

SPACE NEEDS AS PERCEIVED BY SELECTED  
UNMARRIED GRADUATE WOMEN,  
OKLAHOMA STATE UNIVERSITY

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## PREFACE

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## CHAPTER I

### INTRODUCTION

Only in the last three decades have scientists become aware of the important role which housing plays in relation to individuals' emotional growth and stability, in addition to physical well being. In the past, housing design was based upon tradition, ornament, pleasing elevation, and salability. Unfortunately, since the housing industry has sponsored very little organized research, much of the housing being constructed in the United States today still depends upon salability and ornament for its success.

As a result of studies in housing conducted by psychologists and sociologists, the terms "livability" and "functional design" have become widely used by students of housing. These terms infer housing design which is based upon a study of activities carried on in the home, the changing needs of the occupants, and human values as they are expressed in housing design, rather than on a display of ornamentation (17, p. 144). Due to the continuing rapid increase in population and evidence that housing affects such aspects of life as identity, security, group cohesiveness, group conflict, and sense of place, wide application of such livability studies would seem very desirable (13, p. 53). To this date, however, no method or instrument has been perfected which will obtain detailed information from large segments of the population, the cost of livability studies remains very high, and

most builders and architects have not yet felt the need for the information derived from such research.

One segment of the population whose housing needs have received little attention is college graduate students. On most campuses, graduate students have a choice of living in the student dormitories or in off-campus housing, though some schools adapt portions of existing housing for this purpose. Due to their mobile character and limited funds, graduate students who choose not to reside on campus generally rent apartments or rooms in boarding houses. Observation indicates that where special facilities are provided for graduate students, the only changes in housing design (as opposed to undergraduate housing) may be the provision of a larger area for study and room arrangements which allow more individual privacy.

The background of this study is selected housing available to unmarried female graduate students attending Oklahoma State University, Stillwater, Oklahoma, during the Spring Semester, 1969. Housing selections available to women graduates at Oklahoma State University are several: dormitory rooms (single or double) which do not provide private hygiene or eating facilities; university owned apartments; and off-campus housing which includes apartments in complexes of various sizes, homes and garages which have been converted into apartments, single rooms in private homes, and mobile homes.

This research problem deals with the influence of housing structures upon living activities of selected graduate women living in dormitories and off-campus apartments. It is the opinion of the author that housing carefully planned to meet the physical and emotional requirements of students is as important as thoughtful planning for

family housing. As individuals, students have a complex relationship with their housing environment, the adequacy or inadequacy of which influences their emotional stability, satisfaction with the university environment, and even their ability to perform academically.

#### Statement of the Problem

The purpose of this study is to conduct a livability study of selected unmarried female graduate students at Oklahoma State University who live in university dormitories and off-campus apartments. The research will be designed to yield information concerning the respondents' reactions to their current housing environment as compared with perceived space requirements of their concepts of ideal graduate housing.

#### Objectives of the Study

The specific objectives of this study are:

1. To select an instrument for a livability study which will yield data relating to present and desired living activities and space allocation of single female graduate students enrolled in the Spring Semester 1969, at Oklahoma State University, Stillwater, Oklahoma,
2. To administer the instrument to a group of twenty single female graduate students living in university dormitories, and a group of twenty single female graduate students living in off-campus apartments.



3. To evaluate the data obtained from the survey in relation to the following:
  - a. Frequency and location of selected living activities performed in the housing environment;
  - b. Factors which influence the choice of specific housing;
  - c. Living activities and space allocations which are considered desirable by the respondents.
4. To compare the two groups according to items a, b, and c above.
5. To evaluate the value of the instrument itself, in relation to the applicability of the data obtained, and as a tool in conducting a livability study with the selected sample of single female graduate students.

#### Limitations of the Study

This study is limited primarily by the fact that it deals with people and the housing environment, which is partially an abstract concept and is affected by many variables. An attempt is made in the study to determine what students consider to be a desirable housing situation, although as Bauer (3) points out, "needs" and "wants" by individuals are not always the same. Wants are limited by previous experience and knowledge, and may be influenced by current modes of living. Practical limitations must be considered, and, thus,

conflicting wants must be resolved (3, p. 8). At this time, no single questionnaire has been devised which will give complete, accurate information required for thorough planning of the housing environment.

Another limitation is the small size of the sample. After research was begun, it was found that only fifteen female graduate students living in dormitories and who met the requirements of the sample were available to participate in the study.

Human values are constantly changing; as certain goals are achieved, others are formulated and take their place. It is not possible to isolate housing attitudes from other attitudes in the environment (17, p. 149). Therefore, due to the transitory nature of the housing preferences revealed by this study, the conclusions are only arbitrary and must be constantly re-tested and evaluated.

## CHAPTER II

### REVIEW OF LITERATURE

The author's research has revealed no published research which deals directly with livability or environmental studies of student housing, either on or off campus. The small amount of literature that can be found which refers to dormitory planning primarily relates to designing the living spaces for durability, attractiveness, and convenient circulation within the structure.

Since 1950, there has been increased interest on the part of sociologists, psychologists, and architects in the relationship of man to his housing environment. This interest has led to research in city planning and livability studies for the "typical" American family of four or five persons. The author feels that much of the research in the latter area can be applied to housing for students and single persons.

Numerous articles have been published in recent years in which the authors are concerned with "environmental determinism", or man's ability to control his environment, and to what extent this is desirable. All living things have some capacity for adapting to their environment; however, as Gottlieb and Ewald (10, p. 1) point out, man is the only animal which has the ability to control his surroundings. It may be considered ironical that at the present time man knows more about the environmental requirements of cattle than he does about humans. Ewald

(9) questions this lack of research and proposes that the reasons may be due to the lack of money available to finance such a large research program, and the extreme fragmentation and reluctance to change of the building industry. He suggests that computers will be valuable to sociologists, because they give men the capacity to seriously study the real-life multivariable complex interrelationships of the environment which the human mind could not manage alone (9).

All readings by the author indicated a need for much more research in the field of housing. Lois Gottlieb (10, p. 3) states:

The increase in population and the decrease in available land each year is forcing more and more dramatic changes in our surroundings. ... New solutions for shelter and community living are being developed and must be used. Unfortunately, too many of our present-day buildings are based on custom rather than actual need.

In "The Role of Social Research in Housing Design", Reimer and Demerath point out that "the need for research into the various effects of specific housing conditions is practically unlimited." Problems as the immediate and far-reaching effects of specific housing conditions on the human personality, and developing uniform systems of defining housing and human characteristics need to be solved (19, p. 231).

A warning has been given to environmental planners in an article by Rene Jules Dubos, who feels that man has the ability to adapt to his environment only to a certain degree. Although man appears to have "mastered" his environment by controlling such local conditions as temperature, food, and water, there are many other influencing factors, not yet fully understood, which may not be controllable. He states:

The dissociation of modern life from these natural cycles (biological) is likely to exert some deleterious effects on the human organism. In fact, man is likely to suffer from many of the new environmental forces he has set in motion because he has not encountered them in his

evolutionary past. ... He may develop some tolerance against environmental pollution, severe crowding, constant exposure to intense sensory stimuli, and the regimentation of life in a completely mechanized world. But one can anticipate that this tolerance will have deleterious consequences for the human race in the long run (8).

In relating environmental studies to housing, Pickering (16) and Beyer (6) concur that greater livability of housing can be achieved only by relating the design of the structure to human and social values. Beyer (6, p. 1) says that "this means that we know more about families themselves, the way they live, the things they hold important, their attitudes and prejudices --- in short, the values they hold to with respect to shelter."

That "home adjustment is a continuum ranging from minimum to maximum friction and frustration in family living attributable to housing conditions" is the basis for Reimer and Demerath's suggestion that design, construction, and equipment should be planned in light of family life requirements. A method for analyzing family activities must be first developed, then these activities are analyzed in relation to location, space requirements, privacy, and equipment requirements. Following these processes, decisions in actual housing design can be made. The researchers add that as people are being forced to live in smaller spaces, "ingenious home planning" is the key to healthy adjustment to overcrowding (19, pp. 232, 242).

The question still remains, What is good housing? Several researchers warn that no single optimum environment should be sought, which would result in a highly stereotyped, inflexible housing condition. Until recent years, housing standards have relied on the human body and basic requirements for health and hygiene. Although these

criteria are an important facet of housing, others are slowly being added as a result of livability studies. The complexity of such research is referred to by Nygren and Salmon (14, p. 1), who state:

... an occupant is not only a body performing activities, filling space and moving about in it, it is a social being having complex relationships with its housing environment which also should be represented in standards of adequacy. ... The individual has numerous dimensions and complexes, as does the housing product, so when several people are to live in one dwelling, it becomes very complex.

Reimer and Demerath (19, p. 230) propose that:

Good housing is no one thing; it is a composite entity. Bundles of action and objectives become linked to bundles of housing conditions. One can investigate the effects of standards or design practices, but not their 'ultimate' desirability. There will never be a fixed point on any continuum of desirable effects that is not basically arbitrary. Research cannot tell the scientist or housing expert what should be, finally and absolutely.

As has been previously mentioned, builders' motives for construction are to make living structures salable and profitable through the use of styling and inexpensive methods of design and use of equipment. In Shelter for Living, Ernest Pickering (16) states that too often families have had to adjust their ways of living to English, Colonial, or Spanish houses. Instead, "houses should develop as the logical outgrowth of an effort to shelter man's activities efficiently and pleasantly" (16, p. 51).

Exactly what consumers want no one knows for sure, which is one reason why there has been a lack of force to bring about major changes in the housing industry. Although various groups have attempted to determine what different groups of consumers desire - government agencies, housing magazines, and research institutes - Meyerson, Terrett, and Wheaton (12, pp. 83-84) observed that few of these surveys have met standards of statistical sampling, and that often the

respondents' answers are not limited by the costs involved, nor can they judge their reactions to an environment they have not yet experienced.

In a report to the Panel on Civilian Technology, "Better Housing for the Future," the committee cited the following barriers which slow down constructive technological innovations in the housing industry:

(1) Building is highly localized and commercial, thus making it difficult for changes to be accepted by so many and to raise funds for research, (2) There has been too little new technology in fields of public interest, and private industry does not feel justified in spending its own money for research. (3) Although the industry is large and well established, there is lack of a scientific tradition or scientific literature in housing technology. (4) Consumer satisfaction with housing depends upon complex interactions with many different materials and conditions, and designers feel that a major portion of these factors are beyond their control. Therefore, builders "play it safe" by holding to established traditions (4).

John P. Dean (7), in "Housing Design and Family Values," mentions four different methods or directions of research which are used by social scientists in conducting livability studies. The first method involves asking families about their housing 'wants' and 'preferences'; however, respondents generally respond with the wants that are currently in mind. Another course is to attack the problem from the negative viewpoint by inquiring about problems that are evident in the interviewee's present housing. Dean says that the main problem in determining 'activity' and 'use patterns', a third direction, is the ability of individuals to adapt their habits to new surroundings with

little difficulty. The final method utilizes direct observation, inspection, measurement, and time and motion studies. The obvious drawback of this approach is the costs in time and money of the researcher, as well as a narrow viewpoint of efficient home management (7, pp. 128-129).

Continuing his discussion of the many problems researchers face, Dean states:

Perhaps our greatest difficulty in trying to arrive at a more profound understanding of house-family relationships is the confusion we fall into when we try to specify more exactly (a), what it is about family life that we want to relate to housing and (b), what are the variations in housing design that we hypothesize would most affect those aspects of family life that we have specified (7, p. 129).

One aspect of housing design that is most crucial to family life is ... the extent to which the housing design encourages or discourages performance of the living functions within the dwelling space or outside the home through congregate facilities or special ad hoc arrangements ... the ways in which the style and plan of the house are related to the interaction of family members with each other and with their close personal contacts outside the home (7, p. 132).

During the Spring Semester 1969, the Association of Women Students at Oklahoma State University formed an off-campus housing committee to investigate the possibilities and problems of allowing women students to choose the type of housing they wished to occupy. A questionnaire designed to determine what undergraduate women would prefer as graduate students revealed that out of 631 responses, 13 desired to live in a dormitory, with 8 girls preferring double rooms; 143 students preferred on-campus apartments; and 475 wished to live in off-campus apartments (15).

In recent years, the Cornell University Housing Research Center in Ithaca, New York, has contributed significant literature in the



area of livability of housing. Beyer, Mackesey, and Montgomery (6) investigated the values which influence families' choices in housing, as reported in the booklet, Houses Are For People. After studying families in the Buffalo area, the researchers chose nine values for study: economy, family centrism, physical health, aesthetics, liesure, equality, freedom, mental health, and social prestige. Results of the study led to placing families into four groups, as expressed by personal values: economy, family centered, personal, and prestige groups. The researchers then designed a 'sample' house for each group which exemplified their respective values (6, pp. 49-54).

"The delineation of design criteria for housing to be occupied by a specific type of housing occupant" was the ultimate objective of research conducted by Maie Nygren and Christine Salmon (14) at Oklahoma State University in 1966. They sought to devise a method which would yield implications for design criteria of housing for lower income families, on the theory that:

Once the physiological and psychic needs are identified for a given housing occupant ... these needs can be translated into space, space organization, structural design, materials, finishes, and furnishing which constitute a housing environment.

The resulting questionnaire incorporated several different means of elicitation of data from the respondents: open-end questioning, multiple-choice questions, and a technique involving sorting groups of cards, on which were listed various living activities and features of a home. It was designed to obtain information about:

1. The configuration of physical characteristics of the household unit.
2. The configuration of social characteristics of the

household unit.

3. Activities which characterize the living pattern of the occupant.
4. Concepts regarding number of spatial areas needed and kinds of spatial areas needed.
5. Preferences regarding design and structural features which can be incorporated into single-family or multiple-family housing units.
6. Levels of importance attached to certain design and structural features which impinge on man either through his physiological or psychic senses.
7. The relative need for services which can extend the livability quality of dwelling units encompassed within a total housing area (14).

As of this date, a thorough evaluation of this method has not been completed.

Literature relating to the current housing shortage is abundant, however few authors relate this shortage to any segment of the population other than families. Meyerson et al. (12) point out that only about one-half of the 'families' that occupy housing in the United States are husband-wife-child families. The other one-half consists of single persons, households of two or more unrelated persons, married couples, and widowed, divorced or separated persons without children. Unfortunately, most studies deal only with the first group (12, p. 94). Due to the high mobility factor and the changing population structure of today's society, people go through a "housing life cycle" and during certain periods in this cycle cannot find adequate housing (12, p. 82).

The observation that more and more single persons are seeking housing is supported by Louis Winnick (24, p, 96), in American Housing and Its Use, who states, "the tendency of young women not yet married to maintain their own apartments is increasingly becoming an American folkway made possible by jobs and greater social acceptance." This trend may be further supported by the observation of the emergence of many apartment developments "for singles only" in the larger cities throughout the United States.

In the area of planning dormitory interiors, there was no evidence of any livability studies being conducted in the past. An article in the American School and University magazine quoted the opinions of several architects and university planners concerning what they felt the ideal dormitory should include. Eugene F. Harrie noted that the typical dormitory is usually "a series of cubicles facing each other across a long corridor," having a deadly conformity. All of the 'authorities' felt that planners should design for flexibility and be sensitive to student activities, lest the environment become more like that of a hotel than a home (21).

## CHAPTER III

### METHODOLOGY

#### Selection of the Sample

Two groups of single female graduate students comprised the sample: a group living in off-campus apartments in Stillwater, and a group living in university owned dormitories during the Spring Semester 1969. International students were eliminated from the study since it was felt that their differing living patterns would add another variable to the study. Also, the author arbitrarily chose only unmarried graduate women under twenty-six years of age, as those older may have already established definite activity patterns and would be reluctant to change.

The original objective of the author was to survey twenty women in each group; however, after the study was begun only fifteen women living in dormitories were available for the sample. Respondents in the off-campus group were selected at random from enrollment cards found in the office of the Dean of Women at Oklahoma State University. In cases where common roommates both qualified for the sample, only one was selected, since the author felt that responses from both roommates would be undesirably similar.

The questionnaire was administered individually to a total of forty-five unmarried female graduate students.

### Development of the Questionnaire

After a review of methods used in previous livability studies, the author agreed with Nygren and Salmon that activity patterns seem to be the most important means through which an individual comes into contact with his housing environment. Pretesting was conducted with their instrument, which revealed that the questionnaire was too lengthy for the author's purposes, incorporated numerous variables, and contained several sections for the elicitation of data which is not pertinent to single student housing. For purposes of this study, the card-sorting technique of determining frequency and location of living activities, as described in Nygren and Salmon's study (14), was used.

The advantages of the card-sorting method are several. One of the objectives of any type of survey or questionnaire is to keep the influence of the researcher on the respondent to a minimum in order to maintain the 'honesty' of the answers. It is believed that the method of card-sorting, in this case asking the respondents to group a series of cards on which are listed living activities, achieves this goal, while at the same time creating more involvement and mental deliberation than is required with a simple verbal response.

To the extent they (the cards) permit the respondent to see the concepts with which she is dealing, rather than merely hearing them, the responses evoked possibly may contain a greater degree of validity than those elicited by a verbal question. The sorting processes also enable the respondent to visualize the total patterns of her responses (14, p. 17).

The living activities included in the original questionnaire required some modification by the author for use with single graduate women. On the basis of observation and the pretesting, several activities were subtracted from or added to the cards, thus giving a total of

thirty-one activities to be investigated.

The questionnaire was structured to elicit the following types of data:

1. Information regarding the respondent's preferences for living with a roommate or roommates.
2. Information revealing the values which affected the respondent's choice of her current housing.
3. Activities which characterize the present living pattern of the respondent.
4. Activities which characterize the desired living pattern of the occupant in a hypothetical dormitory or apartment situation.
5. Concepts regarding the number and uses of spatial areas desired.

The steps involved in the resulting questionnaire, as illustrated in the Appendix are as follows :

- Step 1. The respondent is asked if she currently has a roommate; then if she prefers to live alone or to have a roommate.
- Step 2. The respondent is asked her reasons for choosing her present housing, which are recorded.
- Step 3. The respondent is given the thirty-one cards and is told that listed on the cards are basic living activities of graduate students. She is asked to group them into three categories: those activities that she does in her room or apartment; those that she performs outside the room, but within the

dormitory or apartment complex; and those that she does not do in either of the first two places.

The name of each location has previously been written on one of three cards, which are placed in front of the respondent as an aid in sorting. After the respondent groups the cards, the interviewer records the responses appropriately.

Step 4. The respondent is again given the same cards and asked to group the activities according to her desired pattern of living in a hypothetical dormitory or apartment situation, respectively. The categories are: activities which she would like to be able to do in an apartment or room; those activities which she desires to perform within the structure; and those which she would not do in either of the first two places. These responses are then recorded by the researcher.

Step 5. The respondent is asked to take the group of cards (activities) which she indicated she would like to do in a dormitory room or apartment and determine in which of four types of areas she would prefer to do each activity. The four areas - Work, Social, Hygiene, and Sleeping - are written on cards and placed in front of the respondent. The interviewer explains that if the respondent would prefer to perform any of the activities in more than one type of area, a duplicate card will

be prepared. The cards placed in the Sleeping and Hygiene areas are then recorded by the researcher.

Step 6. The respondent is asked to take the activities she placed in the Work area and divide them into the number of areas (up to four) which she thinks would best accommodate them. As the interviewer records each area, the respondent is asked to suggest a name for that area.

Step 7. The same procedure as in Step 6 is repeated for the activities placed in the Social area.

#### Treatment of the Data

Frequencies of responses to the questionnaire were observed by the author. Where necessary, comparisons of the two groups were facilitated by means of percentages, due to the unequal size of each sample group.

In analysis of Steps 3 and 4 of the questionnaire, the Chi-square distribution test was used in determining whether observed frequencies varied from hypothetical frequencies by a significant difference of 0.050% or 0.025%.



## CHAPTER IV

### FINDINGS AND OBSERVATIONS

The findings of the questionnaire used for this study are presented in the following manner: respondents' preferences for living alone or having roommates, expressed values affecting housing choices, current and desired performance of selected activities, area distribution of activities, and distribution of social and work activities into specific areas. Analysis of data from each of the two groups studied are presented and compared within each of the areas mentioned above.

#### Respondents' Preferences for Living Alone or Having Roommates

In Step 1 of the questionnaire, each of the respondents was asked if she currently lived with a roommate, which was followed by an inquiry of her desire to live alone or to have a roommate. Responses to these two questions for each group are shown in Table I, which indicate the respondents' desire for change or maintenance of the status-quo.

Table I indicates a large degree of satisfaction by the respondents with their present living pattern, since only one student living in a dormitory and two living in apartments desired to change. Within the on-campus group, five graduate women lived in dormitories consisting entirely of double rooms and having no special facilities for

graduate students. The remainder of the sample lived in newer dormitories which provide single rooms for graduates. The author observed that with only one exception, the respondents living in both types of dormitories had no desire to change.

TABLE I  
RESPONDENTS' PREFERENCES FOR LIVING ALONE OR HAVING A ROOMMATE

Response	On-Campus	Off-Campus
Percentage Who Now Have Roommates, and Desire to Continue to Have a Roommate	33.3%	60.0%
Percentage Who Now Have a Roommate, but Desire to Live Alone	00.0%	00.0%
Percentage Who Now Live Alone, and Desire to Continue to Live Alone	60.0%	30.0%
Percentage Who Now Live Alone, But Desire to Have a Roommate	06.7%	10.0%

#### Values Affecting Housing Choices

In an attempt to reveal which values most affect housing choices, the author asked each respondent her reasons for choosing her present living arrangement. The respondent was free to give more than one reason to this open-end type of question. Tables II and III list the reasons given by each group.

TABLE II  
VALUES AFFECTING HOUSING CHOICES AS IDENTIFIED  
BY THE ON-CAMPUS GROUP

Reasons Given by the On-Campus Group for Living in a Dormitory	Number of Responses
Could Not Get a Roommate for an Apartment	5
Less Expensive to Live Alone in a Dormitory	1
Convenience of Dormitory to Campus	2
Could Not Find a Suitable Apartment	1
Do Not Have to Cook in Dormitory	3
Do Not Like to Keep House	2
Lack of Familiarity With Stillwater	5
Had Never Lived in a Dormitory Before	2
Other Miscellaneous Answers	5

TABLE III  
VALUES AFFECTING HOUSING CHOICES AS IDENTIFIED  
BY THE OFF-CAMPUS GROUP

Reasons Given by the Off-Campus Group for Living in Apartments	Number of Responses
More "Freedom" Than When Living in a Dormitory	19
More Space in an Apartment	1
Less Expensive to Live Off-Campus With a Roommate	3
Like to Cook	4
Dormitory Too Noisy	6
Like to Entertain	1
Dormitory Has No Private Bath Facilities	1
Other Residents of Dormitory Are Younger	2
Other Miscellaneous Answers	4

The data in Table II imply that the two most prominent reasons given by the on-campus group for living in dormitories are "Could Not Get a Roommate for an Apartment" and "Lack of Familiarity With Stillwater." Additional comments made by the respondents revealed that some wished to room with an undergraduate who was not free to move off campus, and that several others desired to live in an apartment, but could not come to Stillwater prior to the semester in order to reserve an apartment. Thus, it is apparent that approximately one-half of the on-campus group preferred to live off campus, but were restrained by various personal reasons. The only positive value of dormitory living brought out by the questioning is a desire for convenience - in accessibility to the campus and in domestic responsibilities.

The desire for "freedom" was given by 95 per cent of the respondents in the off-campus group as a reason for living in apartments. Answers in this category varied from "Freedom to entertain at any time," and "Freedom to come and go as I please," to "Don't like dorm restrictions." Other values expressed by this group were desire for privacy, economy, and freedom to prepare their own meals.

#### Current and Desired Performance of Selected Activities

As explained in the Methodology, the respondents in both groups were given a stack of thirty-one cards, each listing a living activity, and requested to place each into one of three specified locations, according to their present living practices. Following this exercise, the respondents were asked to again sort the same group of activities as they would prefer to perform them in a hypothetical dormitory or apartment situation, respectively. The results of these two exercises

are shown in Tables IV and V. For ease in comparing the current and desired performance of each activity, the corresponding location, e.g. "Do in Room Now" and "Would Do in Room," are placed adjacent to each other in the tables. Hypothetically, the closer the two percentages in the paired columns, the greater is the satisfaction of the respondents in the performance of each respective activity. Conversely, the larger the difference between the two percentages, the less satisfaction there is on the part of the respondents.

The data shown in Table IV indicate a considerable degree of satisfaction by the on-campus respondents for the following activities: Washing Clothes in a Machine, Drip-drying Clothes, Drying Clothes in a Machine, Putting on Make-up, Dressing, Reading, Studying and Writing Letters, Listening to the Record Player or Radio, and Conversing.

Of the activities currently performed in the room and those desired for performance in the room, the Chi-square test showed a significant degree of dissatisfaction for the following: Eating Meals, Preparing Meals, Cutting Out Dresses or Other Articles, Bathing or Showering, Watching TV, Entertaining Guests at Dinner, Sleeping One Overnight Guest, and Sleeping Two or More Overnight Guests.

Those activities desired to be performed in the building by more than 50 per cent of the on-campus sample are: Eating Meals, Preparing Meals, Washing Clothes in a Machine, Drying Clothes in a Machine, Bathing or Showering, and Entertaining Guests at Dinner. The general observed pattern is a reduction by the respondents in the number of activities desired to be performed in the building as compared to those currently performed in the building. In only one activity was there a significant degree of dissatisfaction - Talking on the Telephone.

TABLE IV

PERCENTAGE DISTRIBUTION OF CURRENT AND DESIRED ACTIVITIES SELECTED  
BY THE ON-CAMPUS GROUP

No.	Activity	Do in Room Now	Would Do in Room	Do in Building Now	Would Do in Building	Do Not Do Now	Would Not Do
1.	Planning Menus and Looking up Recipes	06.7	40.0	00.0	13.3	93.4	46.6
2.	Eating Meals	00.0	40.0**	100.0	60.0	00.0	00.0
3.	Preparing Meals	00.0	40.0**	20.0	53.3	80.0	06.7**
4.	Washing Clothes by Hand	26.7	66.7	73.3	33.3	00.0	00.0
5.	Washing Clothes in a Machine	00.0	00.0	100.0	100.0	00.0	00.0
6.	Drip-Drying Clothes	66.7	60.0	33.3	40.0	00.0	00.0
7.	Drying Clothes in a Machine	00.0	00.0	100.0	100.0	00.0	00.0
8.	Ironing	20.0	60.0	73.3	40.0	06.7	00.0
9.	Folding and Sprinkling Clothes	53.3	73.3	40.0	26.7	06.7	00.0
10.	Cutting Out Dresses or Other Articles	20.0	73.3*	20.0	13.3	60.0	13.3*

TABLE IV (CONTINUED)

No.	Activity	Do in Room Now	Would Do in Room	Do in Building Now	Would Do in Building	Do Not Do Now	Would Not Do
11.	Sewing on a Machine	20.0	66.7	06.7	20.0	73.3	13.3**
12.	Putting on Make-up	93.3	100.0	06.7	00.0	00.0	00.0
13.	Washing and Caring for Hair	26.7	66.7	73.3	33.3	00.0	00.0
14.	Dressing	93.3	100.0	06.7	00.0	00.0	00.0
15.	Bathing or Showering	06.7	46.7*	86.6	53.3	06.7	00.0
16.	Reading	100.0	100.0	00.0	00.0	00.0	00.0
17.	Studying and Writing Letters	93.3	100.0	00.0	00.0	06.7	00.0
18.	Watching TV	06.7	60.0**	60.0	40.0	33.3	00.0
19.	Listening to Record Player or Radio	93.3	93.3	00.0	06.7	06.7	00.0
20.	Typing	73.3	93.3	06.7	00.0	20.0	06.7
21.	Carrying on a Hobby	40.0	53.3	06.7	00.0	53.3	46.7
22.	Talking on the Telephone	33.3	86.7	66.7	13.3**	00.0	00.0
23.	Studying in Groups	13.3	26.7	20.0	40.0	66.7	33.3



TABLE IV (CONTINUED)

No.	Activity	Do in Room Now	Would Do in Room	Do in Building Now	Would Do in Building	Do Not Do Now	Would Not Do
24.	Conversing	73.3	80.0	26.7	20.0	00.0	00.0
25.	Working on Projects Re- quiring Much Desk Space	40.0	60.0	20.0	33.3	40.0	06.7
26.	Entertaining Guests at Dinner	00.0	40.0**	40.0	53.3	60.0	06.7**
27.	Entertaining 1-5 Guests	66.6	80.0	06.7	13.3	26.7	06.7
28.	Entertaining 6-10 Guests	06.7	40.0	13.3	46.7	80.0	13.3**
29.	Sleeping One Overnight Guest	26.7	86.7*	13.3	00.0	60.0	13.3*
30.	Sleeping Two or More Overnight Guests	00.0	46.6**	13.3	26.7	86.7	26.7*
31.	Feeding and Caring for Pets	13.3	20.0	00.0	06.7	86.7	73.3

\*Indicates a significant difference of 0.050%.

\*\*Indicates a significant difference of 0.025%.

The third category of activities are those that are not performed in the dormitory room or building, and may include both activities that are not performed by the respondent at all and those performed away from the dormitory. In comparing the present and desired activities, significant differences were noted for these activities: Preparing Meals, Cutting Out Dresses or Other Articles, Sewing On a Machine, Entertaining Guests at Dinner, Entertaining Six to Ten Guests, Sleeping One Overnight Guest, and Sleeping Two Or More Overnight Guests. In each case, the activity received a much lower percentage in the "Would Not Do" column than in the "Do Not Do Now" column.

Table V shows a high degree of satisfaction for the off-campus group, as only two activities desired for performance in the room show a significant degree of difference: Washing Clothes In a Machine, and Drying Clothes In a Machine. This, however, does not necessarily mean that a majority of the respondents in the off-campus group wish to have automatic washing machines and dryers located within the apartment, since the percentage who would desire to perform these two activities in their apartments are only 20 per cent and 25 per cent, respectively. Activities not currently performed by a majority of the respondents, but which are desired for performance in the room are: Cutting Out Dresses or Other Articles, Sewing On a Machine, and Feeding and Caring for Pets.

Activities currently performed within the apartment building by a majority of the off-campus respondents are Washing Clothes in a Machine and Drying Clothes in a Machine. No additional activities are included by a majority of the respondents in the "Would Do in Building" column. The only significant difference is noted in the case of

TABLE V  
 PERCENTAGE DISTRIBUTION OF CURRENT AND DESIRED ACTIVITIES SELECTED  
 BY THE OFF-CAMPUS GROUP

No.	Activity	Do in Apt. Now	Would Do in Apt.	Do in Building Now	Would Do in Building	Do Not Do Now	Would Not Do
1.	Planning Menus and Looking Up Recipes	85.0	85.0	00.0	05.0	15.0	10.0
2.	Eating Meals	100.0	100.0	00.0	00.0	00.0	00.0
3.	Preparing Meals	100.0	100.0	00.0	00.0	00.0	00.0
4.	Washing Clothes by Hand	90.0	95.0	05.0	05.0	05.0	00.0
5.	Washing Clothes in a Machine	00.0	20.0*	60.0	80.0	40.0	00.0**
6.	Drip-Drying Clothes	85.0	70.0	05.0	25.0	10.0	05.0
7.	Drying Clothes in a Machine	00.0	25.0*	60.0	75.0	40.0	00.0**
8.	Ironing	90.0	90.0	00.0	10.0	10.0	00.0
9.	Folding and Sprinkling Clothes	65.0	70.0	00.0	25.0*	35.0	05.0*
10.	Cutting Out Dresses or Other Articles	45.0	70.0	00.0	05.0	55.0	25.0
11.	Sewing on a Machine	30.0	70.0	05.0	05.0	65.0	25.0

TABLE V (CONTINUED)

No.	Activity	Do in Apt. Now	Would Do in Apt.	Do in Building Now	Would Do in Building	Do Not Do Now	Would Not Do
12.	Putting on Make-Up	100.0	100.0	00.0	00.0	00.0	00.0
13.	Washing and Caring for Hair	100.0	100.0	00.0	00.0	00.0	00.0
14.	Dressing	100.0	100.0	00.0	00.0	00.0	00.0
15.	Bathing or Showering	100.0	100.0	00.0	00.0	00.0	00.0
16.	Reading	90.0	95.0	00.0	00.0	10.0	05.0
17.	Studying and Writing Letters	85.0	95.0	00.0	00.0	15.0	05.0
18.	Watching TV	75.0	95.0	00.0	05.0	25.0	00.0*
19.	Listening to Record Player or Radio	95.0	100.0	00.0	00.0	05.0	00.0
20.	Typing	95.0	95.0	00.0	00.0	05.0	05.0
21.	Carrying on a Hobby	55.0	65.0	05.0	10.0	40.0	25.0
22.	Talking on the Telephone	100.0	100.0	00.0	00.0	00.0	00.0
23.	Studying in Groups	40.0	45.0	10.0	15.0	50.0	40.0
24.	Conversing	75.0	90.0	15.0	10.0	10.0	00.0

TABLE V (CONTINUED)

No.	Activity	Do in Apt. Now	Would Do in Apt.	Do in Building Now	Would Do in Building	Do Not Do Now	Would Not Do
25.	Working on Projects Re- quiring Much Desk Space	80.0	80.0	00.0	15.0	20.0	05.0
26.	Entertaining Guests at Dinner	100.0	95.0	00.0	00.0	00.0	05.0
27.	Entertaining 1-5 Guests	90.0	85.0	05.0	05.0	05.0	10.0
28.	Entertaining 6-10 Guests	55.0	70.0	10.0	20.0	35.0	10.0
29.	Sleeping One Overnight Guest	95.0	95.0	00.0	00.0	05.0	05.0
30.	Sleeping Two or More Over- night Guests	55.0	80.0	05.0	10.0	40.0	10.0
31.	Feeding and Caring for Pets	40.0	65.0	00.0	00.0	60.0	35.0

\*Indicates a significant difference of 0.05%.

\*\*Indicates a significant difference of 0.025%.

Folding and Sprinkling Clothes, where none of the respondents perform this activity in the building now, but 25 per cent would prefer to do this in a laundry center.

In the "Would Not Do" column, significant degrees of dissatisfaction were noted for the following activities: Washing Clothes by Hand, Drying Clothes in a Machine, Folding and Sprinkling Clothes, Watching TV, and Sleeping Two or More Overnight Guests. None of the activities, however, received a response of over 50 per cent in the "Would Not Do" column.

#### Area Distribution of Activities

In accordance with Step 6 of the questionnaire, once the respondent had determined which activities she would like to perform in her room or apartment she was asked to group these activities into four types of areas basic to all living units: Work, Social, Hygiene, and Sleeping. This distribution is shown in Tables VI and VII. For ease in comparing the on- and the off-campus groups, the numerical frequencies for each activity have been converted to percentages. Because each respondent was working only with those activities she had selected to perform in her room or apartment, it is meaningful to note the actual numerical frequency indicated in parentheses for each activity.

Of those activities selected by the on-campus group for performance in the room, the following were chosen as Hygiene activities by over 50 per cent of the respondents: Washing Clothes By Hand, Drip-drying Clothes, Putting on Make-up, Washing and Caring for Hair, and Bathing or Showering. Activities listed to be performed in Sleeping areas were Dressing, Sleeping One Overnight Guest, and Sleeping Two or

TABLE VI  
 PERCENTAGE DISTRIBUTION OF ACTIVITIES SELECTED BY THE  
 ON-CAMPUS GROUP FOR PERFORMANCE IN THE ROOM

Activity		Hygiene	Sleeping	Work	Social
1. Planning Menus	(6)*			83.6	14.6
2. Eating Meals	(7)			42.8	57.2
3. Preparing Meals	(5)			80.0	20.0
4. Washing Clothes By Hand	(10)	60.0		40.4	
5. Washing Clothes In a Machine	(0)				
6. Drip-Drying Clothes	(9)	88.8		11.2	
7. Drying Clothes In a Machine	(0)				
8. Ironing	(9)	22.3		77.7	
9. Folding and Sprinkling Clothes	(10)			100.0	
10. Cutting Out Dresses Or Other Articles	(12)			91.7	08.3
11. Sewing On a Machine	(10)		10.0	90.0	
12. Putting On Make-Up	(17)	64.7	29.4	05.9	
13. Washing and Caring For Hair	(11)	91.0	09.0		
14. Dressing	(18)	33.4	61.1	05.5	
15. Bathing Or Showering	(7)	100.0			
16. Reading	(21)	04.8	23.9	42.8	28.6
17. Studying Or Writing Letters	(16)		12.5	68.8	18.7
18. Watching TV	(9)		11.2		88.8
19. Listening To Record Player Or Radio	(14)		21.4		78.6

TABLE VI (CONTINUED)

Activity		Hygiene	Sleeping	Work	Social
20. Typing	(14)			100.0	
21. Carrying On a Hobby	(7)			85.7	14.3
22. Talking On the Telephone	(15)	06.6	06.6	26.7	60.1
23. Studying in Groups	(4)			50.0	50.0
24. Conversing	(13)			07.7	92.3
25. Working On Projects Requiring Much Desk Space	(9)			100.0	
26. Entertaining Guests at Dinner	(8)			25.0	75.0
27. Entertaining 1-5 Guests	(13)			07.7	92.3
28. Entertaining 6-10 Guests	(5)				100.0
29. Sleeping One Overnight Guest	(13)		92.3		07.7
30. Sleeping Two or More Overnight Guests	(6)		100.0		
31. Feeding and Caring for Pets	(3)		33.3	66.7	

\*Numbers in parentheses ( ) indicate numerical frequency for each activity.



More Overnight Guests. The following were selected for performance in Work areas: Planning Menus, Preparing Meals, Ironing, Folding and Sprinkling Clothes, Cutting Out Dresses and Other Articles, Sewing On a Machine, Studying and Writing Letters, Typing, Carrying On a Hobby, Working On Projects Which Require a Large Amount of Desk Space, and Feeding and Caring for Pets. Finally, these were chosen as Social activities: Eating Meals, Watching TV, Listening to a Record Player Or Radio, Talking On the Telephone, Conversing, Entertaining Guests at Dinner, Entertaining One to Five Guests, and Entertaining Six to Ten Guests.

In observing the distribution of activities for the off-campus group, it must be noted that numerical frequencies for each activity are larger than for the on-campus group, due to the larger size of the sample. Also, the off-campus respondents in general seemed to feel free to include more activities for performance in the apartment than did the respondents living in dormitories.

A majority of the respondents in the off-campus sample included the following activities for performance in Hygiene areas: Washing Clothes by Hand, Drip-Drying Clothes, Putting On Make-Up, Washing and Caring for Hair, and Bathing Or Showering.

Dressing, Sleeping One Overnight Guest, and Sleeping Two or More Overnight Guests were the only activities selected by more than 50 per cent of the off-campus group for performance in the Sleeping area.

The off-campus group selected numerous activities for performance in Work areas: Planning Menus, Eating Meals, Preparing Meals, Washing Clothes in a Machine, Drying Clothes in a Machine, Ironing, Folding and Sprinkling Clothes, Cutting Out Dresses Or Other Articles, Sewing On a

TABLE VII

PERCENTAGE DISTRIBUTION OF ACTIVITIES SELECTED BY THE  
OFF-CAMPUS GROUP FOR PERFORMANCE IN THE APARTMENT

Activity		Hygiene	Sleeping	Work	Social
1. Planning Menus	(19)*			78.9	21.0
2. Eating Meals	(20)			60.0	40.0
3. Preparing Meals	(21)			95.6	04.4
4. Washing Clothes By Hand	(19)	63.1		36.8	
5. Washing Clothes In a Machine	(4)			100.0	
6. Drip-Drying Clothes	(14)	64.3		35.7	
7. Drying Clothes In a Machine	(5)			100.0	
8. Ironing	(17)	05.9	17.7	76.6	
9. Folding and Sprinkling Clothes	(14)	07.1	14.3	78.6	
10. Cutting Out Dresses Or Other Articles	(14)		07.1	78.6	14.3
11. Sewing On a Machine	(13)			100.0	
12. Putting On Make-Up	(21)	86.4	13.6		
13. Washing and Caring For Hair	(23)	78.3	13.0	08.7	
14. Dressing	(18)	38.9	55.6	05.5	
15. Bathing Or Showering	(20)	100.0			
16. Reading	(20)	05.0	20.0	55.0	20.0
17. Studying Or Writing Letters	(22)		04.5	68.2	27.3
18. Watching TV	(18)			11.2	88.9
19. Listening To Record Player Or Radio	(18)			05.5	94.5

TABLE VII (CONTINUED)

Activity		Hygiene	Sleeping	Work	Social
20. Typing	(20)			85.0	15.0
21. Carrying On a Hobby	(11)			18.1	81.9
22. Talking On the Telephone	(20)		10.0	10.0	80.0
23. Studying in Groups	(9)			77.7	22.3
24. Conversing	(17)		05.8	05.8	88.2
25. Working On Projects Requiring Much Desk Space	(19)			73.7	26.3
26. Entertaining Guests at Dinner	(17)			05.9	94.1
27. Entertaining 1-5 Guests	(17)			05.9	94.1
28. Entertaining 6-10 Guests	(13)				100.0
29. Sleeping One Overnight Guest	(17)		75.5		23.5
30. Sleeping Two or More Overnight Guests	(14)		78.6		21.4
31. Feeding and Caring for Pets	(13)			84.7	15.3

\*Numbers in parentheses ( ) indicate numerical frequency for each activity.

Machine, Reading, Studying and Writing Letters, Typing, Studying in Groups, Working On Projects Which Require a Large Amount of Desk Space, and Feeding and Caring for Pets.

Activities included for performance in Social areas by a majority of the off-campus sample were: Watching TV, Listening to a Record Player or Radio, Carrying On a Hobby, Talking On the Telephone, Conversing, Entertaining Guests at Dinner, Entertaining One to Five Guests, and Entertaining Six to Ten Guests.

In comparing the activities selected by the two groups as shown in Tables VI and VII, the percentage distribution of activities is very similar, although the numerical frequencies vary somewhat. The largest difference occurs in activities selected for performance in Work areas. At least 50 per cent of the off-campus group included Eating Meals, Washing Clothes in a Machine, Drying Clothes in a Machine, Reading, and Studying in Groups; the on-campus group added Carrying On a Hobby. The only other difference occurred in the Social category, where the on-campus group included Eating Meals.

#### Distribution of Social and Work Activities Into Specific Areas

Once the respondents had decided which activities they considered to be Work and Social activities, they were requested to group these activities into one to four specific areas and name each area. Although many different areas were named, the author did not consider any specific activity with a frequency of less than three to be significant. Table VIII indicates the common areas which were named by the respondents and the "Work" activities which might be performed in

TABLE VIII  
 PLACEMENT OF SELECTED "WORK" ACTIVITIES  
 INTO SPECIFIC AREAS

Area	On-Campus Group	Off-Campus Group
Study	Reading (7)* Studying and Writing Letters (9) Typing (10) Working On Projects Requiring Much Desk Space (5) Talking On the Telephone (10)	Reading (5) Studying and Writing Letters (10) Typing (11) Working On Projects Requiring Much Desk Space (7) Sewing On a Machine (3) Studying in Groups (4)
Dining	Typing (3)	Cutting Out Dresses Or Other Articles (3) Sewing On a Machine (4)
Food Preparation	Preparing Meals (4)	Preparing Meals (17) Eating Meals (9) Planning Menus and Looking Up Recipes (11)
Living		Reading (3)
Laundry-Utility	Ironing (3) Folding and Sprinkling Clothes (4)	Ironing (7) Folding and Sprinkling Clothes (6) Washing Clothes by Hand (4) Washing Clothes in a Machine (5) Drip-Drying Clothes (4) Drying Clothes in a Machine (5) Feeding and Caring for Pets (3)
Sewing	Cutting Out Dresses Or Other Articles (3) Sewing On a Machine (3)	Cutting Out Dresses Or Other Articles (3) Sewing On a Machine (3)
Hobby--Den		Reading (3) Studying and Writing Letters (3) Typing (3)

\*Numbers in parentheses ( ) indicate numerical frequency for each activity.

TABLE IX  
 PLACEMENT OF SELECTED "SOCIAL" ACTIVITIES  
 INTO SPECIFIC AREAS

Area	On-Campus Group	Off-Campus Group
Dining	Entertaining Guests at Dinner (3)*	Entertaining Guests at Dinner (7) Eating Meals (4) Entertaining 1-5 Guests (6) Entertaining 6-10 Guests (3)
Dining- Living		Entertaining Guests at Dinner (3)
Living	Watching TV (7) Talking On the Telephone (4) Conversing (10) Listening to Record Player or Radio (3) Entertaining 1-5 Guests (10) Entertaining 6-10 Guests (4)  Reading (4) Studying and Writing Letters (4)	Watching TV (13) Talking On the Telephone (11) Conversing (13) Listening to Record Player or Radio (14) Entertaining 1-5 Guests (9) Entertaining 6-10 Guests (8)  Carrying on a Hobby (6) Sleeping One Overnight Guest (3) Entertaining Guests at Dinner (4)
Hobby- Den		Watching TV (4) Talking on the Telephone (5) Conversing (3) Listening to Record Player or Radio (5) Carrying On a Hobby (3)

\*Numbers in parentheses ( ) indicate numerical frequency for each activity.

each area, whereas Table IX shows the placement into areas of the selected "Social" activities.

As shown in Table VIII, the on-campus group named five specific areas in which they desired to perform work activities: study, dining, food preparation, laundry-utility, and sewing. Two additional areas - living and hobby-den - were added by the off-campus group, which may reflect their desire for more living space. This pattern is repeated as indicated in Table IX, in which the off-campus group included more activities and areas than did the on-campus group.

The occurrence of several activities, such as Reading, Typing, and Sewing on a Machine, in more than one area is not in conflict with normal patterns of living, since an individual might easily perform these activities in more than one area. The respondents also utilized the concept of versatility of areas, as shown by the inclusion of three areas for both work and social activities: dining, living, and hobby-den. Respondents indicated that the dining area is perhaps the most versatile, since a table could be used for typing, studying, reading, writing letters, sewing, cutting out dresses, eating meals, entertaining, and folding and sprinkling clothes. Willingness to adapt to a particular environment was shown when several of the respondents stated that they would perform certain activities "anywhere there was room at the time". Areas showing the most agreement by both groups in Tables VIII and IX were the study and living areas.

## CHAPTER V

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

#### Summary

In the past three decades, social scientists, psychologists, and architects have become more aware of the very important role that is played by the housing environment in influencing<sup>ing</sup> man's emotional well-being. In order to gain information about<sup>wo</sup> man's reaction to his housing, livability studies have been conducted with various segments of the population. Because educators believe that student housing should be an extension of the educational environment, a need for research can be identified in this area.

The purpose of this study was to conduct a livability study with selected unmarried graduate women students attending Oklahoma State University in order to obtain data useful in planning both university and off-campus student housing.

The sample included two groups of graduate women: a group of fifteen living in university-owned dormitories, and a group of twenty living in off-campus apartments.

The author designed a questionnaire structured to elicit data relating to: (1) the respondents' preferences for living with a roommate, (2) values which affect housing choices, (3) activities which characterize the present versus the desired living pattern of the respondents, and (4) concepts regarding the number and uses of spatial



areas desired by the respondents. The outstanding feature of the questionnaire was a card-sorting technique in which the respondents were required to go through several steps in sorting and grouping a list of thirty-one basic living activities.

Personal interviews and systematic recording of responses were used in gathering the data. The Chi-square test was used to determine significant degrees of difference at the 0.050 per cent and 0.025 per cent levels.

### Conclusions

#### Data From the Instrument

Results from the questionnaire implied that a majority of both groups of respondents were satisfied with their present interaction pattern of living alone or with a roommate. Only 6.7 per cent of the on-campus group and 10 per cent of the off-campus group wished to change. It is considered significant that 60 per cent of the on-campus desired to live alone, and in contrast, an almost equal percentage of the off-campus respondents, 70 per cent, wished to live with a roommate. Although the respondents were not asked to state reasons for their choices, this pattern may comply with one of two hypotheses by the author: (1) the women had definite opinions concerning how they wished to live before selecting a place to live, or (2) the majority of the respondents, having completed their undergraduate work at another institution, selected a place to live "at random" and having established a particular pattern of living, had no desire to change their preference for living with or without a roommate.

The author observed that respondents in the off-campus sample were as a whole generally more gregarious and outgoing and seemed to feel free to include more activities for performance in the apartment than did the respondents living in dormitories.

Values identified by questioning the respondents about their reasons for selecting their present housing were, with one exception, in accordance with those expected by the author. The only positive value identified by several of the on-campus respondents was convenience, whereas the off-campus group mentioned freedom to make their own rules, freedom to prepare their own meals, and privacy. Economy was not identified as an important value by a majority of either group, contrary to the expectations of the author. Responses indicate that approximately one-half of the on-campus group would like to live in off-campus apartments, revealing some dissatisfaction with dormitory living.

Analysis of Tables IV and V disclosed that the on-campus respondents would desire to perform more activities in the room than is now possible, in contrast to the off-campus respondents, who were much more satisfied. Provision in the dormitory rooms of more space for work and entertainment, private hygiene facilities, telephones, and perhaps small kitchenettes which could be shared by two to four students would contribute to more satisfaction by graduate students. Responses by the on-campus group do not suggest any major changes for communal facilities within the dormitory.

The off-campus respondents felt a need in the apartment for a sewing area with counter space for cutting out dresses, more adequate provision for entertaining six to ten guests, and sleeping two or more

overnight guests. Although 65 per cent indicated they would like to care for pets and had the room to do so, many of the respondents lived in apartment units having restrictions against owning pets. The data implied no changes in communal facilities within the apartment building.

Tables VIII and IX, showing the division of the selected Work and Social activities into specific areas by the on-campus group, disclose the desire for the following areas in the dormitory room or unit: study (for reading, studying, typing, and talking on the telephone), living (for watching TV, conversing, reading, and entertaining guests), sleeping, and hygiene. The off-campus group expressed a desire for the following areas: study (for reading studying, writing letters, and typing), food preparation, laundry-utility, dining, living (for watching TV, talking on the telephone, conversing, listening to the record player or radio, and entertaining guests), hygiene, and sleeping.

#### Evaluation of the Instrument

The author believes that the card-sorting technique used in this study is an effective means of removing the influence of the interviewer from the interview. In being able to sort and arrange the activities as desired, the respondents seemed better able to conceptualize living spaces and their functions. The technique requires mental sorting of ideas and concentration by the respondent, which hypothetically leads to more valid gaining of data.

Comments by the respondents indicated that they found the questionnaire interesting and enjoyable, an important factor in gaining

the co-operation of respondents.

Structuring of the questionnaire allowed comparatively independent decisions by the respondents in planning a hypothetical living environment. It is recognized that respondents do not make completely free choices, as they are necessarily influenced by previous experiences and current popular modes of living. However, it is believed by the author that an individual needs to identify with these previous experiences in his housing, for living in a totally unfamiliar environment might create a feeling of disorientation and insecurity.

Only in the performance of Step 5 of the questionnaire did the author sense that some of the respondents were influenced by outside sources in their sorting of the activities. When asked to categorize the activities into four types of areas - Work, Social, Hygiene, and Sleeping - the respondents were hesitant and appeared to feel that each activity should belong to one "right" area. This difficulty may stem from their past experiences with established patterns of housing and/or their desire to conform to what is considered "normal". Evaluation shows that the division of the activities into these four types of areas is not directly applicable to planning of the dormitory room or apartment, but it is valuable as a preliminary step toward grouping the activities into specific areas, which are named by the respondent.

The author considers the list of thirty-one activities used for the questionnaire to be adequately inclusive of the basic activities performed by unmarried graduate women and that no additions are required. It is recommended, however, that the wording of activity numbers thirteen and nineteen be changed for easier understanding by

the respondents.

Due to the nature of the data and the type of responses required, use of the Chi-square test in determining significant differences was not valid in every case. In some instances, the noting of a significant difference did not necessarily mean that a majority (over 50 per cent) of the respondents were dissatisfied with their current situation. This implies that the same hypothetical frequencies cannot be expected with every activity tested.

One type of information not obtained by this questionnaire is that relating to the grouping of specific activities or areas into rooms. As the respondents performed the sorting processes, the interviewer explained that the groupings in Steps 6 and 7 might represent either rooms or areas within a room; however, provision was made only for recording them as areas. While it is recognized that students living in dormitories usually have only a single room for personal use, several of the on-campus respondents in this study expressed a desire for a suite arrangement of rooms.

#### Recommendations

The author makes the following recommendations relative to graduate student housing and future livability studies:

1. Because human values are constantly changing, the results of a livability study such as this are only tentative. The author suggests that this study be repeated with two test groups of similar composition and the results compared with the findings of this study.

2. The author encourages further experimentation with the questionnaire used in this study, including the possibility of the elimination of Step 5, the sorting of activities into Work, Social, Hygiene, and Sleeping areas, because of its failure to yield data for architectural planning. In addition, a better means of statistical analysis and comparison of the two groups should be found.
3. Future livability studies might benefit from further consultation on the structuring of the questionnaire and the data obtained by an interdisciplinary team composed of members from the professional fields of architecture, sociology, and university planning.
4. The author recommends that Oklahoma State University make available to graduate students who have not previously attended this university information which would help to familiarize them with housing available in Stillwater. Such a "packet" might include a map of Stillwater, an explanation of university housing available to graduate students, and a listing of apartment units in town which rent to single women, giving rates, facilities, and names of the managers or owners.

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APPENDIX

THE INSTRUMENT

GRADUATE HOUSING QUESTIONNAIRE -- ON-CAMPUS GROUP

- 1. Name \_\_\_\_\_
- 2. Address \_\_\_\_\_ 3. Age \_\_\_\_\_
- 4. Do you now have a roommate?    Y    N
- 5. Do you prefer to have a roommate or to live alone?    Roommate \_\_\_\_\_  
Live alone \_\_\_\_\_
- 6. Why did you decide to live in a dormitory rather than in an apartment off campus?

7. On these cards are listed a number of activities that generally occur in day-to-day life. Would you first sort them into these categories according to your present practices? ("Do In Room," "Do Within Structure," and "Do Not Do")

(7a) DO IN ROOM:

(7b) DO WITHIN STRUCTURE:

01 02 03 04 05 06 07 08  
 09 10 11 12 13 14 15 16  
 17 18 19 20 21 22 23 24  
 25 26 27 28 29 30 31

01 02 03 04 05 06 07 08  
 09 10 11 12 13 14 15 16  
 17 18 19 20 21 22 23 24  
 25 26 27 28 29 30 31

(7c) DO NOT DO:

01 02 03 04 05 06 07 08  
 09 10 11 12 13 14 15 16  
 17 18 19 20 21 22 23 24  
 25 26 27 28 29 30 31

8. Now would you take the same cards and sort them into these groups according to your preferences? ("Would Do In Room," "Would Do In Structure," and "Would Not Do")

(8a) WOULD NOT DO:

(8b) WOULD DO IN STRUCTURE:

01 02 03 04 05 06 07 08  
 09 10 11 12 13 14 15 16  
 17 18 19 20 21 22 23 24  
 25 26 27 28 29 30 31

01 02 03 04 05 06 07 08  
 09 10 11 12 13 14 15 16  
 17 18 19 20 21 22 23 24  
 25 26 27 28 29 30 31

9. Would you take the activities that you would do in your room and sort them into these four general areas (Social, Work, Sleeping, and Hygiene)?

If there are any activities which you feel could belong to more than one area, please tell me so that I can make a duplicate card.

10. DUPLICATE CARDS:

01 02 03 04 05 06 07 08

09 10 11 12 13 14 15 16

17 18 19 20 21 22 23 24

25 26 27 28 29 30 31

11. HYGIENE AREA:

01 02 03 04 05 06 07 08

09 10 11 12 13 14 15 16

17 18 19 20 21 22 23 24

25 26 27 28 29 30 31

12. SLEEPING AREA:

01 02 03 04 05 06 07 08

09 10 11 12 13 14 15 16

17 18 19 20 21 22 23 24

25 26 27 28 29 30 31

13. Would you divide these activities (Work) into the number of areas or rooms that you think would best accommodate them.

Would you name each of these areas or rooms.

AREA 1 \_\_\_\_\_

01 02 03 04 05 06 07 08

09 10 11 12 13 14 15 16

17 18 19 20 21 22 23 24

25 26 27 28 29 30 31

AREA 2 \_\_\_\_\_

01 02 03 04 05 06 07 08

09 10 11 12 13 14 15 16

17 18 19 20 21 22 23 24

25 26 27 28 29 30 31

AREA 3 \_\_\_\_\_

01 02 03 04 05 06 07 08

09 10 11 12 13 14 15 16

17 18 19 20 21 22 23 24

25 26 27 28 29 30 31

AREA 4 \_\_\_\_\_

01 02 03 04 05 06 07 08

09 10 11 12 13 14 15 16

17 18 19 20 21 22 23 24

25 26 27 28 29 30 31

14. Will you divide these activities (Social) into the number of areas or rooms that you think would best accommodate them.

Would you name each of these areas or rooms.

AREA 1 \_\_\_\_\_

01 02 03 04 05 06 07 08

09 10 11 12 13 14 15 16

17 18 19 20 21 22 23 24

25 26 27 28 29 30 31

AREA 2 \_\_\_\_\_

01 02 03 04 05 06 07 08

09 10 11 12 13 14 15 16

17 18 19 20 21 22 23 24

25 26 27 28 29 30 31

AREA 3 \_\_\_\_\_

01 02 03 04 05 06 07 08

09 10 11 12 13 14 15 16

17 18 19 20 21 22 23 24

25 26 27 28 29 30 31

AREA 4 \_\_\_\_\_

01 02 03 04 05 06 07 08

09 10 11 12 13 14 15 16

17 18 19 20 21 22 23 24

25 26 27 28 29 30 31

## GRADUATE HOUSING QUESTIONNAIRE -- OFF-CAMPUS GROUP

1. Name \_\_\_\_\_
2. Address \_\_\_\_\_ 3. Age \_\_\_\_\_
4. Do you now have a roommate?    Y    N
5. Do you prefer to have a roommate or to live alone?    Roommate \_\_\_\_\_  
Live Alone \_\_\_\_\_
6. Why did you decide to live in an apartment off-campus rather than in a dormitory?
7. On these cards are listed a number of activities that generally occur in day-to-day life. Would you first sort them into these categories according to your present practices. ("Do In Apartment," "Do Within Unit," and "Do Not Do")

(7a) DO IN APARTMENT:

01 02 03 04 05 06 07 08  
 09 10 11 12 13 14 15 16  
 17 18 19 20 21 22 23 24  
 25 26 27 28 29 30 31

(7b) DO WITHIN UNIT:

01 02 03 04 05 06 07 08  
 09 10 11 12 13 14 15 16  
 17 18 19 20 21 22 23 24  
 25 26 27 28 29 30 31

(7c) DO NOT DO:

01 02 03 04 05 06 07 08  
 09 10 11 12 13 14 15 16  
 17 18 19 20 21 22 23 24  
 25 26 27 28 29 30 31

8. Now would you take the same cards and sort them into these groups according to your preferences. ("Would Do In Apartment," "Would Do Within Unit," and "Would Not Do")

(8a) WOULD NOT DO:

01 02 03 04 05 06 07 08  
 09 10 11 12 13 14 15 16  
 17 18 19 20 21 22 23 24  
 25 26 27 28 29 30 31

(8b) WOULD DO WITHIN UNIT:

01 02 03 04 05 06 07 08  
 09 10 11 12 13 14 15 16  
 17 18 19 20 21 22 23 24  
 25 26 27 28 29 30 31

9. Would you take the activities that you would do in your apartment and sort them into these four general areas (Social, Work, Sleeping, and Hygiene)?

If there are any activities which you feel could belong to more than one area, please tell me so that I can make a duplicate card.

10. DUPLICATE CARDS

01 02 03 04 05 06 07 08  
 09 10 11 12 13 14 15 16  
 17 18 19 20 21 22 23 24  
 25 26 27 28 29 30 31

11. HYGIENE AREA:

01 02 03 04 05 06 07 08  
 09 10 11 12 13 14 15 16  
 17 18 19 20 21 22 23 24  
 25 26 27 28 29 30 31

12. SLEEPING AREA:

01 02 03 04 05 06 07 08  
 09 10 11 12 13 14 15 16  
 17 18 19 20 21 22 23 24  
 25 26 27 28 29 30 31

13. Would you divide these activities (Work) into the number of areas or rooms that you think would best accommodate them.

Would you name each of these areas or rooms,

AREA 1 \_\_\_\_\_

AREA 2 \_\_\_\_\_

01 02 03 04 05 06 07 08  
 09 10 11 12 13 14 15 16  
 17 18 19 20 21 22 23 24  
 25 26 27 28 29 30 31

01 02 03 04 05 06 07 08  
 09 10 11 12 13 14 15 16  
 17 18 19 20 21 22 23 24  
 25 26 27 28 29 30 31

AREA 3 \_\_\_\_\_

01 02 03 04 05 06 07 08

09 10 11 12 13 14 15 16

17 18 19 20 21 22 23 24

25 26 27 28 29 30 31

AREA 4 \_\_\_\_\_

01 02 03 04 05 06 07 08

09 10 11 12 13 14 15 16

17 18 19 20 21 22 23 24

25 26 27 28 29 30 31

14. Will you divide these activities (Social) into the number of areas or rooms that you think would best accommodate them.

Would you name each of these areas or rooms.

AREA 1 \_\_\_\_\_

01 02 03 04 05 06 07 08

09 10 11 12 13 14 15 16

17 18 19 20 21 22 23 24

25 26 27 28 29 30 31

AREA 2 \_\_\_\_\_

01 02 03 04 05 06 07 08

09 10 11 12 13 14 15 16

17 18 19 20 21 22 23 24

25 26 27 28 29 30 31

AREA 3 \_\_\_\_\_

01 02 03 04 05 06 07 08

09 10 11 12 13 14 15 16

17 18 19 20 21 22 23 24

25 26 27 28 29 30 31

AREA 4 \_\_\_\_\_

01 02 03 04 05 06 07 08

09 10 11 12 13 14 15 16

17 18 19 20 21 22 23 24

25 26 27 28 29 30 31

## LIST OF ACTIVITIES

1. Planning Menus and Looking Up Recipes
2. Eating Meals
3. Preparing Meals
4. Washing Clothes by Hand
5. Washing Clothes in a Machine
6. Drip-Drying Clothes
7. Drying Clothes in a Machine
8. Ironing
9. Folding and Sprinkling Clothes
10. Cutting Out Dresses Or Other Articles
11. Sewing On a Machine
12. Putting on Make-Up
13. Washing and Caring for Hair
14. Dressing
15. Bathing or Showering
16. Reading
17. Studying and Writing Letters
18. Watching TV
19. Listening to Record Player or Radio
20. Typing
21. Carrying On a Hobby
22. Talking On the Telephone
23. Studying in Groups
24. Conversing
25. Working on Projects Which Require a Large Amount of Desk Space
26. Entertaining Guests at Dinner

3

PREPARING MEALS



27. Entertaining 1 to 5 Guests
28. Entertaining 6 to 10 Guests
29. Sleeping One Overnight Guest
30. Sleeping Two or More Overnight Guests
31. Feeding and Caring for Pets

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