# OFF-CAMPUS RENTAL HOUSING OF STUDENTS ATTENDING VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

by

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(ABSTRACT)

The purpose of this study was to determine the factors which influence the off-campus rental housing choices of students attending Virginia Polytechnic Institute and State University. An interview schedule was developed and administered by telephone to a random sample of 204 Virginia Tech students who were renting off-campus housing in Blacksburg, Virginia. The data were examined by analysis of means, frequencies, correlations, and t-tests.

The findings revealed significant differences ($p<.01$) between students who lived in traditional rental apartments and students who lived in student condominiums

in preferences for amenities, lease options, and maintenance. No difference in satisfaction levels was found to exist between the groups.

All students in the sample showed preferences for a large number of amenities, most of which were provided by the Blacksburg rental market. Cost was identified as the greatest influence on housing choice for the entire sample, while noise and inadequate parking were the major dissatisfactions.

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# Chapter I

## Introduction

A review of housing research indicates a lack of research which examines the specific housing needs and preferences of college students. While some research is available relating to on-campus housing, very little research exists on housing preferences of students living off-campus.

It is of particular importance to understand the needs and preferences of students selecting the off-campus housing in which they will reside during their college years. First, the satisfaction of students who are pleased with their housing is important both to students and property managers. Satisfaction with their housing contributes to the overall well being of the student. Property managers and owners of student housing are concerned with the satisfaction levels of students residing on their properties since this satisfaction results in higher occupancy rates and better maintenance of these properties.

Secondly, by learning the preferences of college students for off-campus rental housing, one could possibly predict the type of rental housing they may prefer after

they have graduated from college. Finally, as they compete for students, colleges and universities can benefit from the existence of off-campus housing which meets the needs and preferences of students.

Background of the Study

Beginning in the late 1960's and at an increasing rate in the early 1970's, college students began to occupy off-campus housing. Movement to the surrounding areas of college campuses occurred in part because of the growing student opposition to "en loco parentis" university policies. These policies, the goal of which was to extend parental authority to the college environment by establishing boundaries on student freedom, resulted in student rebellion. As the incidence of "en loco parentis" policies decreased, student movement to off-campus housing increased.

Furthermore, as student enrollments increased in the early 1970's, some universities across the United States ceased building residence halls and relied on private developers to produce off-campus housing accessible to the campus. Even though off-campus housing is directly related to a university, it is not usually controlled by the university. Therefore, an understanding of the available off-campus housing alternatives and their effectiveness in meeting student needs and preferences is essential for

college administrators interested in the total well-being of college students.

Past research has indicated that environment affects human behavior (Kahana, 1982). It is possible that the success with which students' housing needs and preferences are met by off-campus rental housing may affect academic performance of students. At least one study revealed that among the student group surveyed, off-campus students obtained higher grade point averages than on campus students (Clodfelter & Furr, 1984), suggesting a relationship between housing environments and academic performance.

Much of the research on the housing preferences of college students has examined satisfactions with college residence halls. Much of the research in this area concerned residence hall design and its resulting impact on student housing satisfaction (Kriebel, 1980; Kegan, 1980). Other research which has investigated the factors associated with student housing preference, either on- or off-campus, is lacking.

To provide a background for the study then, the related research which surveys the purchasing and selection behavior for other housing alternatives was reviewed. The housing alternatives included in these studies were single family dwellings, condominiums,

townhouses, mobile homes, and multi-family housing (Brink, 1975; Dexter, 1976; Galloghy, 1973; Jackson, 1971;, Jarosz, 1978; Preuit, 1975; Widmar, 1984). Additionally, various subgroups of the general population have been studied in regard to their renting or purchasing behavior for the aforementioned housing alternatives. A study of the family decisionmaking process for purchasing a single family home provides an example (Brink, 1975).

Because college students account for a significant portion of the population, and many of them reside in off-campus rental housing, the factors influencing their housing preferences should be studied. The results will benefit the subgroup of college students who live off-campus and property managers and developers who provide housing for college students. Additionally, the information may be useful to multi-family housing developers and managers who target young professionals.

## Design of the Study

### Purpose and Objectives

The purpose of this study was to determine the factors which influence the off-campus rental housing choices of students who attended Virginia Polytechnic Institute and State University (hereafter referred to as Virginia Tech). The objectives were to:

a) examine the influence of location, cost, design, and management on off-campus rental housing choice.

b) evaluate the effectiveness of the rental housing market in meeting the off-campus housing preferences of college students.

c) compare the effectiveness of traditional rental apartment with student apartment condominiums in meeting the off-campus housing preferences of college students.

d) assess the degree to which the expectations of students in the sample have been met.

### The Setting

The population which was studied consisted of Virginia Tech students who lived in off-campus rental housing in Blacksburg, Virginia. Virginia Tech is a land-grant university with a student population of

approximately 22,000. At the time of the study, more than half the student population resided in off-campus housing.

Blacksburg, Virginia is a university town which must accommodate a large off-campus student population. The town of Blacksburg contains a variety of housing alternatives both for students and other residents. These alternatives include apartments, a selection of recently built condominiums, mobile homes, rented houses, and rented rooms. Given the large number of and the variety of rental housing alternatives available, Blacksburg was a particularly good setting for this study. The convenient location of Blacksburg to the investigator made it an ideal choice for the study.

Delimitations

The study included only those students who attended Virginia Tech and who lived in off-campus rental housing in Blacksburg, Virginia, at the time of this study. Students who lived in housing managed by Greek organizations were not included in the study.

Assumptions

1. Respondents were living in off-campus rental housing either by personal choice or due to the unavailability of preferred residence hall housing.

2. The search for off-campus rental housing is a rational process.

Definition of Terms

Rental apartment: a set of rooms comprising a unit, usually among similar units in a building or complex, all of which are offered for rent.

Off-campus rental housing: any dwelling which is not located on the campus of or affiliated with a university (i.e. Virginia Tech) and is offered for rent.

Rental house: a single family detached dwelling which is being rented from the owner or a representative of the owner.

Rental room: a single room, usually a bedroom, which is located within a single family dwelling, apartment, or other dwelling type in which the rental price may or may not include utilities and privileges to use other rooms in the dwelling.

Residence hall: housing which is located on a college campus such as Virginia Tech and is provided by the university.

Student apartment/condominium: an apartment house or complex in which the dwelling units are individually owned and are rented from the owner or a representative of the owner by college students.

## Chapter II

## Literature Review

Because of the lack of research reports pertaining to the specific off-campus housing choices of college students, a discussion of the influences on the housing choices of the other groups studied will be presented.

The presentation is divided into four parts. First, studies which have investigated student housing are discussed. Secondly, housing choices and decisionmaking of the general population are reviewed. Third, consumer behavior theory, a theory often associated with housing choice, is addressed. Finally, an empirical model adapted from a model of consumer behavior is presented.

### University /Student Housing

College students have been the target of studies which have investigated student response to residence halls (Kriebel, 1980; Kegan, 1980). The object of these studies has been to improve the living environments in college residence halls by using student evaluations of residence halls to create housing which better meets the selection criteria of college students.

When researching satisfactions with residence halls, Kriebel (1980) found that student response became more

positive as the degree of creativity and variety of design in the residence hall room increased. Students responded negatively when they had less control over their surroundings and were prohibited from using creativity to change their living environments.

Kegan (1980) found that college students evaluated residence hall environments positively when they were designed with more consideration of the student user. Student input into the design of common areas such as lobbies was found to be desirable.

Beginning in the late 1960's and increasing in the early 1970's, university students moved off-campus in large numbers. As the number of students residing off-campus grew, the number and variety of housing alternatives became an issue. In a study completed by Peterson (1968), the factors influencing the housing selection and satisfaction of off-campus rental housing by the non-student wives of undergraduate students were studied. Peterson's study confirmed that cost, location, and the amount of space within the dwelling were the factors having the greatest influence on rental housing selection. Satisfaction resulted from the lack of "bothersome" noise, adequate space within the dwelling, and privacy.

At least one study surveyed the housing needs and preferences of both on-campus and off-campus university students (Titus, 1972). The results indicated a strong desire for freedom and independence as well as for a close location to friends. Additionally, a quiet and private atmosphere was important to the students.

In an investigation of low rent off-campus student apartment housing, Somner (1983) found that some students preferred to reside in rental housing with few amenities in exchange for a low rental fee. Therefore, the greatest importance was placed on cost factors.

General Population

Understanding the preferences, selection criteria, and satisfaction with rental apartments of the general population is another area of related research. Such studies have addressed the preferences and satisfactions of apartment dwellers and non-apartment dwellers.

Design of the apartment, both interior and exterior, is a salient issue (Dexter, 1976; Jarosz, 1978; Widmar, 1984). Multiple-family housing was found to be more pleasing to both its inhabitants and persons living near it, if the design was more detailed and the buildings were smaller. The general public seems to prefer single family design over multi-family design (Widmar, 1984).

A survey which sampled the general population illustrates the relationship between the factors influencing apartment selection and satisfaction. If the factors desired during the apartment search are obtained, then satisfaction increases. The absence of desired features causes an expected decrease in satisfaction with the apartment unit. The factors which are most important in providing satisfaction to apartment dwellers are adequate amenities, privacy, security, space, desirable location relative to work, school, and recreation (Jarosz, 1978).

Housing Value Theory

During the early years of housing research, Cutler (1947) addressed the topic of "housing values" in her now classic study with objectives to determine the importance of personal or family values on housing choices. Among the values studied were comfort, convenience, beauty, safety, privacy, location, health, personal interest, friendship activities, and economy. Cutler's research provided the base for further research on housing choice, preferences, and decisionmaking.

Residential Selection and Decisionmaking

When faced with the choice of a dwelling, several factors influence the decision of a consumer. The entire process of the decision to move, the selection of a

residence, and the resulting satisfaction with the new residence have been addressed by housing theory.

The factors influencing a decision to move from one's present residence to a new one is the subject of the classic residential mobility theory. Residential mobility theory (Morris, Crull, & Winter, 1976) which is an outgrowth of the housing adjustment theory proposed by Morris and Winter (1975), has addressed factors influencing the decision to move from one residence to another. The initial decision to move is spurred by the existence of a normative deficit in one's present housing. Rather than make family adaptations or alter the dwelling, the consumer chooses to move in order to decrease the housing deficit and increase housing satisfaction.

After the initial decision to move, the consumer begins a decisionmaking process which includes consideration of available housing alternatives, the relative importance of each alternative, and the selection of a particular dwelling. This selection is based on the maximization of certain variables (factors) desired by the housing consumer. The combination of these factors will reveal the consumer's preference for housing as he attempts to maximize each of them (Samuelson, 1948). Individuals have revealed their housing preferences through the consistent selection of residences which

maximize a specific desire for beauty, space, cost, neighborhood, and limited noise (Brink, 1975; Cook and Rudd, 1984; Dexter, 1976; Galloghy, 1973; Jackson, 1971; Jarosz, 1978; Peterson, 1968; Preuit, 1975).

The consumer decisionmaking and selection process of housing purchases has been studied by means of the development of models based largely on economic theories of utility and consumer behavior. Factors influencing the selection and/or purchase of mobile homes, townhouses, condominiums, and single family homes have been studied by Preuit (1975), Galloghy (1973), Jackson (1971), and Brink (1975), respectively. Consumer influence on certain housing factors occurred in varying degrees in each study. However, in each case, certain factors such as cost and location were identified as having greater influence on the consumer purchase decision than other factors in the model.

Satisfaction with one's dwelling is said to increase if desired housing factors are met (Morris & Winter, 1978). As with the other stages of the residential selection process, the final stage of satisfaction or dissatisfaction with the dwelling has also been addressed by theory. Residential Satisfaction theory provides an explanation for satisfactions or dissatisfactions as they result from the existence or nonexistence of normative

deficits (Morris & Winter, 1978). The maximization of consumer preferences should result in increased satisfaction with one's housing.

Residential Search

The search behavior of persons seeking housing has been studied for various groups. Models of residential mobility have been used to relate housing choice and the housing market (Onaka & Clark, 1983) in a theoretical context. An empirical study has identified the search behavior and location choices of female householders in urban areas (Cook & Rudd, 1984). As female householders in cities search for housing, they tend to choose and dwell in older, low rent buildings and to locate near to the central business district. However, this is not always true since "socioeconomic and spatial organization factors impact differently on the residential location of each household configuration" (Cook & Rudd, 1984, p. 90).

Although economic models of search and purchase behavior assume the maximization of expectations when making purchase decisions, Phipps & Meyer (1985) have shown a heuristic model to be a more effective explanation. An heuristic model is one that attempts to present concepts in a way which stimulates empirical research. Such a model postulates what remains to be understood. Persons searching for a rental apartment end

their search for housing after they have reached a set of "individual-specific utility-difference thresholds" (Phipps & Meyer, 1985). As Phipps and Meyer suggest, these thresholds vary depending upon the individual and his/her specific needs.

Further research within the rental sector indicates that there is a "strong relationship between the person's mental construction of his environment and his overt search behavior" (Aitken, 1987). Perceptions of environment are different for each individual and result in some individuals searching for housing in different sections of an area than other individuals. Therefore, the mental image of an environment limits the areas for which housing is searched.

Consumer Behavior Theory

Consumer decisions of any type can be explained by consumer behavior theory. The theory is central to housing research within the areas of economics and marketing since it helps to explain housing acquisition patterns and aids in predicting the most desirable forms of housing.

Fundamental to consumer behavior theory is the concept of interaction between an individual and his/her environment. All decisions made by the individual are influenced by factors of two types: 1)basic determinants

or internal variables, and 2) environmental determinants or external variables (Figure 1).

Basic determinants are the needs, motives, personality, and awareness of the individual. Each of these variables is affected by a set of external variables which are family, culture, income, business, and social influences. It is the interaction of these internal and external variables which explain the consumer's selection (Walters, 1978).

The interaction between the individual consumer and his environment, however, is only one part of the entire process of consumer behavior. According to Walters' dynamic model of consumer behavior (Figure 2), the consumer decision process begins with a stimulus (i.e. product deficiency). Past experience tells the consumer that he must correct the deficiency. Then, the interaction between the consumer and his environment shapes the purchase decision. Finally, the consumer "corrects" the product deficiency and is either satisfied or dissatisfied with his choice. Of course, all the steps in this process are stored in the memory of the consumer for future reference.

Some have felt that it is difficult to apply consumer behavior theory to housing. For this reason, adaptations to the theory have been developed for application to

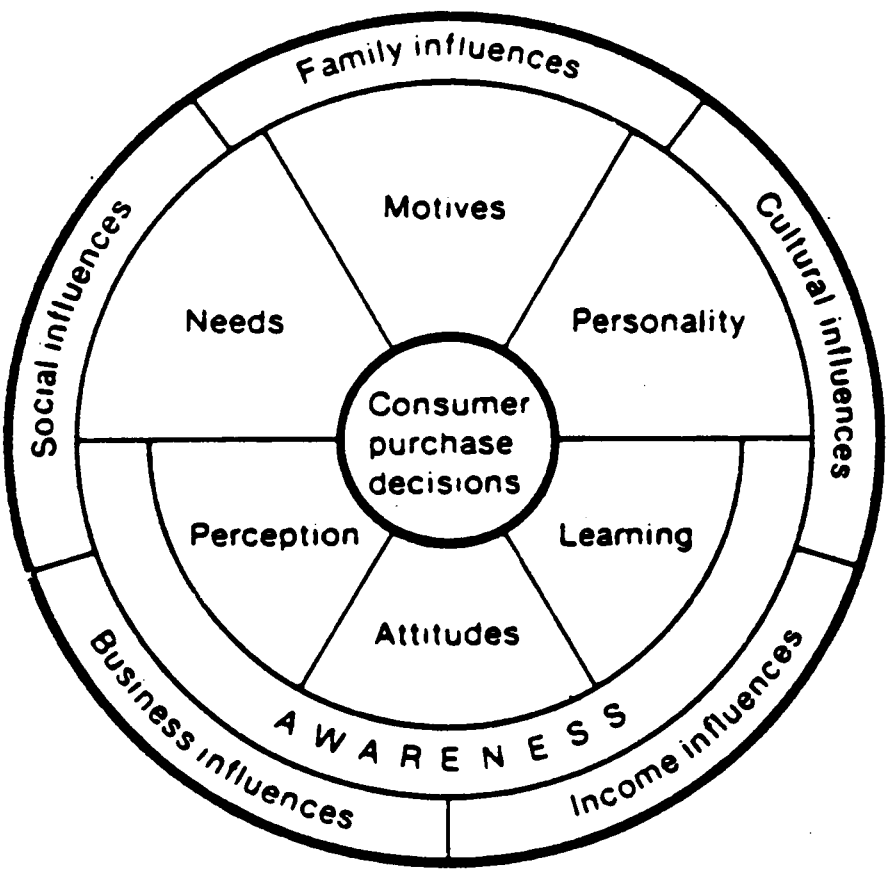


**Figure 1**
**Complete model of consumer behavior (Walters, 1978)**

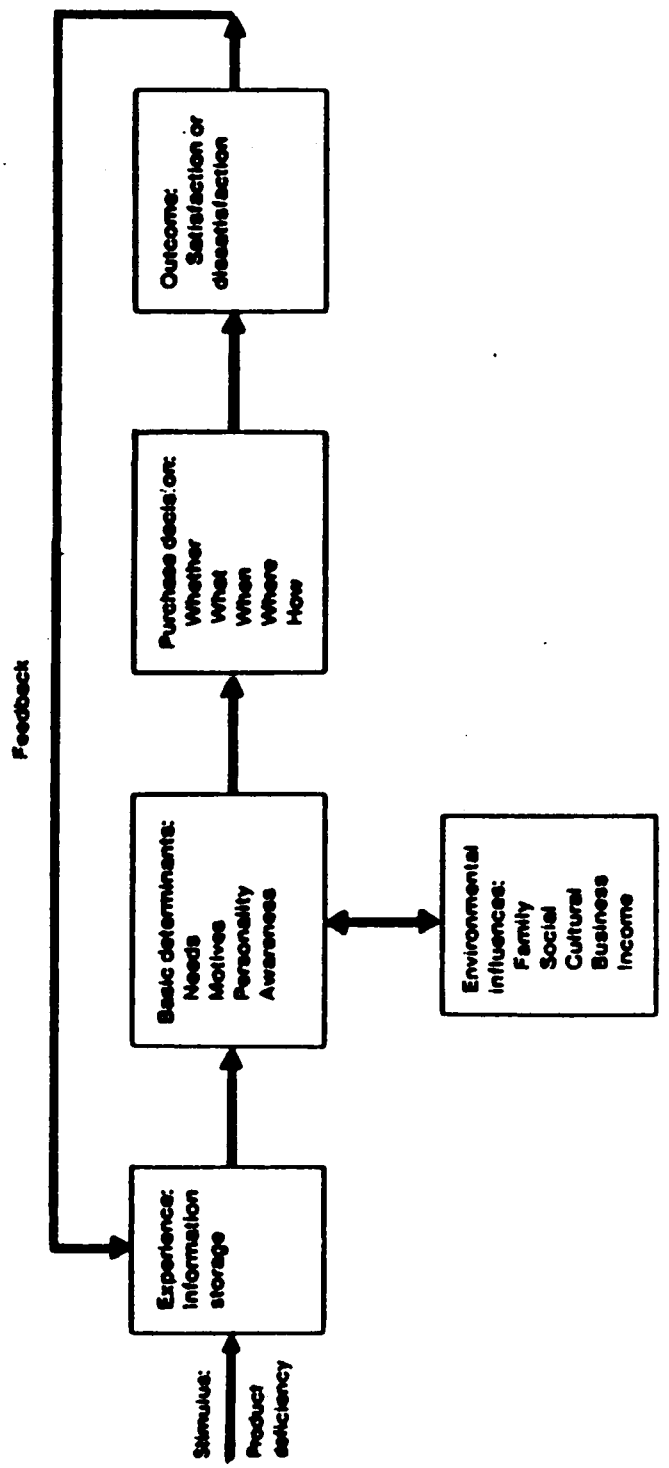


Figure 2
Dynamic model of consumer behavior (Walters, 1978)

housing. Specifically, Brink (1975) created a preliminary study towards developing a model of consumer home purchase behavior. Brink found evidence which supported two separate housing decisions: the decision to move and the decision to buy. Brink modified the consumer behavior model by creating another model which divided the decisionmaking process into three variables: a predictor of housing wants, a selection process, and an outcome of the final move.

Individuals seeking a single family dwelling leave their dwellings because of inadequate space and for increased financial opportunities for investment (Brink, 1975). Then, following the pattern explained by consumer behavior theory, the consumer weighs each alternative for its importance as it meets his/her specific desires. Persons seeking single family housing seek adequate space and good layout, attractive appearance, and reasonable cost.

Finally, Brink found that satisfaction or dissatisfaction with a housing choice is utilized in future home selection decisions and is the outcome of all decisions made by the consumer during the selection process. Outcomes of consumer decisions "feed back" into the selection process as experience and stored

information. The dynamic model of consumer behavior illustrates this finding (Figure 2).

## Empirical Model

To provide a framework for understanding the selection behaviors of students seeking off-campus rental housing, an empirical model is presented (Figure 3). The model is an adaptation of the Dynamic Model of Consumer behavior created by Walters (Figure 2).

## Summary

Literature which has examined the factors which influence both housing selection of various subgroups and selection of several housing types is abundant. However, literature relating specifically to the factors which influence the off-campus rental housing choices of college students is lacking. The available related literature is divided among information which addresses the housing of college students, the rental apartment market, and the selection and decisionmaking processes regarding several forms of housing.

Consumer behavior theory seems to explain the housing selection process best. Other theories add to the knowledge base through their explanations of residential mobility, residential satisfaction, and of housing values. Housing research which has relied on these theories has

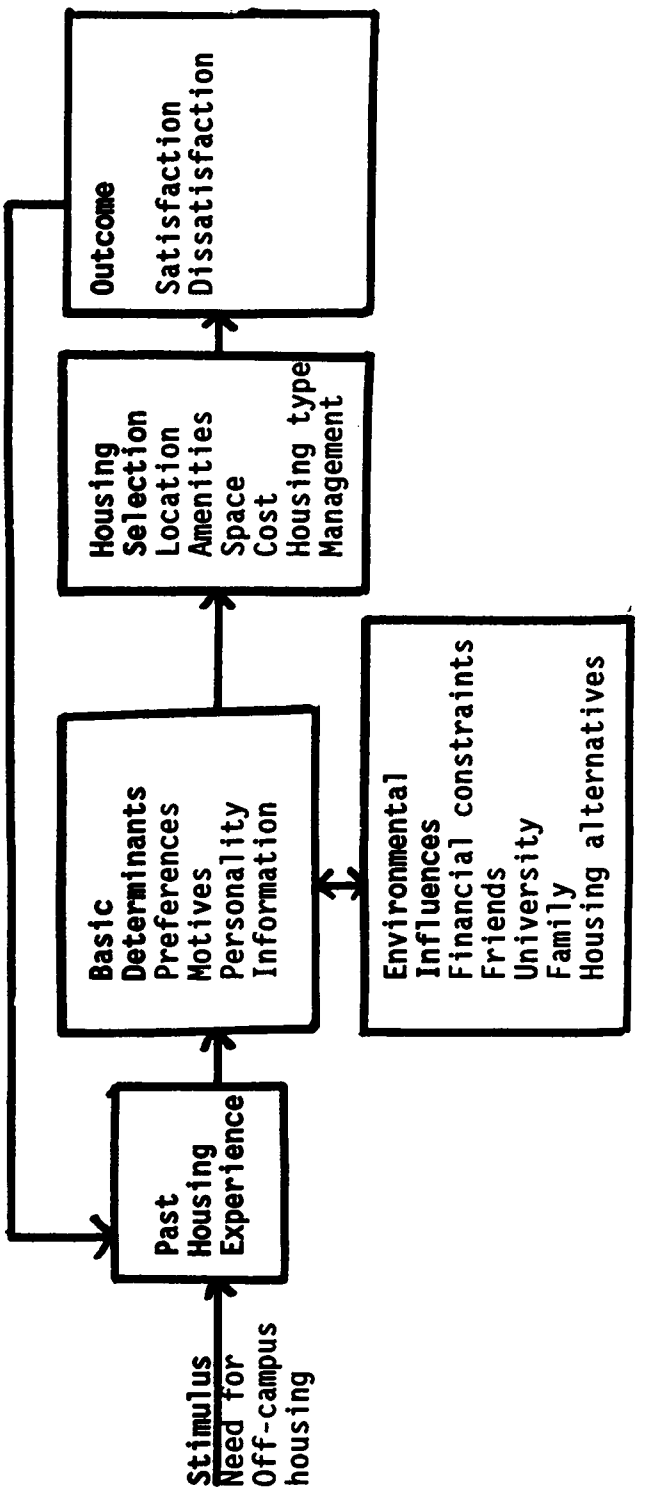


Figure 3. Model of Student Selection of Off-Campus Rental Housing (Adapted from Dynamic Model of Consumer Behavior, Walters, 1978)

shown that persons move due to dissatisfaction, seek satisfaction through reduction of perceived housing deficits, increased financial opportunities, and base future housing decisions on present satisfactions or dissatisfactions.

A review of the related literature indicates a lack of information regarding the housing choices of college students who reside off-campus. Through the use of past housing research for background, a better understanding of the factors influencing the off-campus rental housing choices of college students can be achieved.

## Chapter III

## Methodology

To achieve the purpose and objectives of this study, the methodology detailed in this chapter was implemented. The purpose of the study was to identify the factors which influence student selection of off-campus rental housing in Blacksburg, Virginia. The objectives were to:

a) examine the influence of location, cost, design, and management on off-campus rental housing choice.

b) evaluate the effectiveness of the rental housing market in meeting the off-campus housing preferences of college students.

c) compare the effectiveness of traditional rental apartment and student apartment condominiums in meeting the off-campus housing preferences of college students.

d) assess the degree to which the expectations of students in the sample have been met.

### Development of the Instrument

The data collection instrument was an interview schedule consisting of 19 questions (Appendix A). The structure of the survey questions was forced choice.

Information gathered from these questions included both demographic information and data relating to the

factors influencing the consumer (student) decision to reside in a particular off-campus rental dwelling. Information regarding students' overall satisfaction with their off-campus housing also was obtained from the instrument.

The research instrument was developed by the researcher and members of a committee composed of experts in the field of housing and property management. These experts, along with the researcher, carefully reviewed the content of the instrument to insure that it measured the variables contained in the stated objectives of the study. To further test the instrument's content validity, a pilot study was completed using a random sample of 20 Virginia Tech students who met the criteria for the study.

Training of the Interviewers

Each of the four interviewers was trained to effectively administer the questionnaire. During a training session, the researcher provided a detailed explanation of the study's objectives and the instrument to the interviewers. Additionally, the technique for administering telephone surveys and recording responses was explained.

Selection of the Sample

To obtain 200 completed interviews, a sample of 400 Virginia Tech students was selected at random from the

1988-89 university student directory which lists the names and addresses of all students attending the university. All students who participated in the survey resided in off-campus rental housing. The sampling pool included both undergraduate and graduate students who listed an off-campus Blacksburg address.

The sampling pool was obtained by selecting 400 names from the university student directory. Beginning with a random number, participants were selected by counting down every 36th name for a total sample of 400. The number 36 was obtained by subtracting the total number of Virginia Tech students who lived on campus (8,008) from the total enrollment at Virginia Tech (22,361) and dividing the result by 400. In the event that the individual chosen under this procedure resided on campus, lived outside the boundaries of Blacksburg, or did not have a local telephone number listed in the directory, the next name in the directory which met the established criteria was selected. Selection was continued by counting down by 36 until another eligible individual was chosen. The random selection of two individuals who resided at the same address was not considered to bias the data since each student was assumed to have considered his/her off-campus rental housing choice separately.

To ensure the randomness of the sample, at least three attempts were made to contact each of the 400 students chosen by the previously described method before eliminating a name from the pool. When 200 interviews were obtained, it was decided to call the remaining names with whom there had not been three attempted contacts. Therefore, every person who was a part of the sampling pool had an equal chance of being selected. Because this procedure was used, the total number of completed interviews was 204.

Collection of the Data

The instrument used for data collection was pretested for use in a pilot study. Further refinement of the instrument was made after the completion of the pilot study in order to state questions more clearly and to allow for appropriate statistical analysis.

The data were collected through telephone interviews conducted from February 8 through February 26, 1989 between the hours of 4:00 p.m. and 10:00 p.m., Monday through Friday, and 10:00 a.m. to 10:00 p.m on Saturday and Sunday. The instrument was administered by the investigator and four trained interviewers. Each interview lasted approximately seven minutes.

In the event that the individual selected for interview was not at home, the date and time of the call

were recorded and two additional attempts were made to contact the individual for a maximum of three times. To establish that the individual was not at home, a procedure to wait for a minimum of seven rings was used. In the event that an answering machine was encountered, no message was left, and the call was recorded as a "not home." If contact was made with another individual in the dwelling who was not part of the sample, and the identified subject was not available, the call was recorded as a "not home."

A different procedure was used for busy signals. After encountering a busy signal, the interviewer did not attempt another contact for a minimum of one-half hour. If a busy signal was encountered on each of the three contacts, no further contacts were attempted. If the subject expressed an interest in participating but could not because of time constraints, an effort was made to call back at an appointed time.

Persons who owned a dwelling were not included in the study. In the event that a respondent or the respondent's parents or guardian owned the dwelling in which he or she resided, the interviewer thanked the respondent and ended the interview. To obtain the total of 204 students who met the established criteria, the interviewer selected the next name from the list of 400.

A log sheet (Appendix B) was attached to each questionnaire to record the number of attempted calls per subject and to establish the next procedure.

To obtain a total of 204 completed interviews, 918 telephone calls were made. Students with whom contact could not be made or who were ineligible accounted for 47.0% of the total sample. Students became ineligible when the interviewer was unable to make contact with the individual, or the student (or the student's parents) owned the dwelling, lived with a parent, or resided in Greek housing.

After subtracting the number of students who were ineligible, the overall response rate was 96.7% or 204 interviews. Seven individuals declined to participate in the study. The most frequent reason given for rejection was a lack of time.

Hypotheses

A review of the related literature revealed that housing research has not addressed the specific preferences and satisfactions of college students for off-campus rental housing. However, some of the housing preferences and satisfactions of the general population have been identified. Based on those studies and the model of student selection of off-campus rental housing

presented in Chapter II, the following null hypotheses were formulated and tested in this study:

**Ho1:** There is no significant relationship between the off-campus rental housing choices of college students and the following characteristics of rental housing:

a. Distance from the university campus
b. Distance from friends
c. Cost
d. Space within the unit
e. Design of the unit
f. Management
g. Amenities available

**Ho2:** There is no significant relationship between student satisfaction with off-campus rental housing and the following characteristics of rental housing:

a. Distance from the university campus
b. Distance from friends
c. Cost
d. Space within the unit
e. Design of the unit
f. Management
g. Amenities available

**Ho3:** There is no difference in the effectiveness of the traditional rental apartment market and the newer student

apartment/condominium market in meeting the housing preferences of college students attending Virginia Tech.

**Ho4:** There is no difference between dwellers in traditional rental apartments and dwellers in student apartment style condominiums in their preferences for the following:

a. Dishwasher
b. Microwave
c. Washer/Dryer in unit
d. Cable connection
e. Storage room
f. Private bedroom
g. Deadbolt lock
h. 24 hour emergency maintenance
i. Flexible lease agreement
j. On bus route

Definition of Variables

Independent Variables

Location: Distance in miles from the university campus. Proximity to the Blacksburg Transit bus stop.

Space: Space was measured by the following:

1) The existence of a private bedroom.
2) The existence of a storage room or area

Satisfaction with the amount of space was measured using a satisfaction scale from 1 to 10 (1 being the

lowest and 10 being the highest satisfaction with the total amount of space in the unit).

Cost: The amount of the student's monthly rental payment.

Amenities: The existence of added features both in and outside the dwelling unit. Amenities were measured by the existence of any of the following in/at the student's dwelling:

Dishwasher
Microwave installed in the unit
Washer/dryer in the unit
Cable connection included in the rental payment
Storage room
24 hour maintenance

Security: The existence of features or a general feeling which provides a sense of protection or safety. Security was measured by the existence of deadbolt locks on doors.

Dependent Variables

Housing choice: The specific type of off-campus rental housing selected by the respondent.

Satisfaction: The level of satisfaction with the type of housing selected by the student, measured on a scale of 1 to 10 (1 being the lowest possible rating and 10 being the highest possible rating).

Effectiveness in meeting student housing desires: Effectiveness was measured by comparing the satisfaction levels of students residing in traditional apartment complexes and the newer student apartment/condominiums.

## Analysis of the Data

Upon completion of the data collection, the data were coded, entered onto a computer disk, and reviewed for possible coding errors. The data were subjected to the appropriate statistical analyses. Both descriptive and inferential statistics were used to analyze the data in this study. The descriptive statistics used included frequency distributions, means, percentages, and crosstabulations.

To evaluate the effectiveness of the rental housing market in meeting the off-campus housing preferences of the students in the sample, descriptive statistics (means and frequencies) were used to summarize the distributions of scores on a satisfaction scale.

Comparison of the effectiveness of the traditional rental apartment market and the more recent student apartment style condominium market was achieved through the use of the "Student's t-distribution" (t-test). The t-test was also used to test for differences between the two groups regarding off-campus rental housing preferences.

This type of statistical analysis was deemed appropriate for testing the related hypotheses. Specifically, the t-test compared the two groups on the

importance of selected influences on housing choice, overall level of satisfaction with off-campus rental housing, the level of satisfaction with selected housing factors, and the preference for amenities.

Correlations were used to examine the relationship between the economic and non-economic needs of college students and their selection of off-campus rental housing. The technique was also used to relate satisfaction with selected housing factors to housing choice. The rank-biserial correlation technique was the measure of association used since at least one of the variables was measured on an ordinal scale and the other variables were discrete dichotomies.

An analysis of the descriptive statistics used in this study appears in Chapter 4: Description of Off-campus Rental Dwellers. The analysis of inferential statistics is discussed in Chapter V: Statistical Analysis and Discussion.

## Chapter IV

## Description of Off-Campus Rental Dwellers

The majority of the sample resided in either traditional rental apartments and townhouses or student apartment and townhouse style condominiums. Other types of rental housing such as single family dwellings and single rooms were represented in the sample, but accounted for only a small percentage of the dwelling types represented in the study.

In this chapter, a description of the respondents is given with an emphasis on the characteristics of rental apartment and townhouse dwellers and rental student apartment and townhouse style condominium dwellers. Demographics, rental housing characteristics, preferences, satisfactions, and dissatisfactions are discussed. The findings presented in this chapter provide background information on the basic determinants and environmental influences presented in the empirical model (Figure 3) as well as detailed explanation of the housing selection variables.

Demographics

The sample was fairly homogeneous in relation to marital status, distance from campus, and access to a car, but differed on factors of sex and college class level (Table 1).

Participants in the study included 125 males (61.3%) and 79 females (38.7%) for a total of 204 participants. The percentage of males compared to the percentage of females reflects the actual three to two ratio of males to females in the total student population at Virginia Tech. At the time of the study, there were 13,386 males and 8,975 females attending Virginia Tech.

Data were obtained to identify the number and percentage of students in each class in the university. The sample drawn for this study was not representative of the number of students in each class for the entire university. However, the sample included only those students who lived in off-campus rental housing. Given the Virginia Tech policy to house freshmen on campus, no freshmen were included in the study.

The sophomore class was represented by only 14 persons (6.9%). This low percentage could have occurred because sophomores have a greater probability than juniors or seniors to be chosen for university housing.

Table 1

Demographic Description of Students (N=204)

| Description | Totals n | Totals % |
|---|---|---|
| SEX | | |
| Males | 125 | 61.3 |
| Females | 79 | 38.7 |
| Total | 204 | 100.0 |
| CLASS | | |
| SO | 14 | 6.9 |
| JR | 62 | 30.4 |
| SR | 83 | 40.7 |
| GRAD | 45 | 22.1 |
| Total | 204 | 100.1 |
| MARITAL STATUS | | |
| Single | 188 | 92.2 |
| Married | 16 | 7.8 |
| Total | 204 | 100.0 |
| DISTANCE FROM CAMPUS | | |
| <1 mile | 34 | 16.7 |
| 1 mile | 56 | 27.5 |
| 2 miles | 94 | 46.1 |
| 3 miles | 11 | 5.4 |
| >3 miles | 9 | 4.4 |
| Total | 204 | 100.0 |
| CAR | | |
| No | 49 | 24.0 |
| Yes | 155 | 76.0 |
| Total | 204 | 100.0 |

Note. Percentages may not equal 100 due to rounding.

Additionally, older students often prefer to move off-campus. Therefore, it is likely that more sophomores remain on campus than either juniors, seniors, or graduate students.

A majority of the sample was not married (92.2%). Of the 16 individuals who were married, each was a graduate student.

Most participants in the study lived two miles or less from the college campus (80.3%) and reported having a car at school (76.0%).

Demographic Summary

The typical participants in this study were college seniors who resided in traditional rental apartments two miles or less from the college campus. They were unmarried and had access to a car while attending Virginia Tech.

Description of Living Arrangements

A large percentage (78.9%) of the sample resided in traditional rental apartments or townhouses (Table 2). This large percentage was expected and is representative of the number of available rental apartments and townhouses in the Blacksburg area which comprise the largest portion of Blacksburg's off-campus rental housing market (Blacksburg Apartment Council, 1989).

Table 2

Number and Percentage of Respondents in Each Dwelling Type (N=204)

| Type | n | % |
|---|---|---|
| Rental apartment | 143 | 70.1 |
| Rental townhouse | 18 | 8.8 |
| Apartment style condominium | 16 | 7.8 |
| Townhouse style condominium | 8 | 3.9 |
| Rental house | 14 | 6.9 |
| Rental room | 3 | 1.5 |
| Other | 2 | 1.0 |

Four other types of housing were represented in the sample and the percentage of respondents in each was: Student apartment and townhouse style condominiums (11.7%), single family homes (6.9%), single rooms (1.5%), and mobile homes (1.0%). In accordance with the sample criteria, respondents living in these housing types were renting from the owner of the dwelling or a representative of the owner. The percentage of students in the sample who lived in student apartment and townhouse style condominiums, single family dwellings, single rooms, and mobile homes reflects the actual percentage of these rental housing alternatives in Blacksburg.

Preferred and Existing Features

Data were compiled to summarize the preferred and existing features in the off-campus rental housing of the students in the sample (Table 3). To gather this information, students were read a list of items and asked if they were specifically looking for any of them during their search for off-campus housing. Next, the students identified which, if any, of the items they presently had.

A private bedroom was the most preferred feature of the students (93.1%). This preference was met for nearly all the students who preferred it, as 187 students (92.6%) reported having a private bedroom. Other features which were preferred by more than 50% of the students were

Table 3

Preferred and Existing Features of Students' Off-Campus Rental Housing

| Features | Preferred | | Existing | |
|---|---|---|---|---|
| | n | % | n | % |
| Private bedroom | 190 | 93.1 | 187 | 92.6 |
| Busroute | 130 | 63.7 | 174 | 85.7 |
| Dishwasher | 112 | 54.9 | 153 | 75.4 |
| Cable | 106 | 52.0 | 127 | 62.9 |
| 24 Hour maintenance | 101 | 49.5 | 158 | 78.6 |
| Flexible lease | 89 | 43.6 | 51 | 25.2 |
| Storage room | 87 | 42.6 | 152 | 75.2 |
| Washer/Dryer | 85 | 41.7 | 58 | 28.7 |
| Deadbolt lock | 84 | 41.2 | 147 | 72.8 |
| Microwave | 23 | 11.3 | 38 | 28.7 |

dishwashers (54.9%), television cable included in the rent (52%), and a close proximity to a bus stop for the local public transit service (63.7%).

Because the cost of heating a dwelling is usually the largest housing expenditure (following the monthly rental payment), the students' preferences and existing situation regarding the payment for heating were obtained. Specifically, the students were asked whether or not they preferred to have the cost of heating included in the rental price. Then, data were gathered which indicated the actual situation.

About one-half of the students in the sample indicated a preference to have heating furnished as part of the rental agreement (48.04%) and a majority of those students (65.3%) had their preferences met. Students who preferred to pay for heating separately (24.5%) experienced the preferred situation 78% of the time. Nearly 30% of the students indicated no preference for the payment of heating costs, but most of these students paid for heating separately.

Summary: Preferred and Existing Features

Both the specific preferences and less sought for preferences were being provided to college students by the owners and managers of student rental housing in Blacksburg. Of the features considered in the research

instrument, all but two of them existed at an equal or higher percentage than the corresponding percentage of preference for the feature. However, student demand for washer/dryers within their dwelling unit and flexible short-term leases did not appear to have been met for the Blacksburg student rental housing market.

Student Rental Expenditures

To obtain rental expenditure data, students were asked "How much is your share of the rent per month?". It was explained that their answer to the question should not include utilities unless they were paid for as part of the rental agreement. The mean monthly rental expenditure for students was $171.68. Monthly payments ranged from $20.00 to $413.00 (Table 4).

The source of the students' rental payment is often the student (37.3%). However, a number of students indicated that they shared the responsibility for the rental payment with their parents (34.3%), while one-quarter of them (25.5%) relied on parents to pay the entire monthly rent.

Information Sources

The search for off-campus rental housing was thought to be time consuming for students. Therefore, data were obtained to specify the source of rental housing

Table 4

Amount and Source of Rental Payment

| Rental Payment Information | n | % |
|---|---|---|
| **Amount ($)** | | |
| 20-99 | 4 | 2.0 |
| 100-135 | 47 | 23.5 |
| 136-160 | 57 | 28.5 |
| 163-185 | 50 | 23.0 |
| 186-220 | 22 | 11.0 |
| 221-413 | 23 | 11.5 |
| Total | 203* | 99.5 |
| **Source** | | |
| Student | 76 | 37.3 |
| Parents and student | 70 | 34.3 |
| Parents | 52 | 25.5 |
| Other | 6 | 2.9 |
| Total | 204 | 100.0 |

*Total does not equal 204 due to one respondent's refusal to answer.

information used by the students and the number of properties contacted.

Almost 56% of the respondents cited friends as the most frequent source of information regarding off-campus rental housing (Table 5). Students who stated that they already knew about or had seen the property before gave the second most frequently cited source at a much lower percentage (16.2%).

When searching for off-campus housing, almost 40% of the students contacted only one property, while 28% contacted four or more properties (Table 6). A contact occurred if the student wrote, called, or visited the property.

Factors Influencing Rental Housing Choice

To identify the major influences on students' off-campus rental housing choices, participants in the study were asked to rate each of seven items based on their level of importance in influencing the decision to choose their current residence. Each item was given a rating between one and 10, one being the lowest level of influence and 10 being the highest level of influence.

A scale was developed to categorize the students' responses as low, medium, or high influences. Ratings between one and three were classified as a low influence, ratings of four to six were a medium influence, and

Table 5

Information Source (N=204)

| Source | n | % |
|---|---|---|
| Friends | 114 | 55.9 |
| Already knew | 33 | 16.2 |
| Housing office | 25 | 12.3 |
| Newspaper | 24 | 11.8 |
| Apartment guide | 8 | 3.9 |
| Total | 204 | 100.1 |

Note. Percentage total does not equal 100% due to rounding.

Table 6

Number of Properties Contacted by Students in Selection of Off-Campus Rental Housing (N=204)

| Number contacted | n | % |
|---|---|---|
| One | 81 | 39.7 |
| Two | 26 | 12.7 |
| Three | 40 | 19.6 |
| Four | 14 | 6.9 |
| Five | 17 | 8.3 |
| +Five | 26 | 12.7 |
| Total | 204 | 99.9 |

Note. Percentage does not equal 100% due to rounding.

ratings of seven to 10 were considered a high influence on the decision to reside in a particular unit.

Cost of rental housing emerged as the greatest influence on student housing choice (Table 7). Nearly 80% of the student participants rated cost as a high influence. The source of the rental payment does not seem to influence the importance placed upon cost (Table 8). An influence rating of eight was most common for those students who paid their monthly rent themselves and for those who shared the responsibility with their parents. Students whose parents paid the entire rental fee rated the importance of cost at a slightly higher rating of nine. These crosstabulations illustrate a high influence placed upon anticipated rental expenditure regardless of who is responsible for its payment.

The amount of space within a dwelling and the reputation of the property management were also considered to be important influences on rental housing choice. However, the influence ratings for amount of space and property manager reputation were more evenly distributed between low, medium, and high than the ratings for the influence of cost.

Each of the items rated by the students showed the greatest proportion of responses in the "high influence" category. This suggests that all of the factors

Table 7

Influences on Student Selection of Off-campus Rental Housing

| Influences | Influence Ratings | | | | | |
|---|---|---|---|---|---|---|
| | Low | | Medium | | High | |
| | n | % | n | % | n | % |
| Cost | 6 | 3.0 | 46 | 17.6 | 162 | 79.4 |
| Space | 8 | 4.0 | 54 | 26.5 | 142 | 69.6 |
| Management | 23 | 11.2 | 55 | 26.9 | 126 | 61.8 |
| Close to campus | 23 | 11.2 | 67 | 32.9 | 114 | 55.9 |
| Amenities | 39 | 19.2 | 64 | 31.3 | 101 | 49.5 |
| Design | 33 | 16.2 | 81 | 39.8 | 126 | 44.1 |
| Close to friends | 61 | 29.9 | 62 | 30.4 | 81 | 39.7 |

Table 8

Influence of Cost by Source of Rental Payment

| Influence of Cost | Source of Rental Payment | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Parents | | Students | | Combin. | | Other | |
| | n | % | n | % | n | % | n | % |
| One | 0 | 0.0 | 0 | 0.0 | 1 | .5 | 1 | .5 |
| Two | 1 | .5 | 0 | 0.0 | 0 | 0.0 | 1 | .5 |
| Three | 2 | 1.0 | 0 | 0.0 | 1 | .5 | 0 | 0.0 |
| Four | 2 | 1.0 | 0 | 0.0 | 1 | .5 | 0 | 0.0 |
| Five | 6 | 2.9 | 5 | 2.5 | 5 | 2.5 | 0 | 0.0 |
| Six | 5 | 2.5 | 6 | 2.9 | 4 | 2.0 | 1 | .5 |
| Seven | 9 | 4.4 | 10 | 4.9 | 9 | 4.4 | 1 | .5 |
| Eight | 8 | 3.9 | 22 | 10.8 | 9 | 4.4 | 1 | .5 |
| Nine | 11 | 5.4 | 16 | 7.8 | 14 | 6.9 | 1 | .5 |
| Ten | 8 | 3.9 | 16 | 7.8 | 13 | 6.4 | 1 | .5 |

Note. Influence was measured on a scale of one to 10, one being the lowest possible influence and 10 being the highest.

considered in the research instrument are somewhat influential in students' off-campus rental housing choices. The influence of closeness to friends, design, and the existence of amenities, however, appeared to have the least influence on student housing choice.

## Satisfactions

To evaluate the level of satisfaction with off-campus rental housing, the students were asked to rate their overall level of satisfaction with their housing. Student ratings ranged from one to 10 (one being the lowest and 10 being the highest possible rating).

Students' overall satisfaction ratings were high (Table 9). Nearly 81% of the students rated their overall satisfaction level at seven or above, with just over 4% of them ranking their overall satisfaction at four or below.

To provide a more detailed explanation of student satisfactions, ratings were obtained for seven separate items. Each of these items had been rated previously for its level of importance in influencing the students' housing choices. Because the rating ranged from one to 10, a scale identical to the one used for the influence ratings was used to categorize satisfaction levels.

Table 9

Overall Satisfaction with Off-Campus Rental Housing

| Satisfaction Rating | n | % |
|---|---|---|
| One | 1 | 0.5 |
| Two | 0 | 0.0 |
| Three | 4 | 2.0 |
| Four | 6 | 2.9 |
| Five | 11 | 5.4 |
| Six | 17 | 8.3 |
| Seven | 30 | 14.7 |
| Eight | 73 | 35.8 |
| Nine | 45 | 22.1 |
| Ten | 17 | 8.3 |
| | 204 | 100.0 |

Note. Satisfaction level was measured on a scale of one to 10 (one being the lowest level of satisfaction and 10 being the highest level of satisfaction.)

Each of the items was rated "high" by a majority of the students (Table 10). Students expressed the highest level of satisfaction with the proximity of their dwelling to campus and with the amount of space available inside the dwelling. It is interesting to note that space also appeared as one of the most important influences on student housing choice.

Crosstabulation of the satisfaction ratings of traditional rental apartment and townhouse dwellers with those of student apartment and townhouse style condominium dwellers revealed little difference in the satisfaction ratings of both groups. The most frequently given overall satisfaction rating for both traditional apartment and townhouse dwellers and student apartment and townhouse style condominiums was an eight (Table 11). Both groups appear to be highly pleased with their housing.

Dissatisfactions

Although the satisfaction levels of the students appear high, some dissatisfactions exist. The dissatisfactions discussed in this section may explain the medium and low ratings given by students regarding their overall and item-specific satisfaction ratings.

Participants were to identify from a list the main reason for any dissatisfactions they may have had with their rental housing. Reflecting the relatively high

Table 10

Satisfaction with Selected Characteristics of Off-Campus Rental Housing (N=204)

| Factors | Ratings | | | | | |
|---|---|---|---|---|---|---|
| | Low | | Medium | | High | |
| | n | % | n | % | n | % |
| Close to campus | 16 | 8.0 | 32 | 15.7 | 155 | 76.4 |
| Space | 4 | 2.0 | 44 | 21.7 | 155 | 76.4 |
| Design | 7 | 3.5 | 46 | 22.7 | 150 | 73.8 |
| Cost | 15 | 7.4 | 42 | 20.8 | 146 | 72.0 |
| Management | 21 | 10.4 | 58 | 28.6 | 124 | 61.1 |
| Close to friends | 23 | 11.4 | 56 | 27.6 | 124 | 61.1 |
| Amenities | 26 | 12.8 | 53 | 26.0 | 124 | 61.1 |

Table 11

Overall Satisfaction by Rental Housing Type

| Satisfaction Ratings | Apartments/ Townhouses | | Apartment/Townhouse Style Condominiums | |
|---|---|---|---|---|
| | n | % | n | % |
| One | 1 | .5 | 0 | 0.0 |
| Two | 0 | 0.0 | 0 | 0.0 |
| Three | 3 | 1.6 | 1 | 0.5 |
| Four | 5 | 2.7 | 0 | 0.0 |
| Five | 9 | 4.9 | 1 | 0.5 |
| Six | 11 | 6.0 | 2 | 1.1 |
| Seven | 27 | 14.6 | 2 | 1.1 |
| Eight | 56 | 30.3 | 12 | 6.5 |
| Nine | 38 | 20.5 | 4 | 2.2 |
| Ten | 11 | 6.0 | 2 | 1.1 |

Note. Satisfaction ratings ranged from a low of one to a high of 10.

levels of satisfaction, the students cited the "no complaints" category most frequently (Table 12). Noise (18.6%), inadequate parking (16.7%), and miscellaneous other complaints (18.6%) were the greatest irritations for the students.

Comparison of the dissatisfactions of traditional apartment and townhouse dwellers with those of student condominium dwellers showed differences in the dissatisfactions cited by each group (Table 13). Specifically, traditional apartment and townhouse dwellers most frequently responded that they had no complaints. In contrast, every student apartment and townhouse style condominium dweller surveyed expressed some sort of dissatisfaction. For both groups, noise and parking problems seemed to be the main source of dissatisfaction.

Table 12

Major Reason for Students' Dissatisfactions with Rental Housing

| Dissatisfactions | n | % |
|---|---|---|
| Noise | 38 | 18.6 |
| Inadequate parking | 34 | 16.7 |
| Poor location | 16 | 7.8 |
| High cost | 13 | 6.4 |
| Poor security | 10 | 4.9 |
| Inadequate space | 9 | 4.4 |
| Other | 38 | 18.6 |
| No complaints | 46 | 22.5 |

Table 13

Dissatisfactions with Rental Housing by Rental Housing Type

| Dissatisfactions | Apartment/Townhouse Dwellers | | Student Condominium Dwellers | |
|---|---|---|---|---|
| | n | % | n | % |
| Noise | 32 | 17.3 | 5 | 2.7 |
| Inadequate parking | 26 | 14.1 | 8 | 4.3 |
| Poor location | 12 | 6.5 | 3 | 1.6 |
| Poor security | 10 | 5.4 | 0 | 0.0 |
| High cost | 9 | 4.9 | 2 | 1.1 |
| Inadequate space | 5 | 2.7 | 2 | 1.1 |
| Other | 30 | 16.2 | 4 | 2.2 |
| No complaints | 37 | 20.0 | 0 | 0.0 |

## Chapter V

## Statistical Analysis and Discussion

Statistical analyses were performed to accomplish three of the four objectives:

a) examine the relationship between both economic and non-economic needs and off-campus rental housing choice.

b) evaluate the effectiveness of the rental housing market in meeting the off-campus housing preferences of college students.

c) compare the effectiveness of traditional rental apartment and student apartment condominiums in meeting the off-campus housing preferences of college students.

In this chapter, the results of the statistical analyses are discussed as they relate to the hypotheses stated in Chapter III, Methodology. In addition, this discussion specifically relates to the "housing selection" "outcome" components of the empirical model presented in Chapter II, Literature Review.

## Housing Choice

### Hypothesis 1

To examine the relationship between off-campus rental housing choice and selected characteristics of rental housing, the rank biserial correlation coefficient was used. Housing choice was measured by the type of housing selected. Because there was little or no relationship between the variables measured and housing choice, all seven parts of the first hypothesis were retained: distance from the campus, distance from friends, cost, amount of space within the unit, design of the unit, management, and amenities available.

Specifically, the influence ratings (ranging from one to 10) for seven characteristics were correlated with the actual housing choices of the students. Little or no association was apparent (Table 14). One possible explanation for the low levels of association is that, in general, the influence ratings given by the students were quite high and fairly homogeneous in nature.

According to Hinkle, Wiersma, and Jurs (1979), "as the group under study becomes increasingly homogeneous on one or both variables, the absolute value of the correlation coefficient tends to be smaller." Thus, the narrow

Table 14

Association of Student Preference with Rental Housing Type

| Preference | Correlation Coefficient for All Types | RAT | SAT |
|---|---|---|---|
| Close to campus | .167 | -.195 | .116 |
| Close to friends | -.085 | .036 | .038 |
| Cost | .117 | -.096 | -.010 |
| Space | .052 | .078 | .094 |
| Design | .027 | -.019 | .088 |
| Management | .100 | .052 | -.031 |
| Amenities | .015 | -.053 | -.104 |

RAT = Traditional rental apartment and townhouse dwellers.
SAT = Student apartment and townhouse style condominium dwellers.

distribution of scores on each variable measured could have contributed to the limited level of association.

Results suggest that the level of influence students place on certain housing characteristics does not affect their final off-campus rental housing choice. Although students generally gave high ratings to the independent variables in Ho1 (see Chapter IV), they are fortunate to be consumers in a competitive market with numerous quality rental housing options. Therefore, it would seem that students do not individually compare each available housing type for its success in meeting the preferences stated in Ho1.

Hypothesis 2

The rank biserial correlation coeffiecient was also used to test Ho2. Again, little or no association was found to exist between the students' level of satisfaction with their housing and the type of housing in which they resided (Table 15). Therefore, all seven parts of Ho2 were retained: distance from the campus, distance from friends, cost, amount of space within the unit, design of the unit, management, and amenities available.

Once again the low levels of association are apparently due to the homogeneity of satisfaction scores for each group. These scores were high for each variable.

Table 15

Association of Level of Satisfaction with Rental Housing Type

| Satisfaction with: | Correlation Coefficients for All Types | RAT | SAT |
|---|---|---|---|
| Close to campus | .128 | -.145 | .081 |
| Close to friends | .027 | -.015 | -.031 |
| Cost | .010 | .029 | -.010 |
| Space | .034 | -.016 | -.031 |
| Design | .035 | -.058 | -.068 |
| Management | -.056 | .031 | -.021 |
| Amenities | .015 | -.043 | .090 |

RAT = Traditional rental apartment and townhouse dwellers
SAT = Student apartment and townhouse style condominium dwellers

Student satisfaction with off-campus rental housing appears to be high across all housing types. As the rank biserial test confirmed, it is difficult to associate high satisfaction levels in any one category to a particular type of off-campus rental housing.

The final two hypotheses were tested using the "student's t-distribution." The t-test was used to test for differences between traditional rental apartment and townhouse dwellers and student apartment and townhouse style condominium dwellers on the variables stated in Ho3 and Ho4. The .01 level of significance was used due to the number of separate t-tests which were conducted. Given the unequal size of the two groups, the assumption of equal variances was tested.

Hypothesis 3

To measure the effectiveness of the traditional rental apartment and townhouse market and the student condominium market in meeting the preferences of the students, the overall satisfaction levels of the two groups were compared. For Ho3, the computed test statistic failed to exceed the critical value for the non-directional alternative. Therefore, the null hypothesis was retained at the .01 level of significance.

The small difference between the means of the two groups indicated that both markets are fulfilling the

preferences of the students at a relatively high degree (Table 16). Not only is there little difference in the mean satisfaction levels of the group, but these satisfaction levels are high for both groups.

Hypothesis 4

Using the t-distribution to compare the two groups regarding housing preferences showed significant differences. In four cases, the test statistic exceeded the critical value for the non-directional alternative (Table 17). In each case the null hypothesis was rejected at the .01 level. The two groups differed significantly in their preferences for dishwashers, washer/dryers, 24-hour emergency maintenance, and flexible leases.

Students who resided in student condominiums were more likely to specifically look for a dishwasher in the unit during their search for off-campus housing. Those students who resided in traditional rental apartments and townhouses were less likely to specifically search for a dishwasher.

Existence of a dishwasher in nearly every student condominium in Blacksburg may have been a factor in student decisions to reside in these units. Although many traditional rental apartments and townhouses in Blacksburg provide dishwashers, some do not. Therefore, it is likely that student preference for dishwashers will be higher among student apartment and townhouse style condominium dwellers

Table 16

Overall Satisfaction:
Traditional Rental Apartment/Townhouse Dwellers and
Student Apartment/Townhouse Style Condominium Dwellers

| Housing type | Mean | Difference between the means | t-score |
|---|---|---|---|
| RAT | 7.6 | .2 | .754 |
| SAT | 7.8 | | |

RAT = Traditional rental apartment and townhouse dwellers
SAT = Student apartment and townhouse style condominium dwellers

Table 17

Preferences for Off-campus Rental Housing:
Traditional Rental Apartment/Townhouse Dwellers and
Student Apartment/Townhouse Style Condominium Dwellers

| Preferences | Mean RAT | Mean SAT | Difference between the means | t-score |
|---|---|---|---|---|
| Dishwasher | 1.5 | 1.8 | .3 | .008* |
| Microwave | 1.1 | 1.2 | .1 | .149 |
| Washer/Dryer | 1.4 | 1.8 | .4 | .001* |
| Cable TV | 1.5 | 1.6 | .1 | .347 |
| Storage room | 1.4 | 1.5 | .1 | .204 |
| Private bedroom | 1.9 | 1.9 | 0.0 | .799 |
| Deadbolt lock | 1.4 | 1.4 | 0.0 | .622 |
| 24 Hr. Maintenance | 1.6 | 1.2 | .4 | .001* |
| Flexible lease | 1.4 | 1.7 | .3 | .013* |
| On busroute | 1.7 | 1.8 | .1 | .376 |

*p .01

RAT = Traditional rental apartment and townhouse dwellers
SAT = Student apartment and townhouse style condominium dwellers

than their traditional apartment and townhouse dwelling counterparts.

Student preference for washer/dryers within the unit can be associated with residence in a student apartment or townhouse style condominium. Students residing in traditional rental apartments and townhouses were less likely to be specifically looking for a washer/dryer with the unit during their housing search.

For the most part, the housing search of students whose preference is for a washer/dryer within the unit is limited to student apartment and townhouse style condominiums. At the time of this study, only a few traditional rental apartment and townhouse units provided washer/dryers within the unit. However, most of these provided easy access to laundry facilities. Thus, it can be concluded that the existence of washer/dryers within student apartment and townhouse style condominiums may be a factor in student decisions to reside in these units.

The two groups appear to differ in their preferences for 24 hour emergency maintenance. In this case, students residing in traditional rental apartments and townhouses expressed a higher preference for 24-hour maintenance than students residing in student apartment or townhouse style condominiums. This may have occurred because emergency maintenance service is more likely to be offered at

traditional apartment and townhouse complexes. Since student condominiums are often individually owned and then rented to a student, emergency maintenance is not always provided.

During the administration of the telephone interviews, this investigator noted that nearly all students who lived in traditional rental apartments and townhouses were aware of the availability of emergency maintenance; whereas a number of student condominium dwellers were not immediately certain if emergency maintenance was included in the rental agreement. This seems to confirm the conclusion that student preference for emergency maintenance is higher among students residing in traditional rental apartments and townhouses.

Differences between the two groups are evident in their preference for flexible leases. According to the results of the t-distribution, it appears that student apartment and townhouse style condominium dwellers are more likely to prefer flexible leases (see Table 17).

Due to the limited availability of flexible leases in the Blacksburg market, students strongly preferring one are likely to live in either student apartment and townhouse style condominiums or the small number of subsidized rental apartment units. Admission into subsidized units, which rent on a month to month basis after the first year's

occupancy, is difficult and requires being placed on a waiting list. Although a few flexible lease options do exist in traditional rental apartments in Blacksburg, the incidence is low. Students are most likely to obtain a flexible lease (or none at all) by residing in a student apartment or townhouse style condominium.

Each of the six remaining preferences (microwave, cable connection, storage room, private bedroom, deadbolt lock, near to a bus stop) was tested individually for differences between the responses of the two groups. None were found to show significant differences at the .01 level. The result showing no difference between the groups regarding preference for a microwave provided with the unit is surprising. Due to the high incidence of microwaves within their units, it was expected that residents of student apartment and townhouse style condominiums would show higher preferences for microwaves. However, it is possible that a large number of students already owned a microwave prior to moving to a student condominium unit.

Summary

Significant differences were found to exist between the two groups (traditional rental apartment and townhouse dwellers and student apartment and townhouse style condominiums dwellers) in their preferences for the following:

Dishwasher, washer/dryer, 24 hour emergency maintenance, and flexible lease options.

No differences in overall satisfaction were found to exist between traditional rental apartment and townhouse dwellers and student apartment and townhouse style condominiuim dwellers. Additionally, no associations were found to exist between the type of rental housing in which the students resided and preferences for location, cost, design, and management. No relationship appeared to exist between the type of rental housing of students and their overall satisfaction with their rental housing.

# Chapter VI

## Summary and Conclusions

College students account for a growing percentage of the population. As college enrollments have increased, the number of students residing in non-university operated off-campus housing has risen. Today, many students who reside off-campus dwell in traditional apartments and townhouses or the newer student apartment or townhouse style condominiums.

The purpose of this study was to identify the major factors which influence student selection of off-campus rental housing in Blacksburg, Virginia. The main objectives were to evaluate the effectiveness of the local rental market in meeting student preferences, compare the effectiveness of the traditional rental apartment market and the newer student apartment style condominium market in meeting students' housing preferences, assess students' satisfaction with their housing, and examine relationships between student preferences and housing choice.

The sample consisted of 204 Virginia Tech students chosen randomly from the university's student directory. All students in the sample resided in off-campus rental housing and listed a local Blacksburg address and telephone

number. Any students who owned their dwelling (or whose parent or guardian owned the dwelling) or lived in Greek housing were not included in the study.

The instrument used for data collection was an interview schedule with 19 forced choice questions. The questions were designed to gather information regarding demographics, housing preferences, and housing satisfactions. The interviews were conducted by telephone. Data were collected by the principal investigator and four trained interviewers. Collection of data occurred between February 8 and February 26, 1989.

Demographically, the average student participant was a college senior who lived in a traditional rental apartment two miles or less from campus and had a car. He/she was unmarried and paid $171.68 in monthly rent for a traditional rental apartment.

Examination of the data revealed that the factors having the greatest influence on the students' off-campus rental housing choice were: cost, amount of space available within the dwelling, and reputation of the property's management. However, the scale which was developed to group the influence ratings given by the students indicated that all the factors considered in the research instrument were important influences on the students' housing choice.

The data illustrated that the students in the sample, in general, were highly satisfied with their housing and their preferences had been met. Crosstabulation of dissatisfactions with traditional apartment and townhouse dwellers and student apartment and townhouse style condominium dwellers showed that the student apartment style condominium dwellers had more complaints than their traditional apartment dwelling counterparts. For both groups, noise and inadequate parking facilities were the major complaints.

No associations were found to exist between the type of housing the students lived in and their preferences for location, cost, design, and management. Student preferences seem to be met regardless of the type of housing. Therefore, student housing choice does not seem to be related to the characteristics of a certain type of housing.

Satisfaction and the type of housing in which the students were dwelling did not appear to be related. Student satisfactions were high for each type of housing represented in this study, making any relationship with a particular type unimportant.

Significant differences (t-test, $p<.01$) were found to exist between apartment dwellers and student apartment style condominium dwellers on preferences for a dishwasher, washer/dryer, 24 hour emergency maintenance, and flexible

leases. No significant differences in the satisfaction levels of the two groups appeared in the t-distribution.

To provide a basis for the explanation of student off-campus rental housing choices and satisfactions, an empirical model adapted from an existing model of consumer behavior was developed (Figure 3). Results of this study effectively supported the relationships which were represented in the model. For example, all but one of the variables (housing type) listed under "housing selection" were found to be somewhat if not extremely influential in student housing choice. As a result of these student preferences being met, satisfaction levels for the students were high.

The effect of past housing experience on off-campus housing choice and satisfaction illustrated in the model cannot be supported by the results of this study since the instrument did not address this subject. Additionally, the effect of basic determinants (internal influences) and environmental influences (external influences) could not be measured in this study.

## Conclusions

Based on the results of this study, the following conclusions seem justified:

1. Students in the Blacksburg sample were highly satisfied with their off-campus rental housing.

2. Student preferences were for a high level of amenities and were being met by the student rental market in Blacksburg.

3. Noise and inadequate parking were the main dissatisfactions with off-campus rental housing by the students.

4. Given the opportunity, students were likely to choose rental housing options which offer added amenities (i.e. washer/dryer) and flexible lease options.

5. Students living in student apartment and townhouse style condominiums were more likely to complain of dissatisfactions than students living in traditional rental apartments.

6. Student apartment and townhouse style condominium dwellers were more likely to prefer dishwashers, washers/dryers, and flexible leases than dwellers of traditional rental apartments, who were more likely to prefer 24 hour emergency maintenance.

7. Students searching for off-campus rental housing were likely to consult friends for information and to limit their search to one property.

8. Students were more likely to base their housing choice on cost than on any other influence. However, other factors were also important in their housing choices.

## Limitations

Because this study was limited to Virginia Tech students living in non-university operated housing within the town of Blacksburg, the results and conclusions may not be generalizable to other college towns with different student profiles or off-campus housing alternatives. Neither can the results be generalized to different geographic areas.

Since the researcher did not obtain information regarding the number of persons living in the same unit as the respondent, housing costs, choices, and satisfactions of the student respondents could not be related to the number of persons occupying the respondent's unit.

## Implications

### For Property Owners and/or Managers of Student Rental Housing:

A saturated market, such as the Blacksburg market is becoming, provides an opportunity for property owners to meet student preferences. For a property to remain competitive in a saturated market, it must gain a competitive edge in the marketplace. Knowledge of and provision for student preferences by property owners and managers can result in a competitive edge for the property.

The results of this study indicate that the students in the sample were fairly homogeneous in regard to their preferences for and influence on housing choice. Knowing this, property managers and owners should concentrate on meeting student preferences for items such as dishwashers and cable connections.

Based on the findings of this study, which revealed a few differences between the preferences of traditional rental apartment dwellers and student condominium dwellers, the owners and managers of these types of properties in Blacksburg can begin to meet the students/ preferences. For example, an improvement in the quality of maintenance and management seems to be in order for student apartment style condominiums. In contrast, owners of traditional rental apartments and townhouses should consider offering more amenities such as washer/dryers in the rental unit and flexible leases.

For Owners/Managers of Rental Housing Targeted to Young Professionals:

Because the students selected for this study will soon become young professionals, owners of rental housing that target young professionals should be aware of the results of this study. The preferences, satisfactions, and dissatisfactions of students in this study may be used to

create a rental housing product that is highly appealing to young professionals beginning a new career.

Student preferences for rental housing in this study were for a high level of amenities (i.e. dishwashers, cable connection, washer/dryers, etc...). Therefore, owners of properties who wish to gain the business of young professionals should recognize what the preferences of young professionals were during their college years. Then, owners and managers should, at the minimum, meet these preferences in order to create a sellable product.

For College and University Administrators:

A relationship between housing environment and academic performance has been suggested in the related research on student housing (Clodfelter and Furr, 1984). Therefore, college administrators should concern themselves with the off-campus housing environments which exist for their students.

University student housing offices can play an important role in helping to create quality off-campus rental housing for its students. The information which is available from studies such as this one could be shared with owners and developers of new and existing off-campus rental properties. Cooperation of this type between university administrators and owners of off-campus rental property

should only result in off-campus housing which successfully meets the preferences of college students.

Recommendations for Further Research

The following research on off-campus student rental housing is recommended:

1. the factors influencing the rental housing choices of students both before and after their graduation in order to compare preferences, satisfactions and dissatisfactions.

2. the factors influencing the off-campus housing choices of college freshmen both before and after they have moved away from campus for the first time.

3. the factors influencing the off-campus housing choice of one particular type of housing (i.e. apartments or townhouses only).

4. the factors influencing the off-campus rental housing choices of students attending a different university (i.e. one in which there are fewer housing alternatives and/or units available).

The investigator recommends the following research of off-campus student rental housing based on revisions of the empirical model and the instrument used in this study.

1. the relationship between present student housing choices and satisfactions and past housing experiences in order to test the empirical model's feedback loop.

2. the relationship between housing type and satisfaction. The instrument should be revised to provide better understanding of student satisfactions. Student satisfaction levels should be obtained for additional variables and a different measurement technique should be considered.

3. the relationship between student satisfaction with housing choice and the number of and relationship to other individuals residing in the same dwelling unit.

4. the relationship between the final outcome of the housing search (satisfaction or dissatisfaction) and additional variable(s) which may intervene between selection influences and final outcome. Development and testing of this possible relationship could result in the addition of a valuable component to the empirical model.

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Appendix A

## Questionnaire

ASK THE FOLLOWING QUESTION TO RESPONDENT FIRST. IF ANSWER IS NO, THANK THE RESPONDENT AND GO TO THE NEXT NAME IN THE SAMPLE.

**Do you live in a unit for which you pay monthly rent?**

1. What is the name of your current residence?
   _____

2. To whom do you pay your rent?
   1. To the complex where you live.
   2. To a property management firm such as Raines or Townside Real Estate
   3. To an individual (i.e. roommate)
   4. Other

   PROBE TO FIND OUT IF IT IS A PARENT OR GUARDIAN. IF YES, DISCONTINUE THE INTERVIEW.

3. Do you live in a rental apartment or townhouse, an apartment or townhouse style condominium, rented house, rented room in a house or other rented housing?
   1. RENTAL APARTMENT
   2. RENTAL TOWNHOUSE
   3. APART. STYLE CONDOMINIUM
   4. TOWNHOUSE STYLE CONDOMINIUM
   5. RENTED HOUSE
   6. RENTED ROOM
   7. OTHER RENTED HOUSING
      (list)_____

4. Approximately how many miles from campus do you live?
   1. LESS THAN ONE MILE 2. ONE 3. TWO 4. THREE
   5. MORE THAN THREE

5. Do you have a car here at school?
   1. NO 2. YES

6. How did you learn about your current residence?
   1. Newspaper/Collegiate Times
   2. Friends
   3. Housing office
   4. Apartment guide
   5. Saw or heard of dwelling before/already knew

7. How many places did you write, call or visit before coming to a final decision on where you would live?
   1. ONE 2. TWO 3. THREE 4. FOUR 5. FIVE
   6. +FIVE

8. If you had a choice, would you rather live close to your friends or close to the college campus?
   1. CLOSE TO FRIENDS
   2. CLOSE TO CAMPUS

9. During your search for off-campus housing, were you specifically looking for any of the following?

| | 1.NO | 2.YES |
|---|---|---|
| Dishwasher | 1 | 2 |
| Microwave in unit | 1 | 2 |
| Washer/dryer in unit | 1 | 2 |
| Cable connection | 1 | 2 |
| Storage room | 1 | 2 |
| Private room | 1 | 2 |
| Deadbolt locks on doors | 1 | 2 |
| 24 hour maintenance | 1 | 2 |
| Flexible lease agreement (i.e. 6-9 month lease) | 1 | 2 |
| On the busroute | 1 | 2 |

10. At your current residence, do you have any of the following?

| | 1.NO | 2.YES |
|---|---|---|
| Dishwasher | 1 | 2 |
| Microwave in unit | 1 | 2 |
| Washer/dryer in unit | 1 | 2 |
| Cable connection | 1 | 2 |
| Storage room | 1 | 2 |
| Private room | 1 | 2 |
| Deadbolt locks on doors | 1 | 2 |
| 24 hour maintenance | 1 | 2 |
| Flexible lease agreement | 1 | 2 |
| On the busroute | 1 | 2 |

11. During your search for off-campus housing, did you prefer to pay for heating costs separately or to have the cost of heating included in the rental price?
   1. SEPARATELY
   2. INCLUDED IN THE RENT
   3. DID NOT MATTER

12. Does rent include the cost of heating? 1. NO 2. YES

13. How much is your share of the rent per month?
CODE ____ (3 digits)

14. Is this amount paid from funds provided by your parents, yourself, or others?
1. PARENTS
2. SELF
3. PARENTS AND SELF
4. OTHER

15. On a scale of 1 to 10 ( 1 being lowest and 10 being highest), what is your overall satisfaction with your residence? _____

16. I'm going to read you a list of reasons why some people are dissatisfied with their housing. Which, if any, of the following describes the main reason for dissatisfactions that you may have?
1. Noise
2. Inadequate space
3. Inadequate parking
4. High cost
5. Poor location
6. Poor security
7. Other_____
8. No complaints

17. I'm going to read you a list of items. Please rate each of them from 1 to 10 (1 being the lowest and 10 being the highest) based on their importance in influencing your decision to live at your current residence?
REPEAT AGAIN FOR CURRENT SATISFACTION LEVELS (i.e., "now from the same list, rate your current satisfaction levels for each item.)

| | IMPT | SAT |
|---|---|---|
| 1. Closeness to campus | | |
| 2. Close location to friends | | |
| 3. Cost | | |
| 4. Amount of space within the dwelling | | |
| 5. Design of the dwelling | | |
| 6. Good management | | |
| 7. Amenities available | | |
| 8. Other_____ | | |

18. Are you a sophomore, junior, senior, or graduate student?
    1. SOPHOMORE
    2. JUNIOR
    3. SENIOR
    4. GRADUATE STUDENT

19. Are you married? 1. NO
    2. YES
    (IF YES,REFER BACK TO #13 TO CLARIFY RENTAL COST)

20. IS THE RESPONDENT MALE OR FEMALE? 1. MALE 2. FEMALE

Comments (if any):

Appendix B

## Contact Form

Int_____

ID#_____

| Contacts | Date/ Time | Completed | Busy | Not home Ans/mach | Callbk | Callwt |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
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