules and/or procedures," note the distribution of responses for both "hours of operations" and the "KP system". Responses of non-CAFe consumers compared to the CAFe consumers for both these specific categories suggested that CAFe resolved these irritants sufficiently.

Within the "facilities; atmosphere" topic, the only specific category which stood out was "music", both non-CAFe and CAFe consumers made many suggestions.

Under the main area of "food," the distribution of responses through the specific categories under "quantity" and "quality" provided substantial evidence that CAFe met the needs of the military consumer better than the traditional food service system. Under "food; quality; specific foods cooked correctly or incorrectly" 135 CAFe consumers indicated a dislike for a specific food. Examination of these 135 responses did not, however, indicate a consistent pattern or a specific problem food.

A computer printout of all the responses for a specific category or categories will be available upon request for any planner who needs more detailed information.

Table 12

Consumer Responses to the Unstructured Questions by Categories, Months, and Facilities

		Totals:	August Facility				September Facility				October Facility										
Category:		Controls	CAFe	3114 ^a	3218	3224	3279	3114	3218	3224	3279	3122	3161	3566	3114	3218	3224	3279	3122	3161	3566
I. Facilities																					
A. Decor																					
68	Tables and/or chairs	Like	1	15	/3 ^b	1/			/4		/2					/2			/1	/3	
		Dislike		6	/1	/1		/1		/1									/2		
		Suggestion	3	67	/4	/5	1/1	/4	/6	/1	1/10	/1	/4		/7	/5	/4	/3	/12		1/
	Floor	Like		25					/10		/1					/9				/5	
		Dislike		1																/1	
		Suggestion	1	44	/1	/3		/1		/1	1/9	/5			/9		/2	/4	/9		
	Ceiling	Like																			
		Dislike																			
		Suggestion		16		/1		/1	/2		/3	/1	/1		/2	/2		/2	/1		
	Walls	Like	1	7					/6			1/				/1					
		Dislike	1	5				1/		/2	/1					/1			/1		
		Suggestion	1	44	/5	/5			/1		/2	/10	/3		/3	/1	/1	/3	/9	/1	1/
	Drapes	Like		7				/2	/1		/2						/1	/1			
		Dislike		3						/1		/1								/1	
		Suggestion		22		/2	/1	/1	/2		/6	/2	/1		/2	/1			/2	/2	
	Pictures, posters, or displays	Like	4	7			4/					/2				/1	/2		/2		
		Dislike		17	/2		/2	/1					/10						/1	/1	
		Suggestion		39	/1	/1	/1	/1	/7	/1		/7	/3			/2	/4	/1	/10		
	Expand capacity	Like		2									/2								
		Dislike		1				/1													
		Suggestion	2	19	/2		1/1	/8	/1	/2	/2				/3						1/
	Decrease capacity	Like		2								/1				/1					
		Dislike							/1				/1								
		Suggestion		1							/1										
	Misc.; redecorate	Like	3	29	/2			1/		/4		/3	1/1	/3	1/		/4	/2		/2	/8
		Dislike	2	9		/1	/1			/2		1/1	/2					/1	/1		1/
		Suggestion	7	69	/6	/7	4/3		/3	/7	/4	/15	/5	/1		/5	/2	/2	/4	/2	/3
SUBTOTAL		Like	9	94																	
		Dislike	3	44																	
		Suggestion	14	321																	

---continued---

Table 12

Consumer Responses to the Unstructured Questions by Categories, Months, and Facilities (Continued)

		Totals:		August Facility				September Facility				October Facility									
Category:		Controls	CAFe	3114	3218	3224	3279	3114	3218	3224	3279	3122	3161	3566	3114	3218	3224	3279	3122	3161	3566
I. Facilities																					
B. Personnel																					
Cooks	Like	6	25	/2	/4	1/		/2	/4		/5	4/3				/1		/2	/2		1/
	Dislike	15	25	/1	/2	4/2	4/	/2	/2	/1	1/5	2/				/2	/1	/1	/1	/5	4/
	Suggestion	24	46	/5	/6	7/	2/	/1	/4	/6	4/6	2/5	/1	2/	/1	/4	/3		/2	/2	7/
Mess Sgt.	Like		3						/2		/1										
	Dislike	4	5	/1	/1						3/2				/1						1/
	Suggestion	7	5				4/				2/2			1/	/3						
Misc.	Like		8						/1				/1			/3			/1	/2	
	Dislike	3	2			1/			/1		1/	1/								/1	
	Suggestion																				
SUBTOTAL																					
		Like	6	36																	
		Dislike	22	32																	
		Suggestion	31	51																	
06	C. Rules and/or procedures																				
Speed of service	Like	4	155	/24	/6	/3		/26	/25	/5	1/21	1/9	/3		/11	/4	/2	/4	/4	/8	2/
	Dislike	4	63	/15	/2	3/		/2	/5	/2	/6	/1			/10	/8	/3	/5	/3	/1	1/
	Suggestion	10	41	/5	/4	5/		/4	/2	/4	/8	1/1			/3	/1	/1	/1	/6	/1	4/
Carry Out Capabilities	Like																				
	Dislike		1									/1									
	Suggestion		24	/2	/5			/2	/2		/1	/2	/3			/5			/1	/1	
Self-service system	Like		140	/8	/2	/2		/26	/3	/11	/23	/16			/14	/2	/8	/13	/12		
	Dislike	2	1											1/	/1						1/
	Suggestion	3	5			1/		/1			/1				/2				/1		2/
Hours of Operation	Like	2	173	/1	/35	/1		/1	/41	/4	/6	2/1	/12		/5	/33	/4		/5	/24	
	Dislike	7	26	/1		2/4	1/	/3	/1	/2	/4	/2		1/	/1	/2	/2	/1		/3	3/
	Suggestion	16	142	/18	/6	6/10	1/	/15	/6	/10	/14	2/9	/3	2/	/3	/10	/18	/1	/9	/10	5/
Lines	Like	2	94	/14	/3	/3		/27	/8	/1	/6	/3			/13	/6	/1	/3	/2	/4	2/
	Dislike	38	204	/54	/12	13/6		/18	/9	/20	3/39	6/14	/2	7/	/3		/8	/10	/8	/1	9/
	Suggestion	8	122	/29	/5	3/1		/9	/4	/14	1/16	2/9		1/	/5	/1	/8	/13	/8		1/

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Table 12

Consumer Responses to the Unstructured Questions by Categories, Months, and Facilities (Continued)

		Totals:	August Facility				September Facility				October Facility											
		Controls	CAFe	3114	3218	3224	3279	3114	3218	3224	3279	3122	3161	3566	3114	3218	3224	3279	3122	3161	3566	
Category:																						
I. Facilities																						
91	C. Rules and/or procedures																					
	Headcount system	Like		14				/2	/3	/2	/1	/1			/3	/1				/1		
		Dislike	5	72	/4	/9	1/	/10	/7	/7	1/1	/3	/2	1/	/2	/9	/7	/1	/8	/2	2/	
		Suggestion	4	77	/16	/2	1/	/17	/9		/3	1/8			/2	/4	/4	/1	/8	/3	2/	
	Dress code	Like		2							/1									/1		
		Dislike	2	17	/1	/8	2/1		/7													
		Suggestion	3	18		/3	2/1		/4	/5	1/1						/3			/1		
	KP System	Like	2	221	/12	/4	1/4	/24	/8	/16	/40	1/12			/19	/5	/16	/12	/33	/16		
		Dislike	18	20	/6	/3	6/	1/	/4	/1	/1	/3	/3	2/			/1		/1		6/	
		Suggestion	45	116	/23	/6	16/5	4/	/17	/4	/11	3/3	3/11	/3	6/	/6	/5	/2	/5	/10	/5	13/
	Guests	Like																				
		Dislike	1	3	/2	/1								1/								
		Suggestion	1	8			1/		/2	/1		/1	/3							/1		
	Self-bussing system	Like		5									/2				/1	/1		/1		
		Dislike		4			/1			/1		/1							/1			
		Suggestion		5						/1		/1					/1	/2				
	Late in opening	Like		6	/3				/1			/1					/1					
		Dislike	2	8	/4	/1	1/	1/			/2								/1			
		Suggestion	1	4	/1		/1	1/	/1							/1						
	Seating arrangement	Like		1					/1													
		Dislike	1	9			1/		/3		/2	/1			/1							
		Suggestion	4	16	/1		3/1	1/	/1	/2	/2	/1	/1		/4		/1	/1	/1			
	Food at non-meal times	Like		10		/2										/4				/4		
		Dislike	2					2/														
		Suggestion	4	20	/2		1/1	1/	/1		/1		/3	/2	1/	/3	/2		/2	/3		1/
	Short order foods	Like	1	31					/5	/7	/2				1/	/8	/6	/1	/1	/1		
		Dislike	2	3	/1		2/					/1	/1									
Suggestion		5	23	/1		/1		/3	/4	/2	1/3	1/3				/1	/2		/2	/1	3/	

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Table 12

Consumer Responses to the Unstructured Questions by Categories, Months, and Facilities (Continued)

		Totals:		August Facility				September Facility				October Facility									
Category:		Controls	CAFe	3114	3218	3224	3279	3114	3218	3224	3279	3122	3161	3566	3114	3218	3224	3279	3122	3161	3566
I. Facilities																					
C. Rules and/or procedures																					
92	Misc.	Like	1	6	/1	1/		/1					/1							/3	
		Dislike	1	3	/1	1/		/1			/1										
		Suggestion	4	48	/4	/1	/6		/4	/1	3/3	/2		/9	/2	/2	/2	/6	/6	1/	
	SUBTOTAL	Like	12	858																	
		Dislike	85	434																	
		Suggestion	108	669																	
D. Atmosphere																					
92	Music	Like	3	116		1/	1/			/50	/5	/2	/7	1/	/1	/38		/5		/8	
		Dislike	2	22	/1	/2		/1	/3		/1	/5	/1			/3	/2			/5	
		Suggestion	20	448	/32	/24	15/4	/67	/8	/47	3/23	/37	/5		/67	/13	/44	/16	/42	/19	2/
	Crowds	Like	1	12	/3	/1	1/	/2					/2				/2	/1	/1		
		Dislike	3	44	/14	/2		/3		/5	/10	1/1		/2	/1	/1	/1	/1	/1	/3	2/
		Suggestion	2	19	/6	/1	1/	/2		/2	/2	/1		/4			/1				1/
	Rush	Like	2	18	/1			/1	/4	/1		/1		2/	/1	/2	/3		/4		
		Dislike	2	10	/3			/1			/2	1/3						/1			1/
		Suggestion	2	4	/1	/1	2/				/1							/1			
	Quietness	Like		5	/1			/1	/1		/1	/1									
		Dislike	1	9	/1			/1		/1	/1			1/	/1			/1	/3		
		Suggestion																			
	Friends there	Like		10		/2		/1	/1	/1	/4						/1				
		Dislike		1								/1									
		Suggestion																			
	Military	Like		10					/1	/5					/2	/1				/1	
		Dislike	3	26	/5	/2		/3	/2		/5	/1		/2		/3	/1	/2			3/
		Suggestion	2	10	/2			/2			/1	/2		/2						/1	2/

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Table 12

Consumer Responses to the Unstructured Questions by Categories, Months, and Facilities (Continued)

		Totals:		August Facility				September Facility				October Facility										
Category:		Controls	CAFe	3114	3218	3224	3279	3114	3218	3224	3279	3122	3161	3566	3114	3218	3224	3279	3122	3161	3566	
93	I. Facilities																					
	D. Atmosphere																					
	Relaxed	Like	1	43	/3	/9	1/1		/3	/8	/1	/5	/1	/1		/5	/2	/2		/2		
		Dislike																				
		Suggestion	1	1		/1	1/															
	Misc.	Like	5	96	/4	/8	1/	/3	/22	/2	1/9	/3		2/	/19		/1	/2	/3	/20		
		Dislike	1	19	/2	/4	/1	/4		/1	/2	/4					/1					
		Suggestion		21	/3		/1			/2	/2	/9					/1				1/	
	SUBTOTAL	Like	12	310														/1	/1			
		Dislike	12	131																		
		Suggestion	27	503																		
	E. Miscellaneous																					
	Cleanliness	Like	12	57	/6	/2	4/2	4/	/5	/5	/2	/9	/4	/2	2/	/3	/2	/3	/3	/6	/3	2/
		Dislike	1	3	/1				/2							/3	/2	/3	/3	/6	/3	2/
		Suggestion		6		/1			/1			/1										1/
	Utensils	Like	2	39	/2		/3		/7	/2	/2	/5	/2		2/	/3		/4	/1	/4	/4	
		Dislike	9	44	/3	/3	/9	1/	/4	/9	/3	/1	2/1		1/	/2	/2	/6	/1	/6		5/
		Suggestion	2	60	/2	/2	1/		/6	/6	/3	/8	1/8			/8	/2	/5	/5	/4	/1	
	Convenience-distance	Like	17	71	/7	/7	/64	2/	/2	/2	/10	3/8	3/12	/1		/6	/2	/3	/1	/5	/1	2/
		Dislike		25	/1				/1	/4	/2	/11	/2			/2	/1				/1	
		Suggestion		5	/3							/1										
	Convenience-temporal	Like	2	10	/1		2/		/1	/2						/2	/4			/1		
		Dislike																				
		Suggestion																				
	Convenience-unspecified	Like	12	145	/11	/5	3/1		/6	/15	/7	2/10	1/21	/2		/16	/15	/12	/9	/13	/2	6/
		Dislike		1		/1																
		Suggestion																				
	No choice	Like	17	79	/13	/1	3/1		/7	/4	/12	4/14	5/10			/6	/1	/4		/6		5/
		Dislike	1	5	/1		1/						/2	/1			/1					
		Suggestion	2									1/	1/									

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Table 12

Consumer Responses to the Unstructured Questions by Categories, Months, and Facilities (Continued)

		Totals:	August Facility					September Facility					October Facility								
Category:		Controls	CAFe	3114	3218	3224	3279	3114	3218	3224	3279	3122	3161	3566	3114	3218	3224	3279	3122	3161	3566

I. Facilities

E. Miscellaneous

Free

Like
Dislike
Suggestion

64 261 /48 /15 20/7 6/ /23 /14 /32 5/18 6/20 /2 3/ /20 /9 /20 /9 /12 /12 24/
2 /1

Ice cream dispenser

Like
Dislike
Suggestion

79 /4 /6 /4 /8 /16 /6 /12 /2 /10 /5 /6
4 /4
2 2 1/

Soft drink dispenser

Like
Dislike
Suggestion

10 103 /3 /1 5/2 /4 /6 /14 1/11 2/8 /2 1/ /10 /2 /17 /9 /11 /3 1/
1 2 /1 1/
1 3 /1 1/

Air conditioning

Like
Dislike
Suggestion

2 12 /5 /1 2/ /1 /1 /1 /1 /1 /1
2 2
2 12 88

SUBTOTAL

Like
Dislike
Suggestion

136 844
12 88
9 88

II. Food

A. Quantity

General

Like
Dislike
Suggestion

13 620 /73 /17 3/14 /90 /30 /61 1/66 2/47 /6 2/ /55 /15 /48 /26 /51 /21 5/
35 53 /10 /6 14/3 4/ /4 /30 /5 4/8 5/8 /1 /3 /1 /1 /4 /21 7/
14 20 /4 /2 4/1 3/ /1 /1 /1 4/1 1/1 /2 /2 /1 /1 /4

Specific

Like
Dislike
Suggestion

1 14 /2 /1 /2 /1 /1 /3 1/2 /1 /1 /3 /2 4/
9 27 /2 /2 1/1 1/ /4 /1 /4 1/1 2/5 /3 /4
4 21 1/ /3 /1 1/3 2/4 /2 /5 /1 /2

SUBTOTAL

Like
Dislike
Suggestion

14 634
44 80
18 41

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Table 12

Consumer Responses to the Unstructured Questions by Categories, Months, and Facilities (Continued)

			Totals:	August Facility					September Facility					October Facility									
Category:			Controls	CAFe	3114	3218	3224	3279	3114	3218	3224	3279	3122	3161	3566	3114	3218	3224	3279	3122	3161	3566	
II. Food																							
B. Quality																							
56	General	Like	29	614	/75	/25	5/13	4/	/65	/32	/72	2/71	6/39	/16	3/	/43	/17	/33	/33	/48	/32	9/	
		Dislike	28	34	/1		12/1	2/	/1		/2	1/5	7/7		2/	/6	/5	/4	/1	/1		4/	
		Suggestion	12	29	/2	/2	4/3		/1	/1	/2	2/2	1/1		1/	/4	/5	/3	/3			4/	
	Procurement	Like		13	/2				/4			/1	/1			/1	/1	/2		/1			
		Dislike	1	14	/2		/2		/1		/1	1/2	/1			/1		/2			/2		
		Suggestion		9					/2		/1	/2	/1			/1		/1	/1				
	Preparation — General	Like	4	132	/26	/6	/6	1/	/13	/6	/4	/12	1/2	/2		/16	/3	/5	/13	/12	/6	2/	
		Dislike	18	16	/3		4/	1/	/2		/2	1/6	3/		2/		/1	/1		/1		7/	
		Suggestion	16	14	/2		4/	2/	/1		/1	3/4	2/		1/	/3	/2		/1			4/	
	Food cooked correctly or incorrectly	Like	5	120	/25	/4	2/2	1/	/24	/4	/7	/11	/9	/1		/7	/4	/3	/7	/10	/2	2/	
		Dislike	31	66	/12	/3	8/4	4/	/4	/4	/4	6/11	1/12		3/	/2	/2	/4	/2	/1	/1	9/	
		Suggestion	9	29	/3		1/2		/8	/1	/2	1/4	/2		6/	/3		/2		/2		1/	
	Spec. food cooked correctly or incorrectly	Like	7	84	/18	/2	2/3		/9	/2	/4	/9	3/12	/1	1/	/7	/2	/5	/1	/4	/5	1/	
		Dislike	38	135	/13	/6	3/10	3/	/14	/8	/10	7/22	4/13	/3	8/	/7	/9	/4	/6	/9	/1	13/	
		Suggestion	4	40	/3		/1		/4	/6	/5	/4	1/1			/4	/2	/5	/4	/1		3/	
	Prep.-Foods cooked to order	Like		15	/1				/1	/4		/2	/1	/2			/2				/2		
		Dislike	2	4						/2			1/							1/			
		Suggestion	2	6	/1		2/					/1	/1			/3							
	SUBTOTAL		Like	45	978																		
			Dislike	118	269																		
			Suggestion	43	127																		
C. Variety or Choice																							
	General	Like	10	471	/54	/29	1/7	1/	/69	/52	/34	2/39	/21	/21	2/	/32	/24	/25	/12	/26	/26	4/	
		Dislike	19	63	/3	/1	/12	3/	/5	/3	/5	2/3	1/2	/1	1/		/10	/3	/1	/3	/11	12/	
		Suggestion	50	124	/5	/4	17/5	4/	/10	/11	/7	5/9	2/7	/5	4/	/6	/21	/8	/2	/7	/17	18/	

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Table 12

Consumer Responses to the Unstructured Questions by Categories, Months, and Facilities (Continued)

Category:		Totals:		August Facility				September Facility				October Facility										
II. Food		Controls	CAFe	3114	3218	3224	3279	3114	3218	3224	3279	3122	3161	3566	3114	3218	3224	3279	3122	3161	3566	
C. Variety or Choice																						
96	Specific	Like	6	40	/5	/2	3/	1/	/4	/3	/4	1/6	/1		/2	/2	/8		/2	/1	1/	
		Dislike	25	36	/7	/2	15/6	1/	/3		/3	2/7	4/3				/2	/1	/1	/1	3/	
		Suggestion	14	69	/7	/4	4/4		/7	/5	/3	1/5	5/7		1/	/4	/5	/6	/6	/3	3/	
	Ethnic or specialty foods	Like		7										/4		/1				/2		
		Dislike	1	4	/2				/1		/1										1/	
		Suggestion	8	39	/3		2/	2/	/3	/7	/2	1/2	2/4	/2	1/	/6	/1	/3		/3	/3	
	Alcoholic beverages	Like	2	2										/1						/1	2/	
		Dislike	5	3		/1	2/	1/			/1		1/1								1/	
		Suggestion	18	89	/9	/4	3/	2/	/9	/2	/8	/13	2/7	/2	2/	/8	/3	/6	/8	/10		9/
	Ice cream	Like	1	79	/7	/4	/2		/5	/1	/1	/11	/2		1/	/11	/2	/13	/3	/11	/6	
		Dislike		2	/1															/1		
		Suggestion	1	10	/3	/1	1/			/1	/2							/1		/2		
	Milk	Like	2	5			/1				/3	1/	/1		1/							
		Dislike	5	5			2/1						/1					/2		/1	2/	
		Suggestion		9					/1	/1	/1	/2					/2	/1	/1			
	Soft drinks	Like	9	54	/9	/2	5/1		/4	/4	/2	/5	/2		1/	/7	/5	/6	/1	/5	/1	3/
		Dislike		2								/1	/1									
		Suggestion		7						/1	/2	/1					/2	/1				
SUBTOTAL		Like	30	658																		
		Dislike	55	115																		
		Suggestion	91	347																		

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Table 12

Consumer Responses to the Unstructured Questions by Categories, Months, and Facilities (Continued)

Category:		Totals:	Controls	CAFe	August Facility				September Facility				October Facility				3114	3218	3224	3279	3122	3161	3566
					3114	3218	3224	3279	3114	3218	3224	3279	3114	3218	3224	3279							
II. Food																							
D. Serving																							
General	Like			9	/2				/2			/1	/1		/2			/1					
	Dislike	1		8	/1				/1			/1	1/1		/3				/1				
	Suggestion			5							/1		/1		/3								
Specific	Like			5	/4							/1			/3								
	Dislike	1		6					/1				1/2				/1	/1	/1				
	Suggestion	1		11		/1			/1			/1	/2		1/	/2		/1	/3				
Temp. Hot	Like			44	/4	/2			/6	/1	/3	/8	/2		1/	/4	/5	/3	/1	/3	/2		
	Dislike	2		2	/1		1/					1/1											
	Suggestion	4		11			2/1			/2	/1	1/1		/1		/1	/2	/2				1/	
Temp. Cold	Like			2								/1						/1					
	Dislike	12		41	/7	/4	9/1		/5		/3	/4	1/4			/2	/7	/1	/1	/1	/1	2/	
	Suggestion	1		7	/2		1/		/2			/1				/1	/1						
Food dried out	Like																						
	Dislike			13	/1				/1		/1	/1	/2		/4	/1		/1	/1				
	Suggestion			3	/1										/1			/1					
SUBTOTAL	Like			60											/2								
	Dislike	16		70																			
	Suggestion	6		37																			

a. Refer to Table 1 for a description of each facility.

b. The data is presented in the format "x/y", in which "x" indicates the number of control response and "y" indicated the number of CAFe responses. Therefore an entry of "2/14" indicates that 2 control consumers and 14 CAFe consumers responded in a particular way in the same facility during the same month.

Table 13 presents a listing of 129 responses of CAFe consumers to various aspects of the CAFe system which were basically unclassifiable. These are presented because they may provide food service planners with a little additional information. Several comments were voiced more than once, including a desire for vegetables with short order selections, a desire for some form of continental breakfast or coffee call, more specialty cafes, more variety in the specialty CAFe, hot chocolate and juice machines, and sinks to wash in. In addition, many ingenious systems were suggested for reimbursing persons when they do not take their meal in the military food service system.

Table 13

A listing of 129 Free Response Comments Which Were Unclassified.

I would like a menu out in the hall

I would like new kitchen equipment

I like being able to eat as many times as you want

I would like a condiment tray for hamburgers

I would like noon and evening meals served in two shifts

Should concentrate on the quality of the food

I would like a combined short order and specialty house

I would like a cigarette machine (2)

Have little paper cups for sour cream or salad dressing

We are not allowed to go to the specialty house (the 364 engineering)

I dislike not having it at other places

I would like to see more mess halls open

I want to be able to eat in the short order house

I would like more specialty houses (3)

I dislike it when the jukebox screen is broken (short order house)

I dislike water on the floor under the serving area

I would like weekday serving procedures to be like weekend procedures, on weekends you can help yourself and eat as much as you want

I would like to get rid of the short order for lunch and dinner; it slows the line down too much

I would like baking at mess hall

I would like vending machines

---continued---

Table 13 Continued

I would like a coffee machine (2)

Lunch at 3119 is the same as dinner at 3114

Repay for each meal not eaten

Problems with the new system, sometimes variety or amounts of food are depleted

I dislike no milk at lines

The food is picked over

People who get separate rations should have no KP

I would like to see a system with an ID card which would authorize 90 meals a month and allow reimbursement for the meals not taken

I would like to see breakfast served in this mess hall (short order house)

The hours should be posted

The meals are nourishing

I would like to see an entrance door and an exit door

I would like a milk shake machine (3)

I dislike salad with no dressing

I would like black sisters working here too

I would like more outside professional supervision

I would like combined mess halls like 3224

Everyone should be given separate rations and could eat whenever they wanted

I dislike not being able to eat here everyday (facility 3224)

I would like a hot chocolate machine; I do not drink coffee (2)

I would like coffee machines

I would like a sink to wash hands (2)

I dislike short order having no vegetables (3)

-----continued-----

Table 13 Continued

I would like short orders to have vegetables (3)

There is a need to find some way to handle hot utensils in the food pans

I would like individual servings of catsup

I like being able to come in as many times as you want

I would like a juice machine (2)

I dislike no trays for condiments

The system still has one paying for the meals you do not eat, and medics eat only one meal a day sometimes

Medics need to be paid for meals they do not eat or have medics on separate rations

I am on separations and therefore the meals are reasonably priced

Price of lunch is too high (70 cents)

Frozen food service is a good deal because cooks can't cook too well

I would like the new food system out in the field

I dislike smoke in the mess halls

The 212th HDQ battery should be allowed into the short order house

I dislike the line not having what is on the menu

I would like to see compliance to the menu

I would like to go back to our old mess hall

Lunch and dinner are unevely priced for what you get; lunch is higher priced than dinner

I dislike the excessive food waste; maybe this new system will take care of it but it should be saved or something, rather than thrown out; this is food untouched and in the original dishes.

I would like an intercom system

I would like the cooks partitioned off

I dislike the girls cleaning the tables while eating

---continued---

Table 13 Continued

I would like entertainment

I like the microwave oven

I would like larger coffee pots

Take out the new system so I will have a job again

Smaller portions should be set out so that the food would not be so dry

Don't serve regular meals

I like the specialty house

I dislike only being able to eat here on weekends (short order house)

I like participation

I would like the sauce bottle filled and the salt and pepper shakers filled

I would like a new grill; the oven makes food soggy

The jukebox should be a pay player, about 5 cents per record; with jukebox being free and headcounters being negro, they play their soul music all day. There should be a chart on the door so that all the troops have a choice in selecting records.

At first the food was real good, but lately it seems to be deteriorating in quality. The cooks should put more interest into preparation and show a little devotion to duty.

I would like to have an intercom so you can hear numbers better (specialty house)

I dislike not being able to go to the specialty house

Let us eat here normally, not just on weekends

Begin serving the continental breakfast (3)

Serve coffee and donuts or pastry for breakfast

I would like the food cooked here

When an interviewer is here, food is better than after she departs or when she doesn't come; today there was no butter

I would like the windows to have a screen to keep people from looking in

Sometimes they have the same food for three days, which I dislike

---continued---

Table 13 Continued

I would like to eat here all week

I would like all mess halls to be this way

B BTRY, 2nd BN, 18th ARTY troops do not have a choice of mess halls; they eat breakfast and lunch in 3160, but must eat at 3161 for supper; therefore they have the same menu every night

I dislike it because I feel this all to get us to reinlist

It takes about one minute to walk up to get an order when the number is called, but when I get there my order was thrown out because I took too long to get there

I would like vitamins supplied

I dislike some people getting smart-alecy at the short order house

I would like to have privilege of separate rations so I would have a choice of whether or not to eat here

I would like better holiday and weekend selection

I dislike the lack of control over the amounts of food eaten; the men are getting heavy

I would like to see that the men get certain basic for nutrition

I would like catering from outside

Food should come fresh off the grill; it should not be prepared prior and kept warm

I dislike their keeping the same food for lunch and supper on weekends (2)

List a menu

Have a coffee call, particularly in cold weather as there is no place for men to take a break

I would like a coffee call or continental breakfast in the morning

I like to watch the food being prepared

The food is prepared in too large portions

Steak for Sunday breakfast seems out of place when lunch features frankfurters or chicken-ala-king. They should serve franks or chicken for supper and steak for lunch.

----continued----

Table 13 Continued

Food is not so special, it seems like leftover food; food hasn't improved much.

The quality of the food has gone down from what it was when it first started

I would like steaks as a specialty

I would like toothpicks available

I like having different mess halls to go to eat

I dislike pre-cooked foods

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