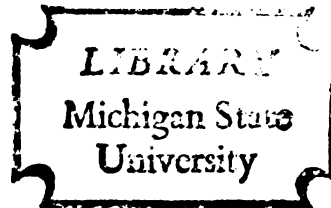


STUDENT PERCEPTIONS OF IMPORTANT
FACTORS IN SINGLE STUDENT HOUSING

Thesis for the Degree of Ph. D.
MICHIGAN STATE UNIVERSITY
CHESTER RANDOLPH TITUS
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This is to certify that the
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Student Perceptions of Important Factors
in Single Student Housing

presented by
Chester Randolph Titus

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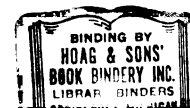
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Major professor

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ABSTRACT

STUDENT PERCEPTIONS OF IMPORTANT FACTORS IN SINGLE STUDENT HOUSING

By

Chester Randolph Titus

The purpose of the study was to identify what students perceive to be important elements of satisfactory housing arrangements. The basic hypothesis was that significant differences do exist in these perceptions among the various academic and residential groupings of students.

To test the null hypotheses subsequently generated, the perceptions of housing characteristics held by male students at the University of Virginia were surveyed during the academic year 1968-69. A 10 per cent random sample with a final 92 per cent response provided a base of 555 male students.

The survey instrument used was designed to give a broad view of student desires and opinions and contained eighty-seven items. Only certain areas of the questionnaire (twenty-four items) were used for this study. Most of the selected items were grouped to provide the five

principal variables, referred to throughout the study as the Five Student Needs: (1) Supervision and/or control, (2) Privacy and/or quietness, (3) Freedom to manipulate the social environment, (4) Freedom to manipulate the physical environment, and (5) Personal study space.

The scores on the questionnaire items were weighted so that the lower score indicated the more emphatic response. They were grouped under the five categories indicated, and converted to standard scores with a mean of 100 and a standard deviation of 10. An analysis of variance routine was used to test for significant differences. The findings showed that some differences did exist but that not all of them were significant.

There were significant differences between the students at the three academic levels and their perceived needs for Freedom to Manipulate the Social and the Physical Environment. Significant differences were not found for the three academic levels, on the other scales of Supervision, Privacy, and Personal Study Space.

The significant differences observed between the on-campus and off-campus groups apply only to upperclass and graduate students. The freshmen do not have a choice of residence so their data was not included in this comparison.

The off-campus group rated significantly stronger in their perceived need for Privacy, Freedom to Manipulate the Social Environment and Freedom to Manipulate the

Physical Environment. The on-campus group rated stronger on the perceived need for Supervision and Personal Study Space, but the difference was not statistically significant.

Analysis of the data on Source of Financial Support revealed no significant differences on any of the scales.

Significant differences were found in the Place of Study most frequently used by the three academic levels. The graduate group made least use of their rooms for study purposes and overall the freshmen made most use of theirs. Graduate students made significantly more use of the library than either of the other groups. On the whole the off-campus group made significantly less use of the student room and more of the living room and the library than did the on-campus group. The most frequent place of study overall was the student's own room.

The key implication may well be that there is no optimal study space or optimal housing space but that there must be space constructed for people who in this case are students.

STUDENT PERCEPTIONS OF IMPORTANT FACTORS
IN SINGLE STUDENT HOUSING

By

Chester Randolph Titus

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A work of this sort is seldom the result of one person's efforts and this thesis is no exception. I regret that it is not possible to acknowledge all the help received.

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CHAPTER I

INTRODUCTION

College supervised or operated housing was initiated in the early years to provide some measure of security for the entering students whose usual age was only thirteen or fourteen years. About the middle of the nineteenth century, however, most American institutions of higher education concluded that it was not worth the trouble and ceased to provide housing for students (Shay, 1964). A few institutions (especially the women's colleges that had opened after the Civil War) continued their dormitory operations in spite of difficulties.

At the end of the nineteenth and the beginning of the twentieth century there was a resurgence of interest in student housing. This was due to a strong desire on the part of the supporters of American higher education to have students educated in a democratic institution with a suitable moral atmosphere. It was believed the college administrators could provide this through control of space assignments and the enforcement of living regulations.

There has been a more or less continuous development of college housing as an important part of the extra curriculum ever since.

Dr. Ruth Useem (1966) identified four periods of development in college housing and referred to them as: the Dormitory Period (up to World War II)--a period of accumulating traditions, centralized activities, and separate men's and women's dormitories; the Disjunctive Transitional Period--a period typified chiefly by the innovation of married student housing; the Traditionless Period (1950-65)--a period of larger buildings with professional managers, decentralized services, increasingly standardized high quality facilities, and "rules" generated out of a need to protect investments; and the Period of Instant Traditions (1965-)--a time for experimental environmental arrangements.

Much of the housing constructed over the years has been built to satisfy administrative requirements and provide a warehousing kind of operation for students while they attend the school. It has not been really directed at providing a living space for students (Riker, 1965). Housing questions are usually related to how many students can be accommodated in how much space, not how much or what kind of space do students need.

A construction committee is usually called to plan for new housing and it typically consists of some member

of the faculty, a representative of the business office, the architects, and someone representing the housing operation. Very seldom does the planning team include a student or a behavioral scientist charged with representing the future residents (Miller, 1968). All too often even the housing representative is omitted.

It is true that these committees sometimes receive information from sources outside the committee, sometimes even from students themselves. Most often this additional information is in the form of a critique of existing structures. In the final analysis whether or not any suggested changes are adopted is largely a "matter of economics" (Marshall, 1968).

The major portion of the committee's time is spent in discussing time schedules, economies to be realized by making certain changes, and the durability or usability of materials. Unbelievably little time is spent in considering life within the area being planned.

It is unlikely that the planning process will change much in the foreseeable future, but some improvement must be made in the end result. History has shown rather conclusively that educational institutions are not very productive if they fail to meet what students perceive to be basic needs (Rudolph, 1962).

Two reasons more consideration has not been given to actual student needs has been a lack of readily

available, quantified or empirically derived information on students and their needs, and an assumption that there was an average student that could somehow be described and built for. The body of information on student characteristics is growing and the concept that any one precise housing unit will comfortably fit all students is being discarded (Van Der Ryn and Silverstein, 1966).

The important factors of territoriality and the effects of space on individuals is also being explored. Not enough of this thinking has yet penetrated to planners to have had any real effect however, and very few experimental models exist.

The situation is further complicated by there being little or no agreement on what the goal of housing should be. In the absence of such agreed upon goals it is difficult to gauge whether or not housing is achieving its objectives.

It seems to follow that since no particular method or arrangement of housing has been clearly shown to be superior to others, and students in substantive numbers across the country are trying to avoid occupying dormitory spaces prepared for them, further investigation is warranted. A logical area for study would seem to be the perceptions of the problem as held by the users--in this case dormitory residents.

It is hoped that the present study will add to the body of information about the needs of residential students and help define the kind of an environment they feel would be most beneficial and satisfying.

Purpose

The purpose of this study is to identify what students perceive to be some important elements of satisfactory housing arrangements and to explore the relationship of these stated needs to the student's present place of residence, his academic level, and source of financial support. A further purpose is to identify the present place of study and explore its relationship to the student's place of residence and academic level.

Hypotheses

- I. Students at the three general levels of academic maturity (freshman, upperclass undergraduate, graduate) have a significant difference in their perceived needs for:
(1) Supervision and/or control, (2) Privacy and/or quietness, (3) Freedom to associate, or manipulate the social environment, (4) Freedom to manipulate the physical environment, and (5) Personal study space.

Educational institutions for years have tried different groupings of classes within housing programs and

although logic would seem to justify an assumption of difference due to age and experience, reports on trial arrangements have not been consistent.

II. Those students who choose to live off-campus and those who choose to live on-campus have significant differences in their perceived needs for: (1) Supervision and/or control, (2) Privacy and/or quietness, (3) Freedom to associate, or to manipulate the social environment, (4) Freedom to manipulate the physical environment, and (5) Personal study space.

Several writers and researchers have indicated that there is a difference between those students who choose to live off-campus and those who choose to live on, but no one has really identified the difference. It can be assumed that students feel such housing will better satisfy at least some of their needs otherwise they would not have chosen to live there.

III. Students, whose parents have assumed total financial responsibility for their education, favor housing that offers supervision and control while students without parental financial support prefer housing that does not.

Students paying even part of their own expenses are likely to demonstrate their emancipation by stating a preference for housing principally in private accommodations where they can more fully accept responsibility for their own affairs; those whose parents are covering all costs may accede to their parents' desires even when they honestly prefer independence and tend to state a preference for housing that is supervised and controlled.

IV. (A) The place of study used most frequently by students is related to their academic level (freshman, upperclass undergraduate, graduate).

(B) The place of study used most frequently by students is related to whether they live on-campus or off-campus.

One possible difference among students may be their varying study needs and it seems reasonable to assume that if there are differences, they will be related to the student's academic level and place of residence.

Overview

In Chapter II pertinent literature is reviewed on three broad bases. The first is a general background including what has been seen in the part as both values and disadvantages of institutionally owned single student housing. The second consists of reviews of the most

current research closely related to the present study. The third addresses literature on various theories of space and territoriality with emphasis on more recent publications. A summary is given in the final section.

In Chapter III the design of the current study is presented. The chapter contains a description of the sample, the questionnaire, the survey techniques used, and a statement of the hypotheses in testable form. This chapter also includes a description of the subtests generated from the basic questionnaire and a description of the statistical measures applied.

Chapter IV contains the analysis of the results. The findings are tabulated, and their significance is noted. A statement on the hypotheses is included.

CHAPTER II

LITERATURE REVIEW

Much has been written over the years by experts and others on various aspects of student housing but only rarely has an integrative work such as a book been produced. In fact, books on housing have averaged only about one each decade (Fairchild, 1963). As a result, the literature lacks fullness and only represents piece-meal attacks on what many people now consider a major facet of higher education.

It is reasonable to assume that in some of the research and thinking student opinion has been considered, but there is little evidence that student reactions have been very often systematically sought and utilized in planning student housing. The literature refers to changing residential concepts, type of existing housing facilities, living-learning theories, and the effects of room-mates and dormitory groupings. Even the most comprehensive published works, however, make no pretense of measuring student desires. Most of the literature reflects a change in educational philosophy, from an early one of

almost total separation of residence from academic pursuits, to one in which residences play a significant role in academic success and in the total development of the individuals.

The American Council on Education's Committee on Student Personnel Work in 1950 prepared one of the most comprehensive general studies (Strozier, 1950). It gave detailed consideration to the basic issues that must be dealt with if student housing is to become a more integrated aspect of the educational systems in colleges and universities. It did not deal with architectural or constructional problems.

Riker's Planning Functional College Housing (1956) describes the development of American college housing and provides a comprehensive view of both the theory and practice of building student housing, and shows how the two should be brought together in planning construction.

In a symposium on housing in higher education, E. G. Williamson and W. M. Wise (1958) present a comprehensive discussion of what student housing can and should do for the life of a student. The authors suggest five basic facets of student life that must be considered in any discussion of housing--academic, economic, social, emotional, and recreational. None can be ignored in developing an adequate program.

Another publication (Riker, 1961) describes some actual building that has taken place in recent years and

is replete with illustrations and floor plans, and covers many possibilities from room decorations to kitchen equipment.

Shaffer and Foster (1965) provide a good look at changing residential concepts and make a strong case for the residential college.

In these publications as in much of the rest, the emphasis appears to be on the needs of the college first and the student second, whereas better results might well be achieved by reversing the priorities. If the needs of students as people could first be met and then the school's needs overlaid on that base, the resulting whole would be more effective.

Riker's monograph on College Housing as Learning Centers (1965) seems to place more emphasis than previous writings on student needs and at any rate is an excellent overview of the vital role of residence halls in the educational process.

Regarding the learning and living aspects of higher education, an effective synthesis of educational and community values can be obtained but an integrated system has to be developed for that purpose (Brownell, 1959). Considering the impact of college on student and student on student it is apparent that residential life creates an educational force of its own, which works upon each student individually and all of them collectively (Thistlewaite, 1959).

As an extension of this kind of thinking some schools developed living-learning models, and one of the most active has been Michigan State University. Several articles have been written concerning its living-learning centers since 1962 (Adams, 1967; Centra, 1966; Olson, 1964, 1966) and on at least one occasion (Olson, 1964), a survey of student opinion was used as a base. The results seemed to justify the continuance of having both classes and instructors nearby, the presence of the opposite sex, and the relaxed atmosphere appeared to be the three most significant elements in the favorable response. The importance of maximizing student-faculty contact has long been stressed and the role of residential centers in stimulating this contact is a very important one (Shaffer, 1959).

A large portion of the literature is devoted to studies of various residential arrangements, roommate selection, characteristics of students, and academic achievement. There appears to be little consistency and Feldman and Newcomb in their substantial work The Impact of College on Students (1969) point out that the impacts from residential settings have been little studied and most differences that have been discovered can be attributed to the forces on self selection.

In spite of this some useful information may be derived from a review of typical material. Some of the literature suggests, for instance, that grouping students

in the same academic area may be conducive to both academic production and satisfaction with living arrangements (DeCoster, 1966; Brown, 1968; Elton and Bate, 1966).

Several writers conclude that the institution in its dormitory operations provides residents with a supportive community that off-campus students lack. Alfert (1966) made special reference in his study to drop-outs and their needs while others drew similar conclusions based on either tests (Dollar, 1966; Baker, 1966) or an overall study of student development in which residences were used as reference points (Chickering, 1967).

Stern (1965) in his research showed that schools could be described or categorized on four bases: (1) student characteristics, (2) college characteristics, (3) college cultures, and (4) intellectual climate. Centra (1966) at Michigan State University found that freshmen and upperclassmen, both men and women, differed in their rating of an environment as being intellectual. Other researchers have concluded that while there appear to be substantial differences between on-campus and off-campus students the differences are not clearly identified (Lindhahl, 1967).

Some of the literature serves as a critique of selected housing types or model housing facilities. It is observed for example that the living-learning centers at Michigan State University are fulfilling their purposes (Adams, 1967) and that co-educational residence halls

provide great opportunity for individual growth and more efficient use of space, although not everyone would benefit from such an experience (Greenleaf, 1962). One writer (Fairchild, 1963) describes how to evaluate the effectiveness of any residence hall program on the basis of physical plant, people, and their pursuits. Another author (Marshall, 1968) writes of surveying student opinion on new housing. She qualifies the usefulness of such information by stating that economics will really determine what changes if any, are made in future housing plans.

Many articles are written on what is now planned for construction or has been recently built at various institutions, thus providing averages for the guidance of planners (Crane, 1962).

On occasion a writer addresses the problem of constructing the ideal dormitory and one such writer indicates that the ideal dormitory is most likely to be the next one rather than the one just built. He claims that there is no universal model. Each one must be carefully planned to reflect knowledge and institutional needs, as foreseen, at the time it is built (Goltz, 1967).

The literature overall suggests that institutional residences should be planned to stimulate or at least allow each student to grow and to develop his potential. The availability of comfortable surroundings that he can call his own is important to this development. Easy



student-faculty and student-student contact is also important. The residential community should be constructed to provide identity and foster participation in the residential life.

One point that is made in the literature is the need for diverse group involvement in the planning and execution stage. The point is repeatedly made with particular reference to students themselves. However, there is no indication constructive use of students has been made to any realistic degree. Even including a representative from the behavioral sciences on the planning team is a rare event (Miller, 1968).

Related Research

Student opinion is only rarely solicited in determining what housing is needed, but there have been some notable exceptions. It is acknowledged that institutions occasionally make informal surveys to test the student climate, but these seldom produce ideas that are implemented.

Three examples of research using student responses are cited because they add significantly to the background of housing information and they will serve as reference points for the present study.

Student Reaction to Study
Facilities--Amherst

The first study was conducted in 1959 at four Massachusetts schools and addressed the problem of study facilities and student reaction to them. This study grew out of a larger cooperative study in which the four schools involved attempted to devise a new imaginative institution to which they all would contribute. It is not aimed directly at housing but it has strong implications for one facet of it.

The researchers attempted to determine "what kinds of study spaces were used by students, why they used them, and what they would prefer."

The sample included sophomores, juniors, and seniors of both sexes drawn from the four schools and distributed over the major divisions of study, type of residence, and preparatory school attendance.

The heterogeneity of four different institutions, residences, and diversity of libraries, rules, regulations, etc., was deliberately sought in the hope that either contrasts would show up, or that generalizations would appear which would have high validity and wide application because they existed in such diverse conditions (Stoke, 1960).

Three major sources of information were used:

(1) a diary of study times and places kept by each participant over a four-day period, (2) the recorded comments of the participants, and (3) a questionnaire completed by each member of the sample group. A 49 per cent response was obtained.

The researchers found that approximately 48 per cent of all study time was spent in student rooms. Interestingly they also found that proportionally more time was spent studying in the room when two people were sharing it than when a student had a room to himself.

Although there were several who preferred to study in large active areas, the vast majority (approximately 75%) preferred small spaces where they could study alone or with one or two others.

Most students also wanted to study in a place where nothing but studying was going on at the time.

The study concluded that in any new dormitory there should be some special room to allow those who wished to study outside of their rooms to do so, and that the school as a whole should provide a variety of study spaces.

This study seems to have been carefully constructed and reported and is one of the very few utilizing systematically acquired student opinion as a base and providing data that can have meanings for other schools.

An Environmental Analysis-- Berkeley

The second study was conducted under the stimulus of the 1964-65 student protest movement at Berkeley and sponsored by the Educational Facilities Laboratories (Van Der Ryn and Silverstein, 1967). The authors, who are both in the department of architecture, constructed a

research design incorporating questionnaires, interviews, observations, and diary or log keeping. They gathered information from various samples of dormitory residents regarding their reactions to environments and their activities. This study focused on the qualitative aspects of student-housing design. The findings are reported in seven major areas.

The Institutional Syndrome is one in which personal choice is limited and group living parameters are already set; distribution and designation of space is determined by the administration but it does not necessarily coincide with the needs or uses of the residents; spaces are constructed to serve an ideal student but actually there may be at least four kinds of subcultures, and thus four ideal students to serve. Both Van Der Ryn (1967) and Stern (1965) identify these four groups as basically collegiate, academic, non-conformist, and vocational.

Personal Environment refers to the need of individuals to have a space of their own in which they can be by themselves, have their own possessions and be quiet. This study showed for instance that when allowed to do so, "94 per cent of the sample group arrange furniture completely on one side of a hypothetical line that splits the room into two equal halves."

The Social Environment either aids or hinders social intercourse. Most construction assumes an ideal configuration (such as one that places two men to a room,

six rooms to a suite, and four suites to a corridor and lounge). It is hoped that there will be overlapping groups, but since the numbers are really arbitrary and most students belong to many groups, the chances of guessing an optimum arrangement is not good. Furthermore, "the size of the dormitory complex is often determined by the number of mouths required to consume the output of an efficient central kitchen."

The Study Environment was found to be a major cause for moving out as stated by 67 per cent of the dissatisfied students. Most students prefer to study in their rooms in spite of too small desks. This study also indicates that there are four levels of studying, from casual to intense, and arrangements for all cannot be expected in residence halls. The use of the residence halls for study will probably relate to what other facilities are available so study facilities should be studied on a campus wide basis.

Meals and snacks points up the need for a variety of dining environments so that the person who wants to eat a quick meal can do so, while the casual diner can take his time and eat where he can meet others. The authors identify five different eating patterns none of which fit present facilities very satisfactorily.

The Intellectual Environment defined as easy faculty-student contact needs imaginative implementation.

There appears to have been much discussion of the problem but very little action.

In Loco Parentis includes all those rules and regulations that inhibit or restrict students' behavior. Frequently institutions have been more restrictive than parents. Perhaps most important is that dormitories have been constructed on that philosophy with restricted access, and clear definition between public and private areas. Problems develop when attitudes and life styles change and buildings cannot.

In a final phase of their study the authors suggest some design proposals which demonstrate a concern for the whole community, of which the institution is only a part; and the whole institution of which housing is an obvious part, to the end that students receive the kind of housing they need. They finally even suggest that non-profit student housing cooperatives should be encouraged because the students know their own needs better than the institution does.

The Residence Halls Study--
Michigan State University

The third study was conducted at Michigan State University in 1968 under the auspices of the Provost and was designed to consider the quality of residence hall life and the place of the residence hall system in the university.

Four different questionnaires were constructed covering various fields of emphasis: physical facilities, staffing, rules and regulations, and living-learning.

One-fourth of the residents of each hall received one of the questionnaires so that all questionnaires were equally distributed among the resident population and each resident received one of the four. Each of the questionnaires were used on approximately 4,250 residence hall students. In all a total survey population of 17,000 was used.

The response to all questionnaires was approximately 30 per cent for the university as a whole, however, there was considerable variation among the areas and even greater variation among the individual halls. The least return being 18 per cent and the greatest 71 per cent.

The findings as presented in the committee report are general in nature and usually refer to majorities or minorities rather than to specific percentages. They do report specifically, however, that more than 72 per cent of the respondents study in their rooms.

On occasion characteristics appear to be attributed to the entire population that more clearly refer to the respondents. The report is not always clear in whether its references are to student questionnaire response or opinions of staff or individual students. Comments are made about the respondents as a whole, so they are much

more meaningful than conclusions about smaller groupings of the respondents would be.

The findings showed that students are satisfied with much of the physical facilities, but want more in the way of quiet study space, freedom to manipulate their own rooms, and a higher degree of privacy.

In the regulations part of the report the committee concluded that "when personal relationships are good they are the best thing that happens in the living experience at college. When they are bad, their badness is seen as the one thing most to be condemned."

There was in general a favorable reaction to living-learning centers as they are evolving at Michigan State University and the students felt that they should be continued with increasing emphasis on personal relations.

These three studies have been reviewed because they are some of the best and most recent research related to housing. They also are three of the very few systematized efforts made to gather and use student housing opinion.

Space and Territoriality

The concept of personal space and/or territoriality has been known to students of animal behavior for many years but only recently has there been an attempt to apply the concept to human behavior. Two writers have been particularly active in synthesizing and contributing work in

this area. Edward T. Hall's work with the concept of what he calls "proxemics" or man's use of space observed from an anthropologist's point of view provides many useful insights. Robert Sommer as a psychologist has conducted a great deal of research on individual and group use of space and reaction to it and has very recently published a book that has many implications for college housing.

A look at the ideas of these two men supported by the works of others may provide some insight into the baffling, inconsistent reactions of students to past efforts to provide them with adequate housing. Even though institutional representatives spend hours in consultation with architects to plan new construction, the results frequently do not seem to satisfy the student tenants.

Proxemics

Hall works from a biological base to depict how man not only interprets what he sees but also only perceives that which his system is trained to perceive. For instance cultural differences allow the Japanese to accept paper walls as acoustic screens while the Germans require thick walls and doors.

Hall expands on the work of Carpenter (1958) and others and applies the concepts of territoriality to the human realm. Unlike Ardrey (1966) he feels that while territoriality has a biological base and reaction is chiefly on the subconscious level its stimuli, expressions,

and manifestations are culturally determined. He draws lessons from the rat experiments of Calhoun (1962) to demonstrate that some kind of social organization is necessary, but that the particular organization will depend on many variables. He explores the human perceptors of space (eyes, ears, nose, skin, and muscle) and describes how each has evolved to receive and interpret stimuli in accordance with cultural patterning.

Hall shows that space is determined by all the senses so that it is possible to talk about visual and auditory space, affactory space, thermal space, and tactile space.

Hall (1963) coins the word proxemics and defines it as the interrelated observations and theories of man's use of space. In developing his system he speaks of behavior on three levels: infra-cultural, that which is rooted in man's biological past and is on a lower organizational level underlining culture; the pre-cultural or sensory base which is physiological and very much in the present; and finally the micro-cultural level where most proxemic observations are made.

Translating behavior from one level to another is important but it is also very difficult. As Hall demonstrates in his book The Silent Language (1959), it is virtually impossible to examine with precision something occurring on two levels simultaneously. He uses the example of a child being reprimanded by his mother,

who in the middle of her tirade says, "Gee mommy your lips move funny when you're mad." Speechlessness at such a time is a normal reaction. It is obvious that man as well as all other organisms is redundantly programmed and depends on receiving information from one system to back up information received from another. Hall's study model of proxemics is further refined into three aspects: fixed-feature, semi-fixed feature, and informal space.

He refers to fixed-feature space or territory as that which is usually well defined by a fence or wall or lot line or designation such as "bedroom"; semi-fixed-feature space as that established by the placing of furniture for example; and informal space as that immediately significant for the individual, but generally out of awareness even though it has distinct patterns.

It is informal space that holds perhaps greatest significance for planners and may at the same time be the biggest obstacle to satisfactory design.

The general failure to grasp the significance of the many elements that contribute to man's sense of space may be due to two mistaken notions: (1) that for every effect there is a single and identifiable cause; and (2) that man's boundary begins and ends with his skin. If we can rid ourselves of the need for a single explanation, and if we can think of man as surrounded by a series of expanding and contracting fields which provide information of many kinds, we shall begin to see him in an entirely different light (Hall, 1966).

With this thought in mind it is possible to conceive of each person having, in addition to the many common types of personalities such as introvert and extrovert, a number

of learned situational personalities such as those associated with intimate, social, or business transactions.

Hall includes as part of his proxemic system for classifying behavior four action distances, each one having a close and far phase, and all based on the hypothesis that:

It is the nature of animals, including man, to exhibit behavior which we call territoriality. In so doing, they use the senses to distinguish between one space or distance and another. The specific distance chosen depends on the transaction; the relationship of the interacting individuals, how they feel, and what they are doing. The four-part classification system used here is based on observations of both animals and men (Hall, 1966).

In evaluating architecture or the structures designed for people, it is important to look at them as if man were surrounded by a series of invisible bubbles which have measurable dimensions. It is possible for people to be cramped by the spaces in which they live and work and also forced into behavior, relationships, or emotional outlets that will be overly stressful.

"One of man's most critical needs appears to be principles for designing spaces that will maintain a healthy density, a healthy interaction rate, a proper amount of involvement and a continuing sense of ethnic (and personal) identification" (Hall, 1966).

Hall is referring to cities but with the addition of "personal identification" it is equally applicable to residence halls planning.

Personal Space

In the preface to his book Sommer (1969) says the term "personal space" has two usages: one refers to the emotionally charged zone around each person and the other refers to the processes by which people mark out and personalize the spaces they occupy.

He points out that territoriality is valuable from a social organization point of view, since it allows members of the society to locate themselves in it in the absence of some dominance or social status criteria.

He makes frequent references to the four types of territory distinguished by Lyman and Scott (1967). Public territories such as parks and lounges which provide free access. Home territories which are public areas taken over by groups or individuals. Interactional territories where social gatherings may occur (these have clearly marked boundaries and rules of access). Body territories which are most private and inviolate and belong to the individual. They also distinguish three types of encroachment: violation (unwarranted use of the territory), invasion (the physical presence of an intruder), and contamination (rendering an area impure in respect to its designation). The differentiation in type of space and encroachment are important because they require or elicit various degrees and types of responses.

Sommer conducted some interesting experiments in libraries, on invasions of personal space from which he concluded that individual distances vary somewhat among individuals but follow a general pattern. He also concluded that an important consideration in determining whether or not an invasion had actually occurred depended on the parties perceiving one another as persons. In the animal kingdom invasions apparently require that the invader be of the same species, intrusion by members of other species may be ignored.

Sommer's work in a hospital ward, where he rearranged chairs and observed the patient's reactions, provide some insight into the possibilities inherent in territorial behavior. Patients who failed to respond to most other stimuli responded to territorial intrusions.

Sommer (1968) found in his research that some of the best places to escape from people are out of doors. There is little reason that places outside cannot be developed with some visual screening and comfortable seating, perhaps even tables high enough to write on, with clips for papers. Such spaces would probably not be used for research or hard study but there seems to be little doubt that they would be used for study.

He also found that asking people what they want in the way of an environment helps overcome institutional alienation and depersonalization even when their desires could not be carried out.

In reference to college housing Sommer's research revealed that only a small amount of studying took place at the student's desk. In a separate study on the subject he found that whether a person studies most on the bed or at the desk had no appreciable affect on his grade point average (Gifford and Sommer, 1968).

He concluded that college housing must reflect the fact that different sorts of students have different sorts of needs. The same facilities will not satisfy the introverts and the extroverts or the loners or the group studiers. There is no optimal study environment for all students. On the other hand the research indicates that when students encounter inadequate facilities, grades do not necessarily go down. The students search out other places causing misuse and sometimes overuse of other facilities.

Another chief concern in dormitories is improved privacy. This too can mean many things to many people and range all the way from absolute freedom from noise and disturbance to merely being ignored in a crowded area.

There are two basic ways in which student housing needs can be met, one is by building in flexibility and the other is by providing variety.

In a changing world it seems reasonable to establish variety and flexibility as important goals in a building program. I do not propose substituting them for harmony, unity, balance, rhythm, excitement, or the other traditional design values. Both variety and flexibility inherently increase the range of individual choice. A necessary corollary of these two values is

that we must establish institutional arrangements--rules, procedures, and personnel practices--that enable individuals to exploit the variety and possibilities for flexibility in their environment. By variety I mean a multiplicity of settings and spaces a person can select to suit his individual needs. . . . The same principle can be applied to other design elements; rather than installing benches of one kind or size in parks and recreation areas, it is preferable to vary one's purchases and arrangements. Flexibility is expressed in such terms as multipurpose, multiuse, and convertible spaces. With rapidly changing technology and the inability to predict institutional practices even five years ahead, its importance seems obvious. It is closely tied in with personalization since it permits a man to adapt a setting to his unique needs.

If people say they like something or show by their behavior that they prefer it, this should be a value fed into the design process even though it cannot be proven that this makes a difference on a profit-and-loss statement or an academic record (Sommer, 1969).

It is apparent that some aspects of student life have not been receiving the attention that their significance to students would warrant. Knowledge of the presence of these aspects has not been unknown, however. At least as early as 1948 it was understood that there were three groups of human criteria necessary to proper understanding of space--functional, sensory, and psychological. The study of functional space was well understood but measuring perceptual or psychological space was found to be very difficult (Smith, 1948).

Even some very recent studies have been unable to empirically identify territorial action or show its relationship to any other variables. Workers in residences, however, have subjectively distinguished territorial behavior and have observed apparent relationships (Eigenbrod, 1969).

The importance of these other dimensions in addition to physical comfort is highlighted by the work of Fried and Gliether (1961) in studying urban slums. They concluded that there was a high degree of residential satisfaction present in many areas and a chief element in this was the ability of the people to identify themselves as belonging somewhere. The significant space for them was not limited to the apartment or house but included such things as the shared street and stairways. It was further defined by meaningful relationships.

It seems obvious that as Sommer has said all people are builders, creators, molders, and shapers of the environment; and that what man is and wants is really the best yardstick for measuring success.

Summary of the Literature

The literature on housing is singular in that there have been very few books published and relatively few other publications that could serve in an integrative capacity. The general literature describes existing facilities or programs, refers to concepts of desirable housing arrangements and the way they have changed over the years, or explores and describes a particular facet of housing. A considerable number of references have been made to living and learning centers as viable answers to many student problems.

Although Feldman and Newcomb feel that most differences that have been discovered cannot be attributed to differences in housing there does seem to be some agreement within the literature. [Several writers feel that satisfying housing will prevail when there is an atmosphere in which the individuals feel free of undue restrictions both socially and psychologically and one in which there is also a degree of academic stimulation. Some also feel that providing comfortable surroundings for the individuals to the extent that they enjoy being there will produce satisfactory housing. Some others feel that there is a need for small or carefully constructed groups devised in such a way that all students can identify with at least one.]

In spite of the repeated statement by many writers that students should be involved in the planning of future housing most direction is given by administrators who decide apriori what students need or want. Only rarely has anyone indicated that students or someone representing them has been constructively involved in planning.

There have been a few instances of research, however, where student opinion or ratings or behavior has been the vital characteristic.

At Amherst in 1960 researchers investigating student study facilities found that in general students preferred their own small place of study. They reported their

findings emphatically. The need for the development of individual study spaces in dormitories and libraries has been strongly supported by this report ever since.

A study at Michigan State University in 1968, on the other hand, attempted to look at residence hall life in its many aspects and perhaps because of that lost some of its impact. The findings were not precisely reported, but they were generated from a base of approximately 5,000 students. In general, [the students gave a high priority to quiet study space, privacy, and freedom to manipulate their own rooms.]

A composite study at Berkeley not only produced some new information, but more importantly, according to the authors, substantiated or documented some of the available knowledge of students such as [study habits, need for privacy, and feelings about the impersonality of institutional housing.]

Since clear answers to what student housing should be, cannot be derived from literature aimed directly at the student housing industry, literature in the area of space and its effects on people was also reviewed.

The works of two people provided the basic material, Edward T. Hall an anthropologist, and Robert Sommer a psychologist. Hall expounds a theory of "proxemics" which he explains as "the interrelated observations and theories of man's use of space." His chief concern is in developing

a system that will help organize and make useful the knowledge of how man behaves. He feels that if people can go beyond the idea that each affect has a single cause and that man's boundaries begin and end with his skin some real understanding of man's sense of space may develop. Hall uses his knowledge of biology and his study of several foreign countries and their cultures to illustrate his points.

Sommer, using some of the same basic ideas, but using examples and research on people who presumably share the same broad American cultural base, shows how people use and react to space. He also shows how they establish and defend boundaries. He stresses that there is no optimal study space and there is no optimal housing space.

There seem to be two basic ways in which diverse student housing needs can be met. One is by building a maximum amount of flexibility into any structure designed to house students. The other is in building a variety of housing spaces so that there can be a choice.

CHAPTER III

METHOD OF THE STUDY

The perceptions of housing characteristics held by male students at the University of Virginia were surveyed during the academic year 1968-69 to determine whether or not a pattern of perceptions existed. Housing policy imposed some limitations on the study in that all freshman students were required to live on campus and the three major class groups of freshman, upperclass, and graduate students were housed separately.

Sample

A 10 per cent random sample of the single non-first year students (both graduate and undergraduate) attending the University of Virginia at Charlottesville during the fall semester 1968-69, and a 10 per cent random sample of the single first year (freshman) students attending during the spring semester 1968-69, served as the base group. The freshman sample was surveyed during the second semester so that they would have at least one semester in residence.

At the time of the survey female students were not admitted to the University as freshmen so none were included

in that sample. They were drawn with the upperclass and graduate sample but since they were so few in number they were omitted from the study.

The Registrar's report showed 5,470 non-first year (freshman) students in the fall semester 1968-69 so the initial group contained 547. The Registrar likewise indicated 1,428 freshmen so 143 students were included in that sample.

Since married students were excluded from the initial sample group, whenever one was drawn the name was discarded and a new name (using the next random number) was selected.

The sample group included male, freshman, upper-class-undergraduate, and graduate students and those living off-campus as well as those living on. It was assumed that because of the controlled random sampling technique the sample was representative. Furthermore since the student body was 45 per cent out of state and approximately 40 per cent out of the region, generalizations may not have to be completely limited to the University of Virginia population. Ninety-three per cent of the upperclass/graduate group (a total of 423 men) and 92 per cent of the freshman group (a total of 132 men) responded. The total response to the survey was 555 out of 600, or 92.5 per cent.

Instrument

A questionnaire (Appendix A) was constructed containing information that both administrators and students felt to be important in considering desirable housing. It was pre-tested on a small group of students (23 members of student council) who were asked to make any comments or criticisms they wished in addition to filling out the questionnaire.

The questionnaire contained eighty-seven items, one-third of which were basically demographic in nature, and two-thirds were items calling for ratings on a five position scale. The questions ranged from those concerning physical requirements to those concerning desired social or living arrangements.

The questionnaire was designed to give a broad view of students, and their desires and opinions regarding housing. For the purposes of this study only certain areas of the questionnaire were used (Appendix B).

Procedure

Each questionnaire was given an identifying number so that a follow-up would be possible.

A packet was made up for each person in the sample groups. Each packet consisted of a questionnaire, a personally addressed letter (Appendix C) (each one signed by the Director of Housing), and a stamped return envelope. Each person was asked to respond within ten days. A

follow-up card was sent out to those who had not responded by that time.

The members of the upperclass undergraduate and graduate group were initially contacted by mail and a final telephone contact was made with those who did not respond to the post card follow-up.

The members of the freshman group (since they all lived in dormitories) were handed their packet by the counselor for their area. This man also made a final contact with those who did not respond to the post card reminder.

Hypotheses

The hypotheses to be tested were restated in the null form.

Hypothesis I. Students at the three general levels of academic maturity have no significant difference in their perceived need for supervision and/or control.

Hypothesis II. Students at the three general levels of academic maturity have no significant difference in their perceived need for privacy and quietness.

Hypothesis III. Students at the three general levels of academic maturity have no significant differences in their perceived need for freedom to manipulate the social environment.

Hypothesis IV. Students at the three general levels of academic maturity have no significant differences in their perceived need for freedom to manipulate the physical environment.

Hypothesis V. Students at the three general levels of academic maturity have no significant difference in their perceived need for personal study space.

Hypothesis VI. Students who choose to live off-campus and those who choose to live on-campus have no significant differences in their perceived need for supervision and control.

Hypothesis VII. Students who choose to live off-campus and those who choose to live on-campus have no significant difference in their perceived need for privacy and/or quietness.

Hypothesis VIII. Students who choose to live off-campus and those who choose to live on-campus have no significant differences in their perceived need for freedom to manipulate the social environment.

Hypothesis IX. Students who choose to live off-campus and those who choose to live on-campus have no significant differences in their perceived need for freedom to manipulate the physical environment.

Hypothesis X. Students who choose to live off-campus and those who choose to live on-campus have no significant differences in their perceived need for personal study space.

Hypothesis XI. Students whose parents have assumed total financial responsibility for their education and those students without parental financial support show no difference in their preference for supervision or control.

Hypothesis XII. The places of study used most frequently by graduate, upperclass, and freshman students are not significantly different.

Hypothesis XIII. The place of study used most frequently by students living on-campus is not significantly different from the places used most frequently by students living off-campus.

Definition of Student Needs

The five student needs that served as the principal variables were operationally defined as the ratings given to selected questionnaire items consolidated into five groups (Appendix B). These were an expression of the importance the individual assigned to various facets of a housing environment.

Supervision and/or control.--A rating of the need for controls instituted by either the institution or students.

Privacy and/or quietness.--Ratings on privacy, single rooms, private baths and entrances and living with a few close friends.

Freedom to manipulate the social environment.--A scale of the importance assigned to freedom to entertain the opposite sex and separate housing for men, women, schools, and classes.

Freedom to manipulate the physical environment.--A rating of movable furniture, permission for refrigerators, television, and telephones, freedom to decorate own space, and easy access to meals.

Personal study space.--A rating of the importance of providing for study in student rooms, and the provision of quiet study rooms.

Analyses

The scores were weighted so that the lower score indicated the more emphatic response and they were grouped under the five categories indicated. The grouped responses were converted to standard scores with a mean of 100 and a standard deviation of 10. A repeated measures analysis of variance routine was used to test overall differences under each hypothesis. When significant differences were shown to exist within the group a one-way

analysis of variance was used to produce F ratios for the sub-groups. When the F ratio was significant and the subgroup contained more than two variables a Scheffe post hoc comparison was made to determine significance.

The university's computer was used in analyzing the data.

CHAPTER IV

RESULTS

The chief result of this study was the identification of some differences in perceived needs among various groupings of students. Several of the differences were found to be statistically significant at the .05 level, the level at which the hypotheses were to be accepted or rejected.

Five Student Needs

As indicated in the method section student perception data were grouped to form five variables which were referred to as Five Student Needs. These were cross correlated and the results are shown in Table 1.

The very low correlation coefficients indicate that the Five Student Needs are only slightly related. They thus appear to be describing different factors. The highest correlation (.32) exists between Privacy and Freedom to Manipulate the Physical Environment both of which have a physical characteristic base.

Note: It must be borne in mind in interpreting the data on the Five Student Needs that low standard scores indicate strength and that high scores indicate proportionally less strength.

TABLE 1.--Cross correlation table on Five Student Needs.

	Group 1	Group 2	Group 3	Group 4	Group 5
Group 1 Supervision and Control	1.00				
Group 2 Privacy and Quietness	0.13	1.00			
Group 3 Freedom to Manipulate Social Environment	-0.10	0.08	1.00		
Group 4 Freedom to Manipulate Physical Environment	0.02	0.32	0.25	1.00	
Group 5 Personal Study Space	0.25	0.25	-0.04	0.12	1.00

A review of Table 2 shows that while graduate students feel less strongly about the need for Supervision and much more strongly about the need for Privacy than the upperclass and freshman students, there is no statistically significant difference (at the .05 level) among the groups on those items, or on the perceived need for Personal Study Space either.

The F ratios in Table 2 clearly show that significant differences beyond the .01 level do exist within two of the groups. Applying the Scheffe method of post hoc comparison revealed that there was a significant difference between the freshmen and both graduate and upperclass students in their perceived needs for Freedom to Manipulate the Social Environment. There was not a significant difference between the graduate students and the upperclassmen. The freshmen felt very strongly that they should have such freedom.

Regarding Freedom to Manipulate the Physical Environment, use of the Scheffe test again revealed that while freshmen scored strongest on this item also, they were not significantly different from the upperclass students. Both freshmen and upperclass students, however, scored significantly stronger than the graduate students. Figure 1 graphically shows these relationships.

The data presented in Figure 2 and Table 3 derive from upperclass and graduate students only. Freshmen at this institution were required to live on-campus. They

TABLE 2.--Five Student Needs and academic level (mean standard scores).

	1 Supervision & Control	2 Privacy & Quietness	3 Freedom to Manipulate Environment		5 Personal Study Space
			Social	Physical	
Freshman N=132 (Standard Deviation)	99.74 (10.0)	100.79 (9.7)	97.67 (9.3)	98.16 (9.7)	100.54 (9.4)
Upperclass N=301 (Standard Deviation)	99.47 (9.9)	100.47 (10.0)	100.71 (10.1)	99.72 (10.1)	99.84 (10.3)
Graduate N=120 (Standard Deviation)	101.62 (10.2)	98.11 (10.3)	100.78 (10.3)	102.72 (9.6)	99.81 (10.1)
F Ratio	2.04	2.81	4.78**	6.93**	0.25
Scheffe Comparisons:					
Upperclass-Graduate			0.07	3.00**	
Graduate-Freshman			3.11**	4.56**	
Freshman-Upperclass			3.04**	1.56	

**Significant at .01 level.

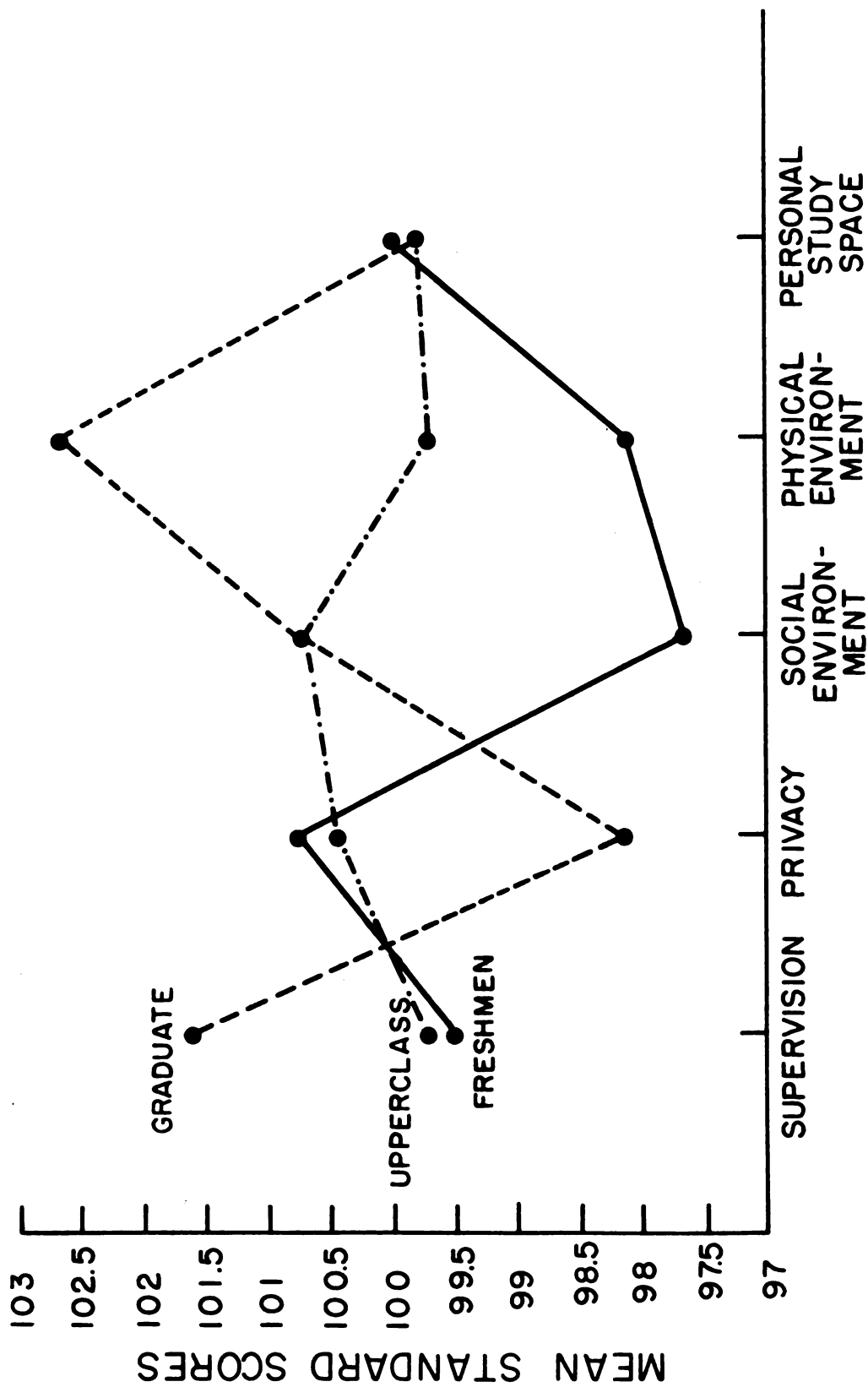


FIGURE I. FIVE STUDENT NEEDS AND ACADEMIC LEVEL

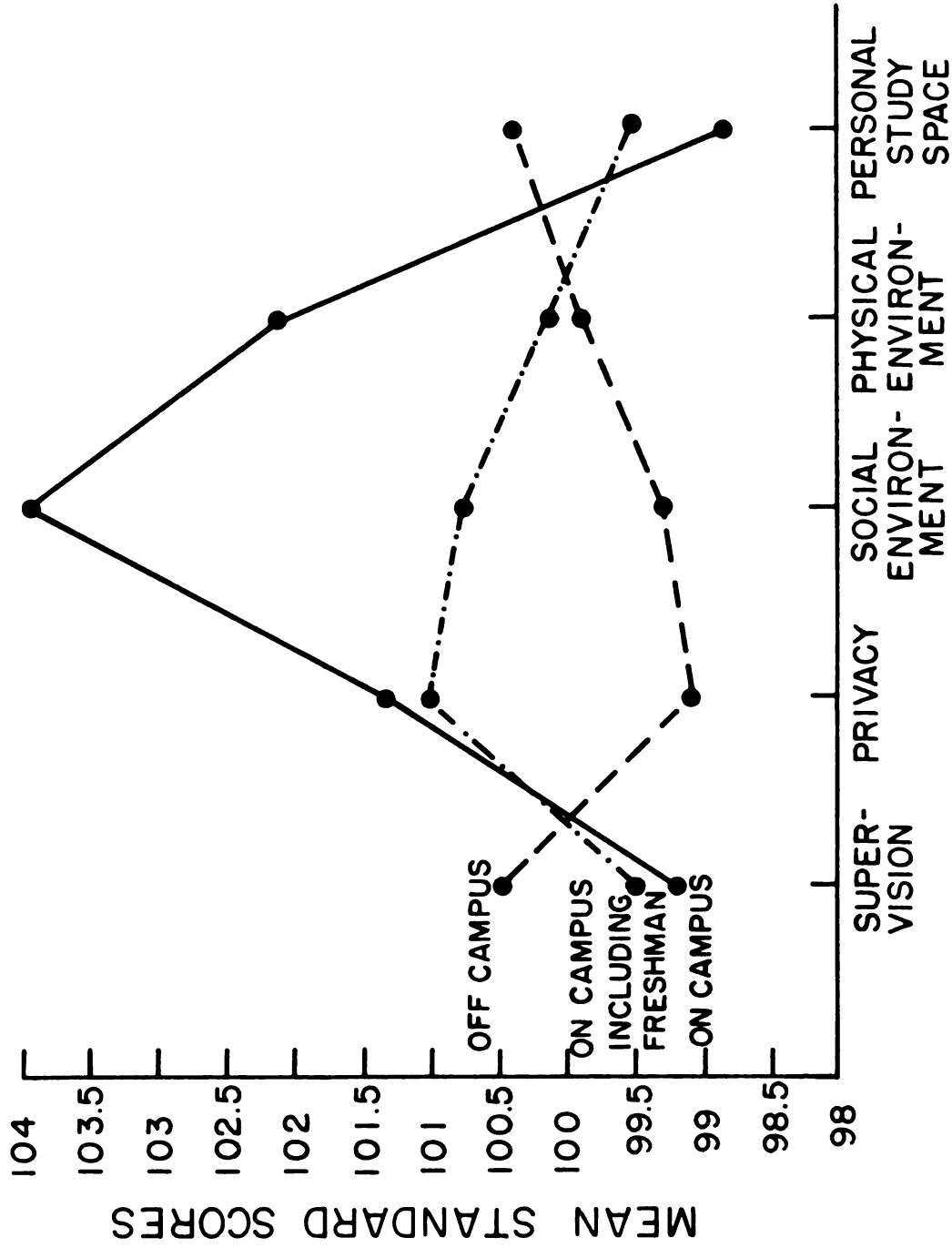


FIGURE 2. FIVE STUDENT NEEDS AND PLACE OF RESIDENCE

TABLE 3.--Five Student Needs and place of residence (mean standard scores of upperclass and graduate).

	1 Supervision & Control	2 Privacy & Quietness	3 Freedom to Manipulate Environment		5 Personal Study Space
			Social	Physical	
On-Campus N=128 (Standard Deviation)	99.19 (9.5)	101.30 (10.7)	103.96 (11.7)	102.09 (10.9)	98.60 (9.1)
Off-Campus N=293 (Standard Deviation)	100.47 (10.2)	99.08 (9.8)	99.32 (9.0)	99.92 (9.6)	100.37 (10.6)
F Ratio	1.47	4.36*	19.57**	4.20*	2.68

*Significant at .05 level.

**Significant at .01 level.

were not allowed a choice between on-campus and off-campus housing. Including their scores with the on-campus group could severely bias the response and obscure any meaningful differences. Freshman scores were consequently omitted.

The F ratios shown in Table 3 indicate that while upperclass and graduate students residing on-campus perceived a greater need for Supervision and Control and for Personal Study Space they were not significantly different from off-campus residents in this regard. Off-campus residents in the sample rated three items significantly higher than the on-campus residents. These were their perceived needs for Privacy and Freedom to Manipulate the Physical Environment which were significantly different at the .05 level, and their perceived need for Freedom to Manipulate the Social Environment which was significantly different at the .01 level.

Figure 3 illustrates the lack of significant differences in perceived needs between those students who receive financial support from parents and those who do not. The standard scores are presented in Table 4. The repeated measures analysis of variance produced overall F statistics (Table 5) that were not significant at the .05 level so no further analysis was undertaken. In addition to not supporting the hypothesis linking source of finances with attitude toward supervision the data revealed no significant difference related to any of the five needs.

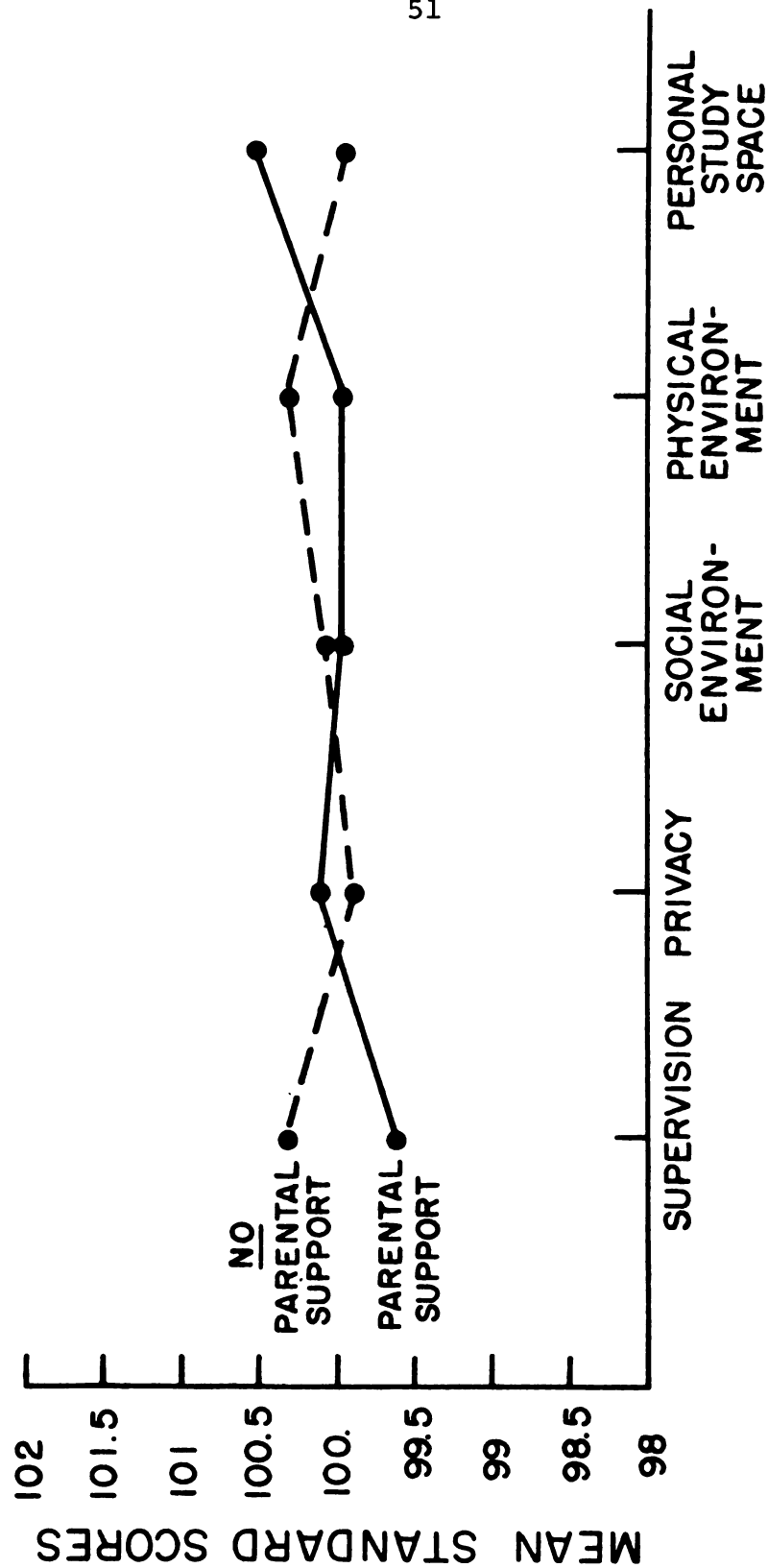


FIGURE 3. SOURCE OF FINANCIAL SUPPORT AND FIVE STUDENT NEEDS

TABLE 4.--Five Student Needs and source of financial support (mean standard scores).

	1 Supervision & Control	2 Privacy & Quietness	3 Freedom to Manipulate Environment		5 Personal Study Space
			Social	Physical	
Parental Support N=254	99.62	100.14	99.93	99.66	100.53
No Parental Support N=299	100.32	99.88	100.06	100.29	99.55

TABLE 5.--Analysis of variance table for Five Student Needs and source of financial support.

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F Statistic
Groups	1.27	1	1.27	0.008
Sub-Groups	83927.09	551	152.32	
Repeated Measures		4		
Repeated Groups	266.27	4	66.57	0.763
Repeated Sub-Groups	192309.39	2204	87.26	
Total	276503.02	2764		

Place of Study

The data on Place of Study differs from that on the Five Student Needs in that it is reported in terms of mean percentage of study time rather than standard scores, therefore the larger figure represents the stronger response.

From the data presented in Table 6 and Figure 4 it can be seen that freshmen spent approximately 60 per cent, upperclassmen approximately 50 per cent, and graduates approximately 40 per cent of their study time in their own rooms. Just the reverse order held for the library with freshmen spending approximately 8 per cent, upperclassmen spending 15 per cent, and graduates spending 30 per cent of their study time there.

The low percentage shown for freshman study time in the living room may be partially explained by the lack of such spaces in freshman residences and a decision early in the study to incorporate the time spent in main lounges in the Other category. The F ratios and the Scheffe post hoc comparisons indicate that all the differences noted are significant at much less than the .01 level.

In an additional analysis limited to just the on-campus group (Table 7) it was found that significance differences between academic levels in the use of the living room as study space disappeared. The use of the library remained virtually unchanged from that of the whole group, but the use of student rooms shifted somewhat.

TABLE 6.--Place of study and academic level (mean percentage of study time).

	Own Room	Living Room	Library	Other
Freshman N=132 (Standard Deviation)	60.60 (32.4)	4.69 (12.8)	8.02 (18.6)	26.70 (30.2)
Upperclass N=301 (Standard Deviation)	53.71 (34.8)	18.78 (28.3)	14.78 (23.0)	12.70 (21.8)
Graduate N=120 (Standard Deviation)	39.68 (35.5)	12.22 (25.6)	29.42 (32.6)	17.85 (30.4)
F Ratio	12.18**	15.14**	15.28**	13.33**
Scheffe Comparisons:				
Upperclass-Graduate	14.03**	6.57**	14.64**	14.00**
Graduate-Freshman	20.92**	7.53**	21.40**	5.15**
Freshman-Upperclass	6.89**	14.10**	6.76**	8.85**

**Significant at .01 level.

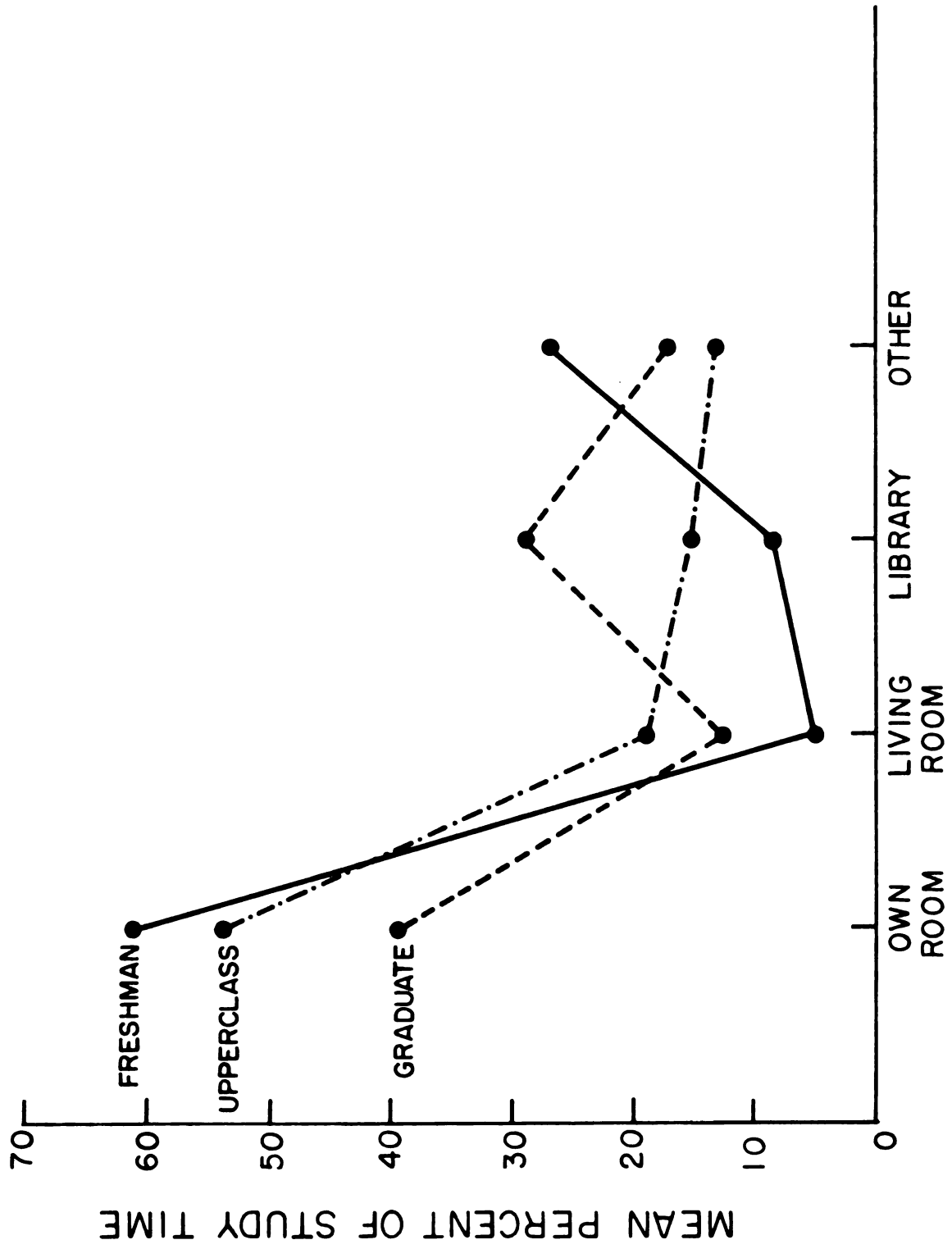


FIGURE 4. PLACE OF STUDY AND ACADEMIC LEVEL

TABLE 7.--Place of study (on-campus) and academic level (mean percentage of study time).

	Own Room	Living Room	Library	Other
Freshmen N=132 (Standard Deviation)	60.60 (32.4)	4.69 (12.8)	8.02 (18.6)	26.70 (30.2)
Upperclass N=301 (Standard Deviation)	67.54 (31.2)	8.43 (18.0)	10.75 (19.7)	13.28 (20.4)
Graduate N=120 (Standard Deviation)	49.22 (34.7)	7.96 (19.3)	29.80 (31.1)	13.02 (24.2)
F Ratio	4.81**	1.65	18.42**	8.49**
Scheffe Comparisons:				
Upperclass-Graduate	18.32**		19.05**	0.26
Graduate-Freshman	11.38**		21.78**	13.68**
Freshman-Upperclass	6.94**		2.73**	13.42**

**Significant at .01 level.

Analysis of the whole group showed freshmen using their rooms the most (60%), and graduates the least (40%).

Analysis of the on-campus group alone showed upperclassmen making the most use of their rooms as study space (67%) and graduates still the least but with a higher percentage (49%).

Table 8 and Figure 5 show that there are significant differences in the place of study for those living off-campus and those living on. Sixty per cent of the study time on-campus was spent by students in their own room and only 45 per cent was spent there by off-campus dwellers. The amount of study time spent in living rooms and the library was much less for the on-campus students than it was for those who lived off-campus. Once again in all cases significant differences were found at well below the .01 level.

Statement of Hypotheses

The statistical analysis of the data provides the basis for the following conclusions regarding the hypotheses:

Hypothesis I. Students at the three general levels of academic maturity have no significant difference in their perceived need for supervision and/or control. Failed to reject.

TABLE 8.--Place of study and place of residence (mean percentage of study time).

	Own Room	Living Room	Library	Other
On-Campus N=260 (Standard Deviation)	60.56 (33.0)	6.44 (15.9)	12.95 (23.2)	20.04 (27.2)
Off-Campus N=293 (Standard Deviation)	44.99 (35.3)	20.69 (30.1)	19.35 (27.2)	14.61 (25.8)
F Ratio	28.55**	46.66**	8.75**	5.81**

**Significant at .01 level.

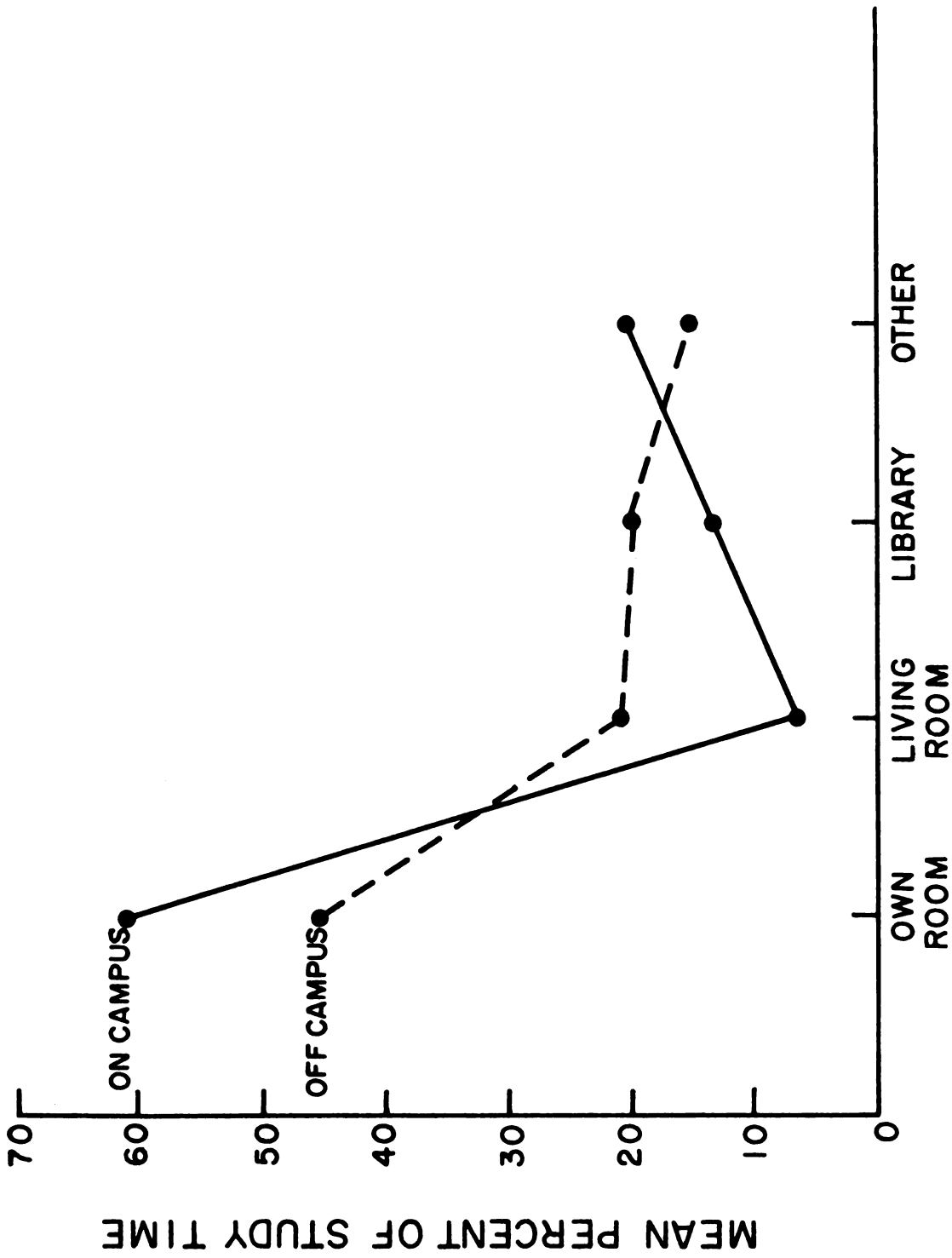


FIGURE 5. PLACE OF STUDY AND PLACE OF RESIDENCE

Hypothesis II. Students at the three general levels of academic maturity have no significant difference in their perceived need for privacy and quietness. Failed to reject.

Hypothesis III. Students at the three general levels of academic maturity have no significant differences in their perceived need for freedom to manipulate the social environment. Rejected.

Hypothesis IV. Students at the three general levels of academic maturity have no significant differences in their perceived need for freedom to manipulate the physical environment. Rejected.

Hypothesis V. Students at the three general levels of academic maturity have no significant difference in their perceived need for personal study space. Failed to reject.

Hypothesis VI. Students who choose to live off-campus and those who choose to live on-campus have no significant differences in their perceived need for supervision and control. Failed to reject.

Hypothesis VII. Students who choose to live off-campus and those who choose to live on-campus have no significant difference in their perceived need for privacy and/or quietness. Rejected.

Hypothesis VIII. Students who choose to live off-campus and those who choose to live on-campus have no significant differences in their perceived need for freedom to manipulate the social environment. Rejected.

Hypothesis IX. Students who choose to live off-campus and those who choose to live on-campus have no significant differences in their perceived need for freedom to manipulate the physical environment. Rejected.

Hypothesis X. Students who choose to live off-campus and those who choose to live on-campus have no significant differences in their perceived need for personal study space. Failed to reject.

Hypothesis XI. Students whose parents have assumed total financial responsibility for their education and those students without parental financial support show no difference in their preference for supervision or control. Failed to reject.

Hypothesis XII. The place of study used most frequently by graduate, upperclass, and freshman students is not significantly different. Rejected.

Hypothesis XIII. The place of study used most frequently by students living on-campus is not significantly different from the places used most frequently by students living off-campus. Rejected.

CHAPTER V

SUMMARY

A great deal has been written about the needs of students and the importance of housing in the educational scheme, but there is very little concrete evidence that the concern expressed by authors has been shared or implemented by college and university administrators.

Perhaps one reason more consideration has not been given to actual student needs has been the lack of readily available, quantified, or empirically derived information on students and their needs. Another reason may be the assumption that there is an average student that can somehow be described and built for. Several writers have identified at least four distinct types of students so that kind of thinking is even weaker than it used to be.

In reference to the research that has been done, Feldman and Newcomb in their book the Impact of College on Students concluded that, most of the differences discovered among groups of variously housed students could not be attributed to differences in housing, but only to the working of a selection process.

Several authors contend, however, that satisfactory housing usually prevails when individuals feel free from undue restrictions, when there is a degree of academic stimulation, when comfortable surroundings are provided, and when small groupings that allow all students to identify with at least one, are available.

Many authors have pointed out for a long time that students should be included in planning but that, like the long time acknowledgment of the important potential contributions of housing, has been largely ignored in practice.

There have been a few instances of research, however, where student opinion, or ratings, or behavior patterns have been the vital characteristic.

In Amherst in 1960 an investigation of student study facilities was undertaken. The researchers found that in general students preferred their own small place of study and they reported their findings emphatically. The need for the development of individual study spaces in dormitories and libraries has been strongly supported by this report ever since.

A study at Michigan State University in 1968 on the other hand attempted to look at residence hall life in its many aspects and perhaps because of its broad purpose some of its impact was lost. The findings were not precisely reported, but since they were generated from a base of approximately 5,000 students they should be considered. In general the students wanted more quiet study

space, freedom to manipulate their own space, and a higher degree of privacy.

A composite study at Berkeley in 1967 not only produced some new information but more importantly, according to the authors, substantiated or documented some of the available knowledge about students such as study habits, need for privacy, and feelings about the impersonality of institutional housing.

Since it was difficult to glean clear answers to what student housing should be, from literature aimed directly at student housing, literature on the effects of space on people was also reviewed.

Edward T. Hall's theory of "proxemics" which he explained as "the interrelated observations and theories of man's use of space" was of particular interest. Hall was concerned with the development of a system that would help organize and make useful, knowledge of how man behaves. He felt that if people could go beyond the idea that each effect had a single cause and that man's boundaries began and ended with his skin some real understanding of man's sense of space could develop. Hall used his knowledge of biology and his study of several foreign countries and their cultures to illustrate his points.

Robert Sommer, a psychologist, using some of the same basic ideas but using examples and research on people who presumably shared the same broad American cultural base, showed how people use and react to space, how they

establish and defend boundaries, how there are patterns of behavior but how the people continue to act as individuals. He demonstrated that there was no optimal study space and there was no optimal housing space. He concluded that there were two basic ways in which housing needs could be met, one was by building flexibility into structures and the other was by building a variety of spaces.

The purpose of the present study was to identify what students perceive to be important elements of satisfactory housing arrangements and the basic hypothesis was that significant differences do exist in these perceptions among the various academic and residential groupings.

To test the null hypotheses subsequently generated, the perceptions of housing characteristics held by male students at the University of Virginia were surveyed during the academic year 1968-69. A 10 per cent random sample, with a final 92 per cent response provided a base of 555 male students.

The survey instrument used was designed to give a broad view of student desires and opinions and contained eighty-seven items.

The information thus produced was not usable in its entirety so only certain areas of the questionnaire (24 items) were used for this study.

Most of the selected items were grouped to provide the five principal variables, referred to throughout the study as the Five Student Needs.

Supervision and/or control.--A rating of the need for controls instituted by either the institution or students.

Privacy and/or quietness.--Ratings on privacy, single rooms, private baths and entrances and living with a few close friends.

Freedom to manipulate the social environment.--A scale of the importance assigned to freedom to entertain the opposite sex and separate housing for men, women, schools, and classes.

Freedom to manipulate the physical environment.--A rating of movable furniture, permission for refrigerators, television and telephones, freedom to decorate own space, and easy access to meals.

Personal study space.--A rating of the importance of providing for study in student rooms, and the provision of quiet study rooms.

The scores on the questionnaire items were weighted so that the lower score indicated the more emphatic response and they were grouped under the five categories indicated. The grouped responses were converted to standard scores with a mean of 100 and a standard deviation of 10. A repeated measures analysis of variance routine was used to

test overall differences under each hypothesis and where significant differences were shown to exist within the group a one-way analysis of variance was applied to produce F ratios for the sub-groups. When the F ratios were significant and the sub-groups contained more than two variables a Scheffe post hoc comparison was made to determine the significance of each difference.

Conclusions

The findings showed that some differences did exist but that not all of them were significant.

There were significant differences between the three academic levels and their perceived needs for Freedom to Manipulate the Social and the Physical Environment. The freshman rating was the strongest on both scales but it was not significantly different from the upperclassmen on the Physical Environment scale. The upperclass and graduate groups were not significantly different on the Social Environment scale. On both scales the rank order was the same with freshmen strongest, upperclassmen middle, and graduate weakest.

Significant differences were not found for the three academic levels on the other scales of, Supervision, Privacy, and Personal Study Space.

The significant differences observed between the on-campus and off-campus groups apply only to upperclass and graduate students since all freshmen must reside

on-campus. The freshmen do not have a choice of residence so their data was not included.

The off-campus group rated significantly stronger in their perceived need for Privacy, Freedom to Manipulate the Social Environment and Freedom to manipulate the Physical Environment. The on-campus group rated stronger on the perceived need for Supervision and Personal Study Space but the difference was not statistically significant.

Analysis of the data on Source of Financial Support revealed no significant differences on any of the scales.

Significant differences were found in the Place of Study most frequently used by the three academic levels. The graduate group made least use of their rooms for study purposes and overall the freshmen made most use of theirs. When only the on-campus group was considered the upperclass group had a higher use than the freshmen.

Graduate students made significantly more use of the library than either of the other groups, but the three are arranged with the upperclassmen making moderate use and freshmen the least.

On the whole the off-campus group made significantly less use of the student room and more of the living room and the library than did the on-campus group. The most frequent place of study overall was the students' own room.

Discussion

Graduate students were found to perceive the least need for supervision and the greatest desire for privacy, they had a moderate concern for manipulating the social environment, were apparently indifferent to manipulating the physical environment, and were concerned for personal study space. In terms of place of study they spent the least time of the three groups in their own room (40%) but they spent approximately 30 per cent in the library (the highest amount of the three groups).

This appears to reflect a scholarly business-like attitude on the part of a person who does less than half of his studying in his room so sees little need for control and supervision. He is generally an adult so he wants his privacy, but does not become very concerned about the social environment, or the physical environment as long as neither interferes with normal living and studying.

The reason graduate students spend less time studying in their rooms than students at the other levels is partly explained by the nature of their work (more library research required), but it also may be that the facilities and environment for study are much better than those in his room.

The upperclass group felt strongly about the need for Supervision and Control (presumably by fellow students) and felt that both Freedom to Manipulate the Physical

Environment and Personal Study Space were also very important. Their concern for Privacy and Freedom to manipulate the Social Environment were not so great. The profile of this group is generally in between freshman and graduate and may reflect an increasing maturity. It may be generally true that upperclassmen are more concerned with exercising control over their own affairs.

The freshman group perceived a strong need for Freedom to Manipulate the Social and Physical Environment and for Supervision and Control. They showed less concern for Privacy and Personal Study Space. Perhaps it can be concluded that young freshmen in general need the more constant stimulation of others and that they have not reached the point in their studies where study space provided in their room is inadequate.

The more extensive use of living rooms by those students living off-campus may mean that the student rooms there are not as conducive to study as the student rooms in dormitories but it is more likely that the students living in apartments consider the whole place as the living unit and adapt the space to their own particular needs. In general dormitory dwellers are denied the privilege of adapting space to their use either by a rigid definition of the space by regulation, or accepted usage, or by physical arrangement.

In Hall's frame of reference much of dormitory existence is in fixed or semifixed feature space thus requiring a maximum of adjustment and a minimum of opportunity to establish individual territory.

Some dormitory space created and designated for a particular purpose, lies idle or is misused because the space is not perceived by the residents in the same way or for the same purpose as the planners. Recreation rooms are good examples since they can frequently be seen totally empty or with a single chair standing like a lonely sentinel. If they were ever furnished it was probably with the wrong kind of furnishings.

One of the important considerations in constructing spaces for people is that the space will force the people who inhabit it into certain patterns of behavior, relationships and emotional outlets. The biggest complaint about the conventional double room is that a person can never get away from his roommate.

Greater consideration should be given to the total residence hall as a living unit when planning is taking place. Instead of considering student rooms, lounges, and toilet facilities as totally separate units, the functions expected to be performed within the complete living cycle by numerous individuals needs to be identified and facilities built to accommodate them. The complete unit should encompass the out-of-doors space as well as the indoors

space. Sommer has pointed out the great loss suffered when outside facilities are not incorporated in the overall plan.

In considering the study uses of housing, one of the writers has cautioned that it is necessary to look at the whole campus and the study facilities available outside the residence halls before drawing conclusions.

Students have been known to set up their own study space in places like an unused shower area, or use a drawing board across a couple of lavatories for a desk. Such imaginative uses are discouraged in a dormitory but may be the person's effort to find his own kind of usable space and not necessarily reflect a lack of "normal" study spaces. If this kind of activity took place in an apartment it is unlikely that anyone would complain. Not only would an apartment type space in the private sector make possible more arrangements but it would also remove many restrictions to adaptation.

It may be significant that the freshmen, living in the most restrictive overall environment (they all live in university dormitories), expressed the strongest need for Freedom to Manipulate both their Physical and Social Environment.

It may also be significant that the off-campus students rated Privacy very strongly. Separate housing for academic purposes such as by class and school as recommended by some of the writers is not supported by the

reactions of students in this study. The moral may be that all academic programs may not satisfy student perceived needs. In the Michigan State University study, however, the students reacted favorably to living-learning centers with their academic selectivity and also felt that they were not limited in their associations with other students.

A contention in some of the literature was that the institution in its housing may play a supportive role for some students. This position was somewhat supported by the findings of this study in that on-campus residents consistently rated the need for Supervision and Control higher than the off-campus residents.

The greatest contribution of both Hall with his "proxemics" and Sommer with his "personal space" is a conviction that to try to build one mold for all students, to severely restrict the use of dormitory space to designated purposes, to fail to arrange for change and individualities both physically in the structure and constructively in the regulations, is to create a study in frustration eventually and to create pressures for students to seek other accommodations.

Implications

The categories used in this study were deliberately broad so that differences if any would be visible and sound conclusions could be drawn. The chief disadvantage of such an approach was that general answers were produced.

If Sommer is correct in his conclusion that the best solutions today seem to be in maintaining variety and in building-in flexibility, some guidelines or limitations need to be drawn. General conclusions drawn about what various groupings of students value most, may be very useful. One criticism of past studies has been that they are so refined that they can apply only to the specific situation and institution under study.

General descriptive statements also indicate areas in which further study might be profitable. The study was clearly descriptive and consequently the why questions are left unanswered except by implication.

More research is needed in identifying specifically the differences between on-campus and off-campus residents so that the differences identified in this study can be more clearly defined. Not enough is yet known about how people live and respond to various environments. It would be valuable to know for example whether the heavy use of the library by graduate students would be lessened if they all occupied single rooms.

The implications for planners is that in planning new housing they must concentrate on building for the needs of people first and students second rather than as in the past. The student planned for, was considered an average something and even his needs became confused with the needs of the institution.

It is essential in planning that a clear distinction be drawn between the needs of the student as a person and as a member of an educational institution where he is supposed to have certain experiences and perform certain tasks.

If it is agreed that one chief use of a student room is study (72% reported at Michigan State University, 48% reported at Amherst, 67% reported at University of Virginia) then planners should attempt to find out what constitutes a good study environment and plan the student room or complex accordingly.

It may be necessary to manipulate or structure the environment to achieve some educational goal but the institution must be aware of what happens when such moves are made.

The implications for administrators are that arbitrary regulations restricting residents' use of the facilities should be removed unless completely justified as necessary to preserve the structure. A re-evaluation of the purpose of housing is essential. It may be that maintenance budgets should be increased so that greater use of the facility can be allowed. That does not mean that malicious or deliberate damage would be tolerated but rather that more frequent redecoration or refurnishing might be scheduled.

Innovations in operation need to be encouraged, perhaps vacant rooms should be provided in which students could place cardboard furniture (some is already on the market) that they select from an inventory carried by the institution or some convenient supplier. They could purchase it at cost and then take it with them when they leave. On the other extreme an operation should be attempted with a complete learning cell such as that suggested by Solovy (1968) where the student only has to push buttons to acquire a taped lecture, a sandwich, or a television program. More should be attempted in terms of student management. Sommer favored the formation of student corporations to operate housing facilities and with proper cooperation from the institution such corporations should not only function effectively but could be a valuable learning experience as well.

There is no one solution to the problem of housing students and what has been done so far is not all bad. As shown in the Michigan State University study about 50 per cent of the students prefer what they now have. The key implication may well be that there is no optimal housing space but that there must be spaces constructed for people who happen to be students.

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APPENDICES

APPENDIX A

HOUSING QUESTIONNAIRE

HOUSING QUESTIONNAIRE

1. SCHOOL_____ 2. CLASS_____
3. AGE_____ 4. SEX_____
5. NUMBER OF COLLEGES-UNIVERSITIES PREVIOUSLY ATTENDED_____
6. MEMBER OF A FRATERNITY YES_____ NO_____
7. Married Yes_____ No_____
8. Going steady or engaged Yes_____ No_____
9. Expenses while attending the University are being covered by:
____Family paying practically all
____Self provided funds (including loans)
____Grants, fellowships and scholarships
____Combination of sources (please specify)_____
10. PRESENT RESIDENCE (please check one)
 - a. University owned
 - (1) McCormick_____
 - (2) Alderman_____
 - (3) Monroe Hill_____
 - (4) Lawns & Ranges_____
 - (5) Mary Munford or McKim_____
 - (6) Other (please specify)_____
 - b. Non-university owned
 - (1) Fraternity_____
 - (2) Apartment_____
 - (3) House_____
 - (4) Room in private home_____
 - (5) Other (please specify)_____
11. Do you share a room? Yes_____ No_____ How many share that room with you?_____
12. How many other people share rental costs and live in your suite, apartment or house?_____
13. What rent are you now paying as an individual per month?_____ 9 months?_____ 12 months?_____
14. If rent does not cover all costs of heat, light and water, indicate how much more you spend for these items per month. \$_____
15. Is maid service included? Yes_____ No_____
16. Is bed linen included? Yes_____ No_____
17. Do you use the linen service? Yes_____ No_____
18. What additional services would you like to have provided?
19. How much additional money would you be willing to pay for these increased services? \$_____

20. Do you have a car at the University? Yes _____ No _____
21. Do you have a convenient parking place near your residence? Yes _____ No _____
22. Would you pay rent for an easily accessible parking area? Yes _____ No _____
How much per month? _____
23. Do you feel living on the Grounds is freer of responsibility than living off Grounds? Yes _____ No _____
24. Do you feel living on Grounds is cheaper than living off Grounds? Yes _____ No _____
25. Are your present study facilities adequate? Yes _____ No _____
26. Where do you now study? (give % of time)

_____ Own room

_____ Living room

_____ Library

_____ Classroom

_____ Outdoors

_____ Snack bar

_____ Main house lounge

_____ Other (please specify) _____

27. Where do you now eat? (give % of time)

<u>Place</u>	<u>Breakfast</u>	<u>Lunch</u>	<u>Dinner</u>
a. Own room or apartment	_____	_____	_____
b. Newcomb cafeterias	_____	_____	_____
c. Newcomb grill	_____	_____	_____
d. "The Corner"	_____	_____	_____
e. Other nearby restaurants	_____	_____	_____
f. Glass Hat or Castle	_____	_____	_____
g. Fraternity	_____	_____	_____
h. Other (please specify)	_____	_____	_____

28. Why did you choose to live where you are? (Give a brief statement.)

In rating the following items please consider each one's importance to you in either selecting a place to live or in creating a satisfying living arrangement for you (without regard to your present living arrangement). Please rate each item by placing a check (✓) mark in the appropriate column. Please use the "other" category for any additional items you wish to rate.

	Essential	Highly Desirable	Desirable	Unimportant	Undesirable
29. Living with a few close friends					
30. Living among a lot of people					
31. Lack of restriction on parties					
32. Freedom to entertain the opposite sex					
33. Small amount of supervision					
34. Quietness					
35. Privacy					
36. Freedom to decorate own living space					
37. Easy access to fraternities					
38. Easy access to town					
39. Short distance to class					
40. Easy access to meals (own kitchen or equivalent)					
41. Physical attributes (new, old furnishings, etc.)					
42. Own direct entrance to living area					
43. Low cost/rent					
44. Adequate parking space near residence					
45. Adequate parking space near class					
46. Provision for study in own room					

The following items refer principally to dormitories and should be rated as if you were or will be a dormitory resident.

	Essential	Highly Desirable	Desirable	Unimportant	Undesirable
47. Quiet study rooms equipped with carrels					
48. Study Lounges					
49. Small reserve library in living area					
50. Faculty living in same residence with students					
51. Academic counseling in dormitories					
52. Personal counseling in dormitories					
53. Dining hall in or near housing area					
54. Movable furniture in student rooms					
55. Carpeting in student rooms					
56. Bunk beds in student rooms					
57. Permitting refrigerators in student rooms					
58. Permitting TV in student rooms					
59. Providing for telephones in student rooms					
60. Bed making service daily in student rooms					
61. Room cleaning service daily					
62. Single rooms					
63. Double rooms					
64. Private baths					
65. Bath and toilet facilities shared with no more than 10 residents					

	Essential	Highly Desirable	Desirable	Unimportant	Undesirable
66. Snack bar in each residential area					
67. Snack vending machines in each residential area					
68. Recreation room in each residential area					
69. Exercise room in each residential area					
70. TV room in each residential area					
71. Outside physical activity space in each residential area					
72. Totally separate housing for men and women					
73. Totally separate housing by schools					
74. Totally separate housing by class					
75. Organized gatherings with faculty					
76. Organized dormitory parties and dances					
77. Informal residential programs					
78. Controls instituted by the University to:					
a) Ensure quiet					
b) Protect property					
c) Protect rights of others					
79. Controls instituted by the resident group to:					
a) Ensure quiet					
b) Protect property					
c) Protect rights of others					
80. Elected representatives (students) to handle disciplinary matters					

81. Other (please specify)

82. _____
 83. _____
 84. _____
 85. _____

Essential	Highly Desirable	Desirable	Unimportant	Undesirable

86. There has been some interest expressed in the University's establishing what are called "residential colleges." These would be places where several hundred students would live, eat and study together. What is your general reaction to this idea?

Favorable _____ Unfavorable _____ Undecided _____

If such residential colleges were established, would you prefer them to include lecture rooms and/or laboratories?

Yes _____ No _____

87. What is the maximum amount you would pay for the type of housing you desire? \$ _____ per month, \$ _____ per 9 months, \$ _____ per year (12 months)

APPENDIX B

CONSOLIDATED HOUSING QUESTIONNAIRE

APPENDIX B

CONSOLIDATED HOUSING QUESTIONNAIRE [Showing original item numbers () and new groupings]

	Essential	Highly Desirable	Desirable	Unimportant	Undesirable
1. <u>Supervision and/or Control</u>					
(78) Controls instituted by the university to:					
a. Ensure quiet	—	—	—	—	—
b. Protect property	—	—	—	—	—
c. Protect rights of others	—	—	—	—	—
(79) Controls instituted by resident group to:					
a. Ensure quiet	—	—	—	—	—
b. Protect property	—	—	—	—	—
c. Protect rights of others	—	—	—	—	—
2. <u>Privacy and/or Quietness</u>					
(29) Living with a few close friends	—	—	—	—	—
(34) Quietness	—	—	—	—	—
(35) Privacy	—	—	—	—	—
(62) Single rooms	—	—	—	—	—
(64) Private baths	—	—	—	—	—
(42) Own direct entrance to living area	—	—	—	—	—

	Essential	Highly Desirable	Desirable	Unimportant	Undesirable
3. <u>Freedom to Manipulate Social Environment</u>					
(32) Freedom to entertain the opposite sex	—	—	—	—	—
(72) Totally separate housing for men and women	—	—	—	—	—
(73) Totally separate housing by schools	—	—	—	—	—
(74) Totally separate housing by class	—	—	—	—	—
4. <u>Freedom to Manipulate Physical Environment</u>					
(54) Moveable furniture in student rooms	—	—	—	—	—
(57) Permitting refrigerators in student rooms	—	—	—	—	—
(58) Permitting TV in student rooms	—	—	—	—	—
(59) Providing for telephone in student rooms	—	—	—	—	—
(36) Freedom to decorate own living space	—	—	—	—	—
(40) Easy access to meals (own kitchen or equivalent)	—	—	—	—	—
5. <u>Personal Study Space</u>					
(46) Provision for study in own room	—	—	—	—	—
(47) Quiet study rooms equipped with carrels	—	—	—	—	—

6. Source of Financial Support

(9) Expenses while attending the University are being covered by:

_____ Family paying practically all

_____ Self provided funds (including loans, grants, fellowships, and scholarships)

7. Place of Residence

(10) Present Residence

a. On-Campus _____

b. Off-Campus _____

8. Academic Level

(2) Class _____

9. Place of Study

(26) Where do you now study? (Give % of time)

1. _____ Own room

2. _____ Living room

3. _____ Library

4. _____ Other

APPENDIX C

LETTER

November 15, 1968

The Office of University Housing is conducting a study to ascertain what the students at the University of Virginia desire and need for housing while in attendance here. It is expected that the information produced will be useful in many ways.

A random sample of students has been selected from the student body. Because the sample is relatively small it is important that we have replies from everyone who receives this questionnaire. The attached questionnaire will require only approximately twenty minutes of your time and we sincerely request your assistance. If you do not wish to participate, we will appreciate your returning the questionnaire to us right away so that a replacement can be selected.

The Student Council has concurred in this study and will, of course, share in the results.

We are all anxious to tabulate the requested information so we ask you to return the completed questionnaire by not later than November 25, 1968.

Sincerely,

Chester R. Titus
Director

CRT:pc

cc: Mr. Martin Evans

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