



Psycho-social factors influencing care of communal facilities in married student housing
by Audrey Samuella Ardison

A thesis submitted in partial fulfillment of the requirements for the degree of MASTER OF SCIENCE
in Psychology

Montana State University

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Abstract:

The results obtained from attitude scales, and interviews concerning desired attributes of living space, as well as observation of behavior have shown that there is a difference in the way people use their built environment (Sanoff & Shawhney, 1972). These differences have been related to socio-economic level, ethnic origin, and age (Perin, 1972).

The objective of the present study was to find demographic and psycho-social factors related to the upkeep of communal areas in a married student residential environment.

Data were collected by a survey questionnaire (independent variables) and a checklist evaluating communal laundry facilities (dependent variables) in each of six identical 24 unit apartment buildings in married student housing.


The results indicated that the group of residents maintaining a more orderly communal laundry facility were younger, yet had attained a higher education level. They spent more time in social or recreational activity with their neighbors, and more had rented private homes prior to moving to student housing (as opposed to renting apartments). These results have some recommendations for the management of such housing as to the assignment of occupants to the dwelling units.

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PSYCHO-SOCIAL FACTORS INFLUENCING CARE OF COMMUNAL
FACILITIES IN MARRIED STUDENT HOUSING

by

AUDREY SAMUELL ARDISON

A thesis submitted in partial fulfillment
of the requirements for the degree

of

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Approved:


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ABSTRACT

The results obtained from attitude scales, and interviews concerning desired attributes of living space, as well as observation of behavior have shown that there is a difference in the way people use their built environment (Sanoff & Shawhney, 1972). These differences have been related to socio-economic level, ethnic origin, and age (Perin, 1972).

The objective of the present study was to find demographic and psycho-social factors related to the upkeep of communal areas in a married student residential environment.

Data were collected by a survey questionnaire (independent variables) and a checklist evaluating communal laundry facilities (dependent variables) in each of six identical 24 unit apartment buildings in married student housing.

The results indicated that the group of residents maintaining a more orderly communal laundry facility were younger, yet had attained a higher education level. They spent more time in social or recreational activity with their neighbors, and more had rented private homes prior to moving to student housing (as opposed to renting apartments). These results have some recommendations for the management of such housing as to the assignment of occupants to the dwelling units.

Psycho-Social Factors Influencing Care of Communal Facilities in Married Student Housing

Introduction

The multi-dimensional aspects of human behavior in residential environments has been researched at great lengths by social scientists. The type of residential environments that have had the most interest are the low-income and subsidized public housing apartment buildings. These environments have received much attention because of the numerous social problems that become apparent when a great number of families are crowded into buildings that are not designed to meet their needs or behavioral objectives. The occupants of public housing projects have little input in determining the design requirements, and, as non-paying clients, they can effect few changes. From the standpoint of the designer, it would be impossible to design and build a residential complex that is meant to accomodate such a heterogeneous population, meet all their individual housing needs, and stay within the financial limitations that have been set.

The difficulties in meeting the need and behavioral criteria in the design of apartment buildings is not unique to public housing. Studies of housing designed for young singles and childless couples (Wekerle, 1975), military personnel (Sommers, 1969), and married students (Leonard, 1973; Kennedy, 1950) have revealed similar social problems as in public

housing, but to a lesser degree. Although these populations are seemingly homogeneous, the individual needs are not always met.

Each individual brings into his physical environment background characteristics that affect his functioning within the environment. In turn human behavior cannot be measured or explained apart from the environment in which it occurs. This thesis will discuss various factors influencing behavior within residential environments and present data representative of measures of these factors. From the analysis of these data this thesis will identify factors affecting behaviors in university married student housing, and recommend alternative criteria for the management of student family housing to maximize residential satisfaction and minimize cost of repairs and other managerial problems.

There is a need for new information on how the student families thrive in the presently constructed married student housing. Information from such studies can be of benefit to future students in the form of changes or remedies that can be recommended, and can also be of service to the administration if these changes bring about improvements in the ways the students treat their surroundings.

Relevant Theories

Social ecology. Out of the need for a multidisciplinary approach to the study of the impacts of the physical and social environment on human beings a new discipline has emerged. Social ecology considers the

physical, biological, and social sciences and begins with some basic assumptions regarding man-environment interactions:

1. Human behavior cannot be understood apart from the environment in which it finds its expression.
2. Physical and social environments must be studied together since neither can be fully understood without the other.
3. Social ecology has an explicit value orientation in that it attempts to provide knowledge relevant to promoting maximally effective human functioning (Moos & Insel, 1974).

Although social ecology makes use of a variety of disciplines, it arises chiefly from the social sciences. The term "ecology" is originally a biological one referring to an organisms ability to adapt and survive. "Human ecology" then is the adaptation and sustenance organization employed by human beings (Gibbs, 1959). Thus, "social ecology" is man's survival techniques within the social system. Since the aggregates of people comprising a social system do not exist outside of a physical environment, social ecology not only concerns itself with interpersonal variables, but the physical environment as well.

Personal space. Interpersonal relations within any social system are characterized by territoriality and dominance behaviors. Psychologists have studied these behaviors among animals and humans, and in both cases territoriality and dominance are adaptive behaviors effective in maintaining social order. With the failure of dominance to

maintain stable order (i.e. two highly dominant individuals unable to arrive at an equilibrium), aggression is avoided through strict adherence to territorial rights (Sommer, 1969).

Human territorial behavior is not only limited to defining physical boundaries, but also to maintaining at least the minimum space an individual may require as a means of reducing pain and discomfort (Proshanski, et al., 1970). This type of territorial behavior becomes more pronounced under overcrowded conditions (Proshanski, et al., 1970; Solnick et al., 1972; Sommer, 1969), and is defined through body placement and gestures. Studies of behavior in psychiatric wards have shown human territoriality to be reflected in the amount of space an individual has jurisdiction over, and has freedom of movement in. The more dominant psychiatric patients could claim the best chair, re-arrange furniture, and invade the personal space of others (Proshanski, et al., 1970; Sommer, 1969).

Physical space. The study of human behavior in the built environment is not complete without examining the effect of the physical properties of that environment. The structure of the physical space varies with the behavioral objectives for which it was designed. All too often the design professions ignore social and behavioral aspects in favor of esthetics. The designers of structures such as the CBS building have placed such emphasis on continuity of style inside and out that the occupants are forbidden any personalization in their offices. In addressing the aspect of "personal choice" in the physical

environment, Proshanski, et al. (1970) began their discussion with three propositions.

1. Man, in almost all instances and situations, is a cognizing and goal-directed organism.

2. Man's attempt at need satisfaction always involve him in interactions and exchanges with his physical environment.

3. In any situational context, the individual attempts to organize his physical environment so that it maximizes his freedom of choice.

If man is not allowed the freedom of choice in his response to his environment, or is unable to respond, "psychological stress" occurs (McGrath, 1970; Steiner, 1970). Selye (1956) classifies reactions to stress from the physical environment at three levels, "alarm," "adaptation," and "exhaustion." If the architectural design is unresponsive to the needs and behaviors of its occupants, stress results (Lang, 1971). The first reaction is "alarm," and if man has a choice he will bring about changes in the design to meet his needs. If he has no choice, "adaptation" occurs where he will employ coping strategies. With the inability to cope or adapt, "exhaustion" takes place and he will simply abandon the environment (Lang, 1971).

Housing Research

Most of the literature available on housing and human behavior comes from sociological inquiry into problems of slum housing and public housing projects. Although this thesis deals with a distinctly different

population, the nature of the physical environment involved is similar enough to apply some of the information from public housing research. Studies dealing with social behavior in high rise buildings for singles and childless couples, student veteran housing, and military housing is also of interest here because of the similarity of the population.

Public housing. Sources of satisfaction for occupants of slum housing have been attributed to kinship and friendship ties within the neighborhood, identification with the area as "home," the extension of the home area outside the dwelling unit, and the interdependence of neighbors (Fried & Gleicher, 1961; Sanoff & Sawhey, 1972). Since residents of slum areas have in the most part spent their life there it is very likely that neighbors will also be kin (Angrist, 1974) and would therefore be more responsive to needs of one another. This aspect of slum housing eases the adverse effect of the lack of adequate space within the dwelling unit. Since economic conditions of the residents prohibits any changes of the physical conditions of the environment, the stress reaction is on coping or "adapting" to the situation by extending the home area outside the dwelling unit. This "adaptation" could only be successful if the environment is responsive, including the people in it (Lang, 1971).

The personal space required by individuals in a group is affected by the type of relationship that exists between them. Friends require less personal space and are able to share territorial space (Sommer,

1969). Therefore, friendship or kinship ties between neighbors in densely populated areas serve to increase the territorial claims of the individuals by allowing them to extend the "home" space.

When families are dislocated from their familiar home environment, they lose the established social relationships that have been a source of satisfaction and well being (Fried, 1963; Shelley & Adelberg, 1969; Stueve et al., 1975). Disruption of social ties results in a loss of continuity and can increase feelings of grief (Fried, 1963). Re-establishing similar social relationships in the new environment is not always possible. Prerequisites are both that the physical environment allow for contact between neighbors and that the personal backgrounds, attitudes, and behaviors be somewhat similar.

The arrangement of the physical space and facilities in multiple family buildings can effect both objective and subjective variables of satisfaction with the environment. First the need for adequate space within the individual dwelling unit must be satisfied. Outside the dwelling unit the physical structure must allow for ease of access, physical security, and semi-public areas for the development of informal social networks (Angrist, 1974). The Pruitt-Igoe Housing Project in St. Louis is a prime example of the designers' failure to meet these requirements (Yancey, 1971; Lang, 1971). Much of this housing project is now abandoned and has been destroyed.

Angrist (1974) conducted a study of two public housing projects,

one consisting of two high rise buildings, the other a series of row houses, and found that the important elements in residential satisfaction and well-being were people's perceptions of housing and neighborhood. Factors affecting these perceptions are physical security, livability, and tenant identification with the project. Her results also reveal implications for housing managers to strive for optimal mixes of resident families to facilitate satisfaction and well-being. Choosing occupants for dwelling units according to their background and stage in the life cycle so they may become more socially involved has been suggested (Fisk, 1972; Wekerle, 1975). More socially involved tenants are more satisfied with their project neighbors (Levin, 1971).

In a summary "Report on Family Living in High Apartment Buildings," Elizabeth Coit (1965) treated each problem area individually and gives recommendations for improvement. The report, however, seems only to focus on the physical aspects of apartment living. In much of the literature physical deterioration seems to be mentioned as a source of dissatisfaction (Lang, 1971; Yaneey, 1971; Angrist, 1974; Schorr, 1970), or as a reason for abandonment of neighborhoods or a desire to move out (Kasl & Harburg, 1972; Wolden, 1975).

Studies on abandonment of neighborhoods have shown the most frequent complaint to be "fear for personal safety" (Kasl, et al., 1972; Wolden, 1975), as was the case with Pruitt-Igoe. The physical deterioration of

the neighborhood and dwelling led to a desire to move out, as well as the characteristics of the families moving in (Wolden, 1975).

From the results of inquiries into problems of public housing, several researchers have recommended that effective management can prevent most of these difficulties (Yancey, 1974; Hartman, 1973; Saile, 1972). One suggestion is for selecting the occupants of adjacent apartments for optimum social interaction (Angrist, 1974; Wekerle, 1975). Proper management can also prevent the kind of physical decay of the buildings by prompt maintenance and encouraging tenant involvement and responsibility for the care of the facilities (Hartman, 1973; Saile, 1972). Since occupants of public housing projects do not have the financial resources to meet maintenance expenses it would be profitable for the management to pay for repairs the occupants initiate. If the structures are kept from physical decay they remain in greater demand and therefore yield a greater return for the landlord (Wolden, 1975).

Other housing. Literature on housing other than public, low-income, or subsidized apartments have revealed striking similarities of behaviors and attitudes in all types of residential environments. Thoma and Lindemann (1961) discuss the difficulties a new family encounters when they move into a suburban neighborhood. Being accepted in the new neighborhood depends on background information such as age, children, religion, education, occupation, and income. The last three which denote socio-economic class, are most important (Stueve et al., 1975).

Neighborhood and community satisfaction in town and suburbs has been shown to correlate highly with maintenance level of the neighborhood, friendliness, homogeneity of residents, noise level, and play areas for children (Zehner, 1971). These factors have also been outstanding in previous discussion of public housing. Hinshaw and Allott (1972) surveyed the desires of future housing consumers and found that the same items that had correlated with neighborhood satisfaction in the Zehner (1971) study were also among the more important attributes of future housing preferences. The most outstanding factor, however, was safety.

The above studies have all contributed valid information on the multidimensional aspects of human behavior within his living space. The methods have varied greatly, but there is much agreement that the important qualities of housing is adequate dwelling space, safety, friendship with neighbors, and well maintained and aesthetically pleasing surroundings.

The physical space inside the dwelling unit must serve the individual's needs and functions, and is a primary need. However, human territoriality extends beyond the immediate dwelling unit, and the physical as well as the social environment will shape attitudes and behaviors in that setting. In turn man will affect the physical and social environment in accordance with his personal background.

Survey research has shown that physical deterioration of a building

or neighborhood precipitates a desire to move out (Wolden, 1975), and an attempt was made to explain why the physical deterioration occurred in the first place. This included examining demographic data and making sociological and psychological inferences from this data, with no statistical analysis to base it on.

An investigation of public housing managers found that the serious problems perceived by managers were rent delinquency, inadequate maintenance budget, and tenant behavior (Hartman, 1973). The most serious of these were tenant destructive behavior and failure to maintain their apartments.

From an architectural point of view, observations of built environments that become physically deteriorated have yielded information and recommendations for altering the size, shape, placement, color, materials, lighting, etc. to better meet the needs and objectives of the users. The hypothesis within the design professions being that if man alters or defaces his built environment then that environment is not functional for the needs of man.

The common element in the various points of view is that physical deterioration of the built environment is accompanied by user dissatisfaction, a desire to move, or even total abandonment. Whether the deterioration occurs before or after the users become dissatisfied with the environment is still a question.

The Questionnaire

It is the purpose of this thesis to examine a number of variables that have been related to residential satisfaction and find whether these variables correlate with the physical upkeep or orderliness of shared space such as communal laundry facilities.

Satisfaction with one's housing has been positively related to a number of characteristics. Among these, the ones that are relevant to this study are: one's neighbors or one's view of them (Rossi, 1955); close friendship or kinship ties in the neighborhood (Freid & Gleicher, 1961); enough space per person (Reimer, 1945; Cottam, 1951); the number of rooms per family (Mogney & Morris, 1961); and the availability of privacy (Chapin, 1938; 1951). The questionnaire constructed for use in this thesis intends to measure these characteristics.

Most of the items on the questionnaire were tested in a pilot study in married student housing fall quarter 1973. Question #9 on Part I has been added because of feedback from Prof. Chuck Wilder. All but Question #1 on Part III are new in order to check the residents' perception of their neighbors, and to see if there was any one person in the buildings that took on the leadership or pushed more for cooperation in building upkeep. The questionnaire has been divided into three sections for the purpose of scoring. Part I tests the adequacy of the residence to meet the needs of the family, and the amount of social contact, Part II contains personal background concerning housing and income, etc., and

Part III asks for the perception of neighbors, and perceived leadership within the building. The sections are in that order so that the low threat questions appear first and the more sensitive ones toward the end.

The following is a listing of the questions in order of appearance. Included are the reasons for including the items.

Part I

1. How many bedrooms do you have in your apartment? _____

This question, along with Question #2, Part II, will indicate whether there is adequate space per person. This has been positively related to residential satisfaction (Riemer, 1945; Cottam, 1951).

2. Does the residence seem large enough to meet your needs?

_____ Yes

_____ No

The campus architect and the On Campus Living office have set a limit of 2 persons per bedroom. However, the family history may determine whether there is actually adequate space in the apartment, (i.e. the type of residence prior to this one, the ages of the children).

3. Of the following, which quality(s) do you like about living here?

_____ storage space

_____ size of rooms

_____ furniture provided

_____ outdoor play area for children

Part I (continued)

- floor plan
- appliances provided
- proximity to campus
- proximity to shopping

4. Of the following, which quality(s) do you dislike about living here?

- storage space
- size of rooms
- furniture provided
- outdoor play area for children
- floor plan
- appliances provided
- proximity to campus
- proximity to shopping

In these two items the choices are identical and randomly selected through information in several readings in environmental psychology. The choices themselves have been positively related to housing satisfaction and livability (Michelson, 1970). A report by the Public Housing Administration, May 1965, on "Family Living in High Apartment Buildings" discussed aspects of apartment living and found the first six choices in the above question to be very important factors that were often a problem for the tenants (Coit, 1965). Inadequate storage space resulted

Part I (continued)

in accumulation of objects in traffic areas and, health hazards. The size of the rooms were often not adequate enough for any extra furniture or personal preference in furniture arrangement. The furniture provided often did not stand up to family use, especially children. The lack of a central play area for children where the mothers could see them, or that the children themselves could not go to without escort presented a problem. The floor plan was sometimes such that there was little privacy.

Other than the specific problems of apartment living, the presence or absence of complaint is a measure of satisfaction (Proshanski, et al., 1970), therefore both questions. Some might find many attributes they like, and never thought about the dislikes, and vice versa.

5. How long have you lived in this building? _____

6. How much longer do you plan on living in this building? _____

Some students are more transient than others, and this may affect their perception of the neighborhood, the problems, and the other residents, as well as influence the amount of social contact. I have specifically mentioned "this building" because there are families that move from one location in student housing to another if they leave for the summer. The efforts extended in trying to get acquainted with ones neighbors is influenced by the anticipated length of stay (Leonard, 1973).

Part I (continued)

7. How many people, or families, in your building are you acquainted with?

- none
- less than half
- about half
- more than half
- all of them

8. How much time do you spend in social or recreational activity (or just visiting) with the people in your building?

- never
- once weekly
- 2-3 times weekly
- 4 or more time weekly

The amount and type of neighbor contact can reflect neighbor satisfaction. A person may be acquainted with only one or two other residents, but spend considerable time with these neighbors. On the other hand, it would be possible to be acquainted with all of ones neighbors and, for one reason or another, not spend any time socializing with them. Clausen (1954) states that residents of neighborhoods with a highly transient population will rarely develop more than a nodding acquaintance.

Part I (continued)

9. Please check as many categories as are applicable about the activities of both spouses.

Husband full time student part time student work full time

outside the home

 work full time at home work part time

outside the home

 work part time at homeWife full time student part time student work full time

outside the home

 work full time at home work part time

outside the home

 work part time at home

Knowledge of the activities of the adults in the family will explain the opportunity, or lack of it, that they have to get acquainted with and socialize with the other residents. This item will also reflect how much time the people have to be concerned with the appearances and upkeep of communal facilities in and around the building.

Part II

1. What university classification does the head of household or other qualifying party hold?

 faculty-staff grad student with assistantship grad student

Part II (continued)

the size of rooms or storage space, while a couple with no children had adequate space and would not be concerned with the availability of play area.

3. What are the ages of the children, if any? _____

Children of the same age level seem to bring together the parents because they play with one another, go into each others houses, and get into mischief together. Since preschoolers require more supervision in outside play than children of school age, it would be expected that a building that had several families with preschoolers would have a higher level of neighbor acquaintance (Gans, 1970).

4. What is the age of the head of household?

_____ 18-25

_____ 26-35

_____ 36-45

_____ over 45

5. What type of residence did you live in before coming to school?

_____ own house

_____ rent house

_____ rent apartment

_____ with parents

_____ other: explain _____

Part II (continued)

6. What was your annual family income before coming to school?

(Or parents income, if you lived at home)

- under 5,000
 5,000 - 6,999
 7,000 - 8,999
 9,000 - 10,999
 11,000 - 12,999
 over 13,000

The above questions are the personal history of where the person lived before coming to school, and his income. Satisfaction with the current residential environment is influenced by where the person has lived previously (Proshansky, Ittleson & Rivlin, 1970). A pilot study has shown that residents having a higher income before coming to school were more concerned, or at least had taken better care of communal facilities (Leonard, 1973).

Part III

1. Are the residents of your building expected to do any cleaning or upkeep of the laundry room or other communal facilities?

- Yes
 No
 Don't know

2. Does your lease agreement state what the residents are responsible for as far as regular maintenance or upkeep? (e.g., keeping the

Part III (continued)

porches clean, shoveling sidewalks, replacing lightbulbs in outside lights or other communal facilities)

Yes

No

Don't Know

These questions will show the knowledge of the rules, regulations, or lease agreement stipulations concerning tenant responsibility. A pilot study showed a high correlation between the lack of knowledge and badly cared for communal laundry facilities.

3. Is the laundry room kept as neat or clean as you would like?

Yes

No

Don't know/no opinion

4. Do you feel that everyone is doing their share as far as keep of community facilities such as yard, sidewalks and laundry room nice for others?

Yes

No

Don't know/no opinion

5. Do you feel that there is one person in the building that is more concerned about neatness and appearances of community facilities than the other residents?

Part III (continued)

 Yes No Don't know/no opinion

The above questions will show how the people perceive their own efforts and involvement in cooperating with others in keeping facilities up to their own standards. Question #4 will show if there are any resentments from lack of communication concerning the upkeep of these facilities. The "Don't know/no opinion" option will show whether the residents are concerned or even aware of any difficulties concerning communal facility upkeep. This should also show whether there is acknowledged leadership within the building.

6. Are there people in your building, that you see and speak with on occasion, that you would choose not to live around if you had that choice?

 Yes No Don't know/no opinion

7. Do you find it uncomfortable to live so close to your neighbors?

 Yes No Don't know/no opinion

Part III (continued)

These items will reflect the amount of stress that the residents are feeling in getting used to living with various new neighbors. Getting used to living in a smaller space, having less privacy because of close neighbors, having to "be nice" to neighbors for the sake of harmony, and adjusting to sharing space can all be very stressful for the individual.

The Checklist

The measurement of the condition of the communal laundry facilities was chosen as a dependent variable. The degree of order and upkeep observed in the laundry room should reflect the satisfaction of the users with their residential environment. Skolnick et al. (1971) state that physical disorder reflects social disorder, social disorder effects stress (McGrath, 1970), and stress within the residential environment causes dissatisfaction. A "best fit" (Yahoda, 1961) of man and environment can be expressed in high performance, satisfaction and little stress, and conversely for systems with "lack of fit" (Pervin, 1974).

Methods

Subjects. The sample was drawn from residents of Grant Chamberlain Drive, a section of married student housing on the Montana State University campus. This population was selected because it was desirable to obtain measures from families or married couples rather

than from singles. The section of married student housing that was sampled also had the greatest number of identical apartments. All 143 units on Grant Chamberlain Drive have 2 bedrooms, identical floor plans, and are identically furnished. A few apartments were unfurnished with regard to tables, chairs, couch, beds, etc., but the stove and refrigerator were provided and were identical to those units that were completely furnished.

Grant Chamberlain Drive is arranged in a semi-circle with lawn area in the center, six identical three story apartment buildings arranged somewhat like the spokes of a wheel, and the vehicle parking area located on the periphery of the semi-circle (Figure 1).

Insert Figure 1 about here

Each of the six three story buildings contained 24 two bedroom units, and two laundry rooms in which three washers and three dryers were provided for the use of the residents. These washing facilities were not coin or token operated. Each laundry room is used by the tenants from 12 apartments. The buildings are designed with main entrances on both sides, and in each of the groups of 12 apartments assigned the use of a laundry room six are on one side of the building and the other six enter from the other side. The laundry room can be

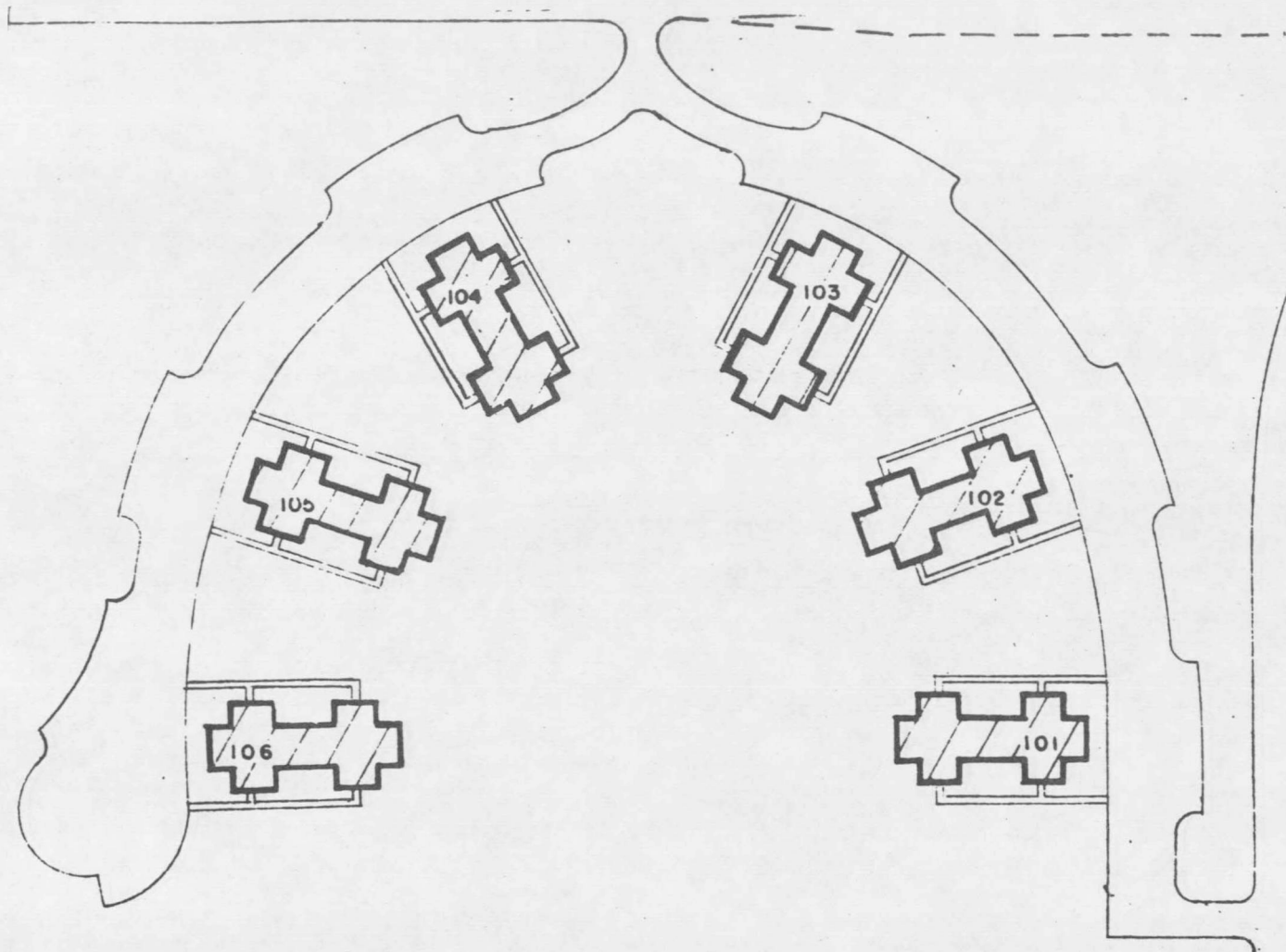


Figure 1. The arrangement of the apartment building around Grant Chamberlain Drive.

entered from both sides and is located on the bottom floor of each building (Figure 2).

Insert Figure 2 about here

There are a total of 144 apartments on Grant Chamberlain Drive, with one apartment designated as storage, hence 143 families made up the complete population to be sampled. There were 116 questionnaires returned for a 81.1% return from the population.

Instrument. The questionnaire was four and one half pages long and divided into three parts. Part I had nine items that measured attitudes toward the physical characteristics of the residence, and the amount of social contact within the building. Part II consisted of six items that asked mainly demographic data such as age, income, number of persons in the household, type of residence prior to the present one, and university classification. Part III measured attitudes concerning living in an apartment situation, perception of neighbors, and the cooperation between residents in the upkeep of communal facilities, specifically the laundry room. This last part had a total of seven items. A total of 22 items comprised the questionnaire. After coding and entering on computer cards, the questionnaire yielded 47 independent variables to be analyzed (Appendix I). The condition of each laundry facility was measured on an eight item

27

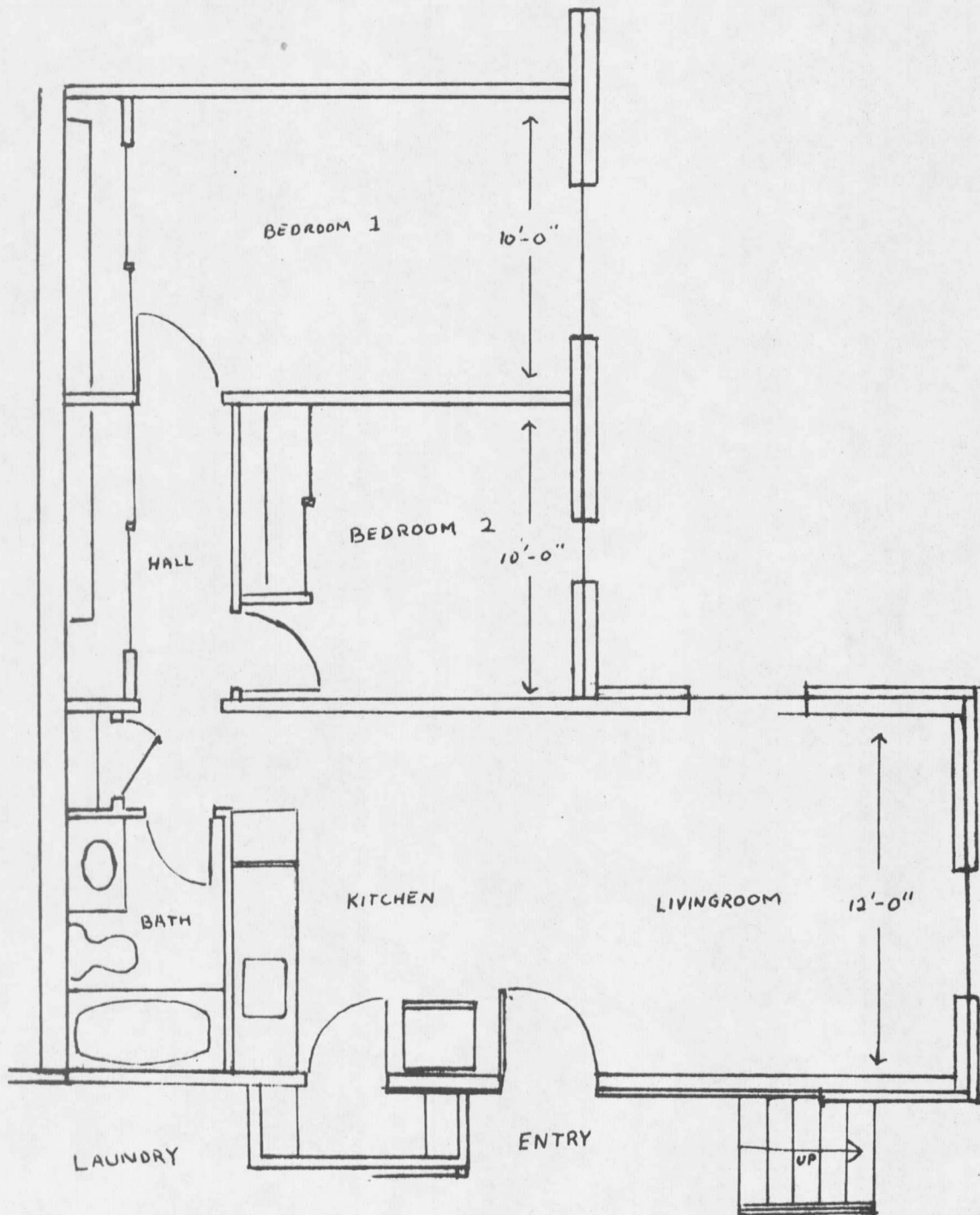


Figure 2 . Apartment Units on Grant Chamberlain Drive

checklist. These items indicated whether or not certain conditions of litter or disarray existed or not. This method eliminated any subjective decision as to degree of cleanliness (Appendix II). The total score yielded one number indicating the disorder of the laundry room and this was entered as the dependent variable in the analysis.

Questionnaire administration. The investigator personally distributed the questionnaire to each family. There were no oral instructions given as to the completion or purpose of the study. The subjects were only told that the questionnaire was part of a Master's thesis, then they were asked to read the cover letter that was included with each questionnaire (Appendix III). The questionnaire was left with the subjects and picked up by the investigator two days following distribution.

The laundry rooms were evaluated between midnight and 2 a.m. as the chances were small that the facilities were being used at that time.

Analysis. The 47 dependent variables and the independent variable were cross correlated in a 48 x 48 correlation matrix. Then a stepwise multiple linear regression was applied. The independent variables were entered into the equation one at a time, in the order of significance. The computer analysis yielded the multiple R, standard error of estimate, and analysis of variance for each of the 47 steps.

Results

Demographic Data

Simple tabulation of the personal data indicated that over two thirds of the households were young people between 18-25 years of age, (see Table 1); undergraduates (see Table 2); and had only two people in the household (see Table 3). One fifth of the sample had lived with their parents prior to moving to married student housing (see Table 4).

Insert Table 1 about here

Insert Table 2 about here

Insert Table 3 about here

Insert Table 4 about here

An overwhelming amount of the men in the households were full time students (89.65%), while 52.59% of the women worked outside the home either part time or full time (see Table 5).

Insert Table 5 about here

In dividing the data into three groups on the basis of the laundry room ratings, each group was similar in size and had the ratings of four laundry rooms each. Since the method of data collection for the laundry room condition yielded a score indicating demerits, the lower the score the better the degree of upkeep. The scores from all 12

Table 1
Age of Head of Household

Age	Group I % (N=41)	Group II % (N=37)	Group III % (N=38)	Total Sample % (N=116)
18-25	82.93	72.97	73.68	76.72
26-35	17.07	27.03	23.68	22.4
36-45	0	0	2.63	.8
over 45	0	0	0	0
TOTAL	100.00	100.00	99.99	99.92

Table 2
University Classification

	Group I % (N=41)	Group II % (N=37)	Group III % (N=38)	Total Sample % (N=116)
U-classification				
Faculty	2.38	2.63	0	1.69
Staff	0	5.26	0	1.69
Grad-w/assistantship	11.90	7.89	13.16	11.01
Grad	14.29	7.89	5.26	9.32
Undergrad	71.43	73.38	78.95	74.57
Other	0	2.63	2.63	1.69
TOTAL	100.00	100.04	100.00	99.97

Table 3
Size of Household

	Group I	Group II	Group III	Total
	%	%	%	Sample
	(N=41)	(N=37)	(N=38)	%
Size of Household				(N=116)
1	19.51	0	2.63	7.75
2	63.41	81.08	84.21	75.8
3	9.76	16.22	5.26	10.34
4	7.32	2.70	7.89	6.03
5 or more	0	0	0	0
TOTAL	100.00	100.00	99.99	99.92

Table 4
Previous Residence

Prior Residence	Group I % (N=41)	Group II % (N=37)	Group III % (N=38)	Total Sample % (N=116)
own house	11.36	19.44	12.5	14.16
rent house	31.82	11.11	20.00	21.66
rent apartment	25.00	33.83	37.5	31.66
with parents	20.45	22.22	20.00	20.83
other	11.36	13.89	10.00	11.66
TOTAL	99.99	99.99	100.00	99.97

Table 5
Activities

Activities	Group I % (N=41)	Group II % (N=37)	Group III % (N=38)	Total Sample % (N=116)
Full time student--men	90.24	83.78	94.74	89.65
Full time student--women	29.27	40.54	34.21	34.48
Part time student--men	2.44	2.70	0	1.72
Part time student--women	4.88	13.51	0	6.03
Work full time--men	7.32	16.22	2.63	8.62
Work full time--women	24.39	27.03	36.84	29.31
Work part time--men	24.39	35.14	34.21	31.03
Work part time--women	24.39	27.03	18.42	23.28

laundry rooms were as follows: 0, 0, 1, 2, 3, 3, 3, 3, 4, 5, 5, 6. There was a clear separation between the four low scores and the four high scores, with the middle scores all being the same. The distribution of the scores lent itself nicely to division into three equal groups. For the purpose of this thesis the groups will be referred to as Group I (score of 0-2), Group II (scores of 3), and Group III (scores of 4-6). Most of the comparison will be on the data from the Group I and Group III.

In breaking down the sample into three groups, each group contained too few subjects to obtain any significant results from statistical analysis. However, a percentage tabulation of the data shows that there are a number of large enough differences between the two extreme groups, and between either group and the results of the total sample, to make some good assumptions about the population.

Activities. From a population of 143 there was a return of 116 (81.1%). Each of the three subgroups, Group I, Group II, and Group III had an N of 41, 37, 38 respectively.

The more noticeable differences in the demographic data occurred on only three items. The first item being the activities of both adults in the households (refer to Table 5). In the group with the dirty laundry rooms the adults seem to have much more of their time committed to full time activities outside the home. In this group

there were slightly more full time students among the men (4.5% greater than Group I). However, the percentage of women in that group that were full time students was the same as for the total sample but nearly 5% greater than in Group I. It is interesting to note that there were no part time students among either the men or the women in Group III.

In comparing the amount of full time activities outside the household among the men and women, it is apparent that there is little or no difference for the men, but there is a great deal of difference in the amount of time the women have committed to outside activities. Nearly 54% of the women from Group I have full time commitments outside the home, while 67% of the Group II and over 71% of the Group III are committed to full time activities outside the home.

The correlation matrix for the entire sample indicated that households with women working full time outside the home anticipated a longer stay (.175), and also spent less time in social or recreational activity with the other residents in the building (-.191). The time spent in social activity with other residents was positively related to the number of acquaintances (.353). On the basis of these results (and common sense) one can infer that women working full time simply don't have the opportunity to meet their neighbors, nor the time to spend in social activity with the ones they do get acquainted with (refer also to Table 6). It can also be assumed that these women have little time to be concerned with the condition of laundry facilities.

Insert Table 6 about here

Student status. Although Group III had a slightly larger percentage of undergraduates, it was not significantly larger than either of the other groups (Table 2). However, the number of graduate students in Group I was considerably larger than the other groups. The correlation coefficient for the laundry room factor and graduate student status was $-.181$ (note: higher laundry room factor means dirtier laundry room). Therefore, the more graduate students, the cleaner the laundry room.

In the stepwise regression analysis, the graduate student (without assistantship) variable was entered into the equation on the second step (Table 7), and is significant at $<.05$ level. This writer doubts that this should be taken at face value. Graduate students in this sample are not necessarily any more concerned about the upkeep of their physical environment than are any other classification of student. They do, however, bring with them the background and experience that would influence their behavior. They are younger yet better educated, many of them are also faculty or staff, more had owned or rented homes instead of apartments, their families are larger, and the women in the families have less time committed to full time outside activities.

Insert Table 7 about here

Table 6
Acquaintance with Neighbors

	Group I % (N=41)	Group II % (N=37)	Group III % (N=38)	Total Sample % (N=116)
Number of neighbors acquainted with				
none	9.76	26.47	13.16	15.93
less than half	78.05	70.59	71.05	73.45
about half	9.76	2.94	10.53	7.96
more than half	0	0	2.63	.88
all	2.44	0	2.63	1.77
TOTAL	100.01	100.00	100.00	99.99

Table 7
Summary of Stepwise Regression

Step Number	Variable Entered	Multiple R	RSQ	Increase In RSQ	F Value To Enter	Number of Independent Variables Included
1	36	.1898	.0360	.0360	4.2580*	1
2	30	.2532	.0641	.0281	3.3914*	2
3	34	.3021	.0913	.0272	3.3506*	3
4	43	.3502	.1226	.0313	3.9642**	4
5	10	.3836	.1471	.0245	3.1627**	5
6	5	.4072	.1658	.0187	2.4404*	6
7	7	.4373	.1912	.0254	3.3884**	7
8	15	.4520	.2043	.0131	1.7684	8
9	42	.4695	.2204	.0161	2.1843*	9
10	45	.4806	.2309	.0105	1.4392	10
11	37	.4906	.2407	.0098	1.3372	11
12	32	.4985	.2485	.0078	1.0624	12
13	22	.5052	.2552	.0067	.9210	13
14	31	.5115	.2616	.0064	.8798	14
15	29	.5308	.2818	.0202	2.8071**	15
16	41	.5349	.2861	.0043	.6031	16
17	4	.5383	.2898	.0036	.5003	17
18	11	.5424	.2942	.0044	.6049	18
19	19	.5458	.2979	.0037	.5072	19
20	33	.5473	.2995	.0016	.2211	20
21	6	.5500	.3025	.0030	.4062	21
22	21	.5524	.3052	.0026	.3544	22
23	23	.5555	.3086	.0035	.4613	23
24	44	.5581	.3115	.0029	.3780	24
25	27	.5602	.3130	.0024	.3087	25
26	24	.5618	.3156	.0018	.2292	26
27	25	.5645	.3187	.0031	.3942	27
28	2	.5666	.3211	.0024	.3086	28
29	38	.5685	.3232	.0021	.2701	29
30	8	.5698	.3247	.0015	.1877	30
31	20	.5707	.3257	.0011	.1312	31
32	26	.5731	.3284	.0027	.3345	32
33	28	.5743	.3298	.0013	.1640	33
34	14	.5750	.3306	.0008	.0988	34
35	18	.5756	.3314	.0008	.0914	35
36	35	.5760	.3318	.0004	.0502	36
37	39	.5770	.3329	.0011	.1311	37
38	16	.5775	.3335	.0006	.0638	38
39	40	.5778	.3338	.0003	.0398	39
40	13	.5780	.3341	.0003	.0351	40
41	3	.5782	.3343	.0002	.0207	41
42	9	.5783	.3344	.0001	.0108	42
43	46	.5784	.3345	.0001	.0124	43
44	17	.5785	.3346	.0001	.0101	44
45	12	.5785	.3346	.0000	.0010	45
46	1	.5785	.3346	.0000	.0000	46
47	47	.5785	.3346	.0000	.0001	47

(refer to Appendix IV for identification of variables entered)

*significant at $p < .05$

**significant at $p < .01$

Attitudes

More than 58% of the total sample felt that the laundry facilities were not kept as clean as they preferred (Table 8). This variable was entered into the regression equation in step 4, and was significant at $p < .05$. This shows that the groups with dirty laundry areas were also very dissatisfied with the conditions of the area.

Insert Table 8 about here

Group I had a greater number of subjects that felt there was one person in the building that was more concerned about neatness than the rest. However, the total sample revealed very little difference in opinion (Table 9).

Insert Table 9 about here

More people were satisfied than dissatisfied with their present neighbors, but the difference was small (Table 10). A greater proportion of the sample did not find it uncomfortable to live so close to their neighbors (Table 11). In Group III, however, the relationship was reversed, but the difference was minute.

Insert Table 10 about here

Insert Table 11 about here

Table 8

Attitudes: Appendix I, Part III, Question 3

	Group I	Group II	Group III	Total
	%	%	%	Sample
Is the laundry kept as neat or clean as you would like it?	(N=41)	(N=37)	(N=38)	% (N=116)
yes	51.22	32.43	39.47	41.38
no	48.78	67.57	60.53	58.62
TOTAL	100.00	100.00	100.00	100.00

Table 9

Attitudes: Appendix I, Part III, Question 5

	Group I	Group II	Group III	Total
	%	%	%	Sample
Do you feel there is any one person in the building more concerned about neatness?	(N=41)	(N=37)	(N=38)	% (N=116)
yes	60.00	41.18	45.95	45.55
no	40.00	58.62	54.05	50.45
TOTAL	100.00	100.00	100.00	100.00

Table 10

Attitudes: Appendix I, Part III, Question 6

	Group I	Group II	Group III	Total
Are there people in your building you would choose not to live around?	% (N=41)	% (N=37)	% (N=38)	Sample % (N=116)
yes	36.59	44.44	34.21	38.26
no	63.41	55.55	65.79	61.74
TOTAL	100.00	99.99	100.00	100.00

Table 11

Attitudes: Appendix I, Part III, Question 7

	Group I	Group II	Group III	Total
Do you find it uncomfortable to live so close to your neighbors?	% (N=41)	% (N=37)	% (N=38)	Sample % (N=116)
yes	29.27	35.14	51.35	38.26
no	70.73	64.86	48.65	61.74
TOTAL	100.00	100.00	100.00	100.00

Items 3 and 4 on the questionnaire listed eight characteristics of the residence to which the subjects were to indicate a like or dislike. Six of these eight characteristics were the same as Michelson (1970) used to determine satisfaction in a housing environment. He presented a formula for determining the "Satisfaction Index" (SI) from these items. It was as follows:

$$SI = \frac{\# \text{ of satisfactory items} \times 100}{\# \text{ of satisfactory items plus} \\ \# \text{ of unsatisfactory items}}$$

Michelson's formula was applied to items 3 and 4 of this thesis questionnaire and the SI was arrived at. Group I (clean laundry room) had a SI of 29.004, Group II (average laundry room) had a SI of 33.831, but Group III (dirty laundry room) had a SI of only 11.737. These results were in support of the hypothesis stated in this thesis that the level of satisfaction or dissatisfaction with the environment will be reflected in the treatment of the physical environment.

Discussion

Physical Environment

The relationship of the physical environment to the satisfaction of occupants is the first factor examined in this thesis. In computing the SI for each of the three groups in the study, it is evident that the residents maintaining a cleaner laundry area were also satisfied with a greater number of other physical attributes of their residential environment. Since all the apartments are identical, and the size of the households are all similar, this would indicate that once the minimum space requirement is met, satisfaction with the residential environment is determined by factors other than the attributes of the physical space itself. Satisfaction with the physical environment is more complex than providing for the physical and spacial needs of the occupants. Human behavior and attitudes toward the environment are influenced by a variety of factors both physical and social.

Social Environment

The results of this thesis are not detailed enough to make conclusive statements regarding the optimum social environment in a multiple dwelling unit arrangement such as married student housing. However, this research has profiled the type of family that seems more concerned about the upkeep of shared space. These student families were younger on the average, had a greater percentage of graduate students, had rented private homes rather than apartments prior to moving to student housing, their families were larger, and the women

has less time committed to full time activities outside the home. These results are in agreement with those of a pilot study (Leonard, 1973) using subjects from another area of Montana State University married student housing. The population samples for the pilot study were from eight two-story buildings with eight two and three bedroom units in each building. Each building had one communal laundry room with two washers and two dryers provided for the residents. This investigator re-evaluated these laundry facilities again two years later using the same instrument and obtained nearly identical scores to the ones obtained in the pilot study. The population was not resampled, but it is unlikely that they would also be identical since the turnover rate for this, and most any other, married student housing is quite high.

This would indicate a "culture" or "tradition" being established within each building that new residents find difficult to deviate from. Since it would be a rare instance that all apartments in a building would have a complete turnover of tenants at once, it is quite feasible that some sort of "culture" gets passed from one "generation" of tenants to the other.

Management

It would be an enormous task to screen and properly assign occupants to each dwelling unit, but it is suggested here that one apartment next to each laundry room be reserved for occupancy by a "resident

manager." Such a unit could either be reduced in rent, or the occupants be in some way compensated. These "resident managers" should be married women and their husbands preferably graduate students. These women should not have full time work outside the home, nor be full time students. Women who spend more time at home have the opportunity to develop friendships and acquaintances with neighbors, which contributes to residential satisfaction. The results of this thesis show that in the groups having a more orderly laundry area, the women, do not have full time commitments outside, they spend more time in social contact with their neighbors. This would allow for the extension of the personal and home space into communal areas. With this extended home space, there would be more concern about the condition of that space. As long as the personal, social, and home space is confined to the dwelling unit itself, there is no need for the sustenance organization and adaptations in the areas outside the home.

This thesis recommends further research into issues specifically relevant to management of married student housing. Records can be collected showing the maintenance cost of each dwelling unit as tenants move in and out. If the factors affecting the maintenance of the private areas are able to be manipulated as are ones affecting conditions of shared areas, the management may benefit by the reduction of repair costs, and the occupants would be more satisfied with their residential environment.

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Appendixes

Appendix I

Residential Satisfaction Survey

January 1976

PART I

1. How many bedrooms do you have in your apartment? _____

2. Does the residence seem large enough to meet your needs?
____ Yes
____ No

3. Of the following, which quality(s) do you like about living here?
____ storage space
____ size of rooms
____ furniture provided
____ outdoor play area for children
____ floor plan
____ appliances provided
____ proximity to campus
____ proximity to shopping

4. Of the following, which quality(s) do you dislike about living here?
____ storage space

- size of rooms
- furniture provided
- outdoor play area for children
- floor plan
- appliances provided
- proximity to campus
- proximity to shopping

5. How long have you lived in this building? _____

6. How much longer do you plan on living in this building? _____

7. How many people, or families, in your building are you acquainted with?

- none
- less than half
- about half
- more than half
- all of them

8. How much time do you spend in social or recreational activity (or just visiting) with the people in your building?

- never
- once weekly
- 2-3 times weekly
- 4 or more times weekly

9. Please check as many categories as are applicable about the activities of both heads of household (i.e., spouses, or parents). In the case of single parent families, please cross out the column that does not apply.

ManWoman full time student full time student part time student part time student work full time work full time

outside the home

outside the home

 work full time at home work full time at home work part time work part time

outside the home

outside the home

 work part time at home work part time at home

PART II

1. What university classification does the responsible party hold? ("Responsible party" means the person to whom the apartment is rented.)

 faculty staff grad student with assistantship grad student undergraduate other: explain _____

2. How many people live in your household?

_____ one

_____ two

_____ three

_____ four

_____ five or more

3. What are the ages of the children, if any? _____

4. What is the age of the head of household? (In this instance, "head of household" refers to a single parent, or the father in a two parent family, or the husband in a marriage.)

_____ 18 - 25

_____ 26 - 35

_____ 36 - 45

_____ over 45

5. What type of residence did you live in before coming to school?

_____ own house

_____ rent house

_____ rent apartment

_____ with parents

_____ other: explain _____

6. What was your annual family income before coming to school?

(Or parents income if you lived with parents.)

under \$5,000

\$5,000 - \$6,999

\$7,000 - \$8,999

\$9,000 - \$10,999

\$11,000 - \$12,999

over \$13,000

PART III

1. Are the residents of your building expected to do any cleaning or upkeep of the laundry room or other communal facility?

Yes

No

Don't know

2. Does your lease agreement state what the residents are responsible for as far as regular maintenance or upkeep? (e.g., keeping the porches clean, shoveling snow off of sidewalks, replacing lightbulbs in outside lights or other communal facilities.)

Yes

No

Don't know

3. Is the laundry room kept as neat or clean as you would like?

Yes

No

4. Do you feel that everyone is doing their share as far as upkeep or community facilities such as yard, sidewalks, and laundry room nice for others?

Yes

No

5. Do you feel that there is any one person in the building that is more concerned about neatness and appearances of the communal facilities than the other residents?

Yes

No

6. Are there people in your building, that you see or speak with on occasion, that you would choose not to live around if you had that choice?

Yes

No

7. Do you find it uncomfortable to live so close to your neighbors?

Yes

No

Appendix II

Laundry Room Evaluation - Grant Chamberlain Drive

1. Lint in floors
2. Shelves dusty or cluttered
3. Dirt tracks on floors
4. No waste basket
5. Washer tops with detergent spills
6. Dryer tops with dust or lint
7. Dryer filters full
8. Washer tubs and agitators soiled

Appendix III

This survey is part of a Masters Thesis in Environmental Psychology at Montana State University. Your responses to this questionnaire will be used to study the kinds of families (size, age, income, etc.) that live in your neighborhood, and how satisfied they are with the housing they were assigned to.

It should take no more than fifteen minutes of your time to complete this questionnaire, so please don't be discouraged by its length. All responses will be completely confidential, and will be identified only by the building number. In order to get an accurate evaluation of the whole neighborhood it is important that as many questionnaires be returned as possible.

I will come around to your door to collect the survey on January 29 and 30. Thank you for your cooperation.

Appendix IV

Identification of Variables Used in the Data Analysis

<u>Variable #</u>	<u>Item</u>
1	no. of bedrooms
2	enough space
3	like storage space
4	like size of rooms
5	like furniture
6	like outdoor play area for children
7	like floor plan
8	like appliances
9	like proximity to campus
10	like proximity to shopping
11	length of residence to present
12	anticipated length of residence
13	number of acquaintences in building
14	time spent in social contact with neighbors
15	full time student--man
16	part time student--man
17	work full time--man (outside home)

<u>Variable #</u>	<u>Item</u>
18*	work full time--man (at home)
19	work part time--man (outside home)
20*	work part time--man (at home)
21	full time student--woman
22	part time student--woman
23	work full time--woman (outside home)
24	work full time--woman (at home)
25	work part time--woman (outside home)
26	work part time--woman (at home)
University Classification	
27	faculty
28	staff
29	graduate student with assistantship
30	graduate student
31	undergraduate
32*	other
33	number of people in household
34	age of head of household

Variable #Item

Previous Residence

- | | |
|------|------------------------|
| 35 | own house |
| 36 | rent house |
| 37 | rent apartment |
| 38 | with parents |
| 39** | other |
| 40 | income prior to school |

Knowledge of Rules and Expectations

- | | |
|----|---|
| 41 | Are the tenants expected to do
upkeep? |
| 42 | Does lease agreement state
responsibility? |

Attitudes

- | | |
|----|---|
| 43 | Is laundry clean as you would like? |
| 44 | Is everyone doing their share of
upkeep? |
| 45 | Is one tenant more concerned
about neatness? |
| 46 | Are there neighbors you would
choose not to live by? |
| 47 | Are you uncomfortable with close
neighbors? |

Variable #Item

48***

laundry room conditions

- * Less than 2% of the population fell into these categories. It is felt that these items are not applicable for man.
- ** The "other" type of residences specified were mainly trailer houses. One respondent indicated a dwelling provided by an employer at a ranch, another three indicated a dormitory.
- *** The laundry room rating was such that the higher the number, the worse the existing conditions.

