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AN ECOLOGICAL ASSESSMENT
OF THE RESIDENCE HALLS ENVIRONMENT
AT THE UNIVERSITY OF IOWA

By

Mitchel Dean Livingston

A DISSERTATION

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ABSTRACT

AN ECOLOGICAL ASSESSMENT OF THE RESIDENCE HALLS ENVIRONMENT AT THE UNIVERSITY OF IOWA

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The study tests the ecosystem model (micro-level) for environmental assessment and redesign with the department of Residence Services at The University of Iowa. The introduction to the model was at Stage V - measuring student perceptions of the residence halls environment. Data from this assessment were utilized by a planning team composed of residence halls staff and students, faculty and student services representatives, to develop a list of recommendations for environmental intervention. These recommendations were either implemented immediately or they were incorporated into the departmental Management by Objective program for staged implementation. A major focus of the study was to evaluate the effectiveness of the ecosystem model for generating data that were to improve conditions in seven different residence halls environments (e.g. Physical, Regulatory, Programming, Security, Food, Intellectual/Academic, and Interpersonal Relations and Responsibility).

Seven procedural stages that were utilized to conduct the study included 1) obtaining sanction, 2) selecting a planning team, 3) determining what to assess,

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4) instrumentation, 5) distribution and collection of instrument, 6) data analysis, and 7) redesign and evaluation.

The University of Iowa Residence Halls Environmental Assessment Survey (UIRHEAS) was developed by the planning team to operationalize the study.

The five research questions examined in the study included:

1. How do students perceive the residence halls environment along different environmental subscales?
2. Why do students say they have certain perceptions about the residence halls along different environmental subscales?
3. What do students recommend to improve the residence halls along different environmental subscales?
4. What environmental interventions will be made as a result of data generated from the above questions?
5. Is the ecosystem methodology an effective means of making environmental improvements in residence halls?

A review of the seven procedural stages revealed that all research questions were answered.

Findings of the study also demonstrated that the ecosystem model is an effective means of assessing residence halls environments and developing recommendations for planned intervention.

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CHAPTER ONE
INTRODUCTION

HISTORICAL DEVELOPMENT AND
OBJECTIVES OF STUDENT HOUSING

Student residences are as old as universities.¹ One of the problems that confronted students in medieval universities in Europe was the procurement of adequate housing. Without the historical account of these problems that students faced with medieval landlords, the origin of universities would remain a mystery today.² Thus, the early development of universities is inextricably joined with that of student residences.

Housing was necessary for the basic purpose of providing food and shelter rather than an esoteric tie to learning and development. Students often came from far-away places to study together in the few communities that had universities. Many of the best known housing arrangements, from an historical perspective, entailed a gathering of students from the same area who would rent a house and operate it as a residence. These houses of residence came to be called Nations, named according to the area of origin of the occupants, and they formed key structural components of the university.³ The principal factor that

joined the Nations was the concept of citizenship. Students would band together in Nations to create an artificial citizenry and through their commercial value to the city, work for the rights of jurisdiction over their members. However, the power and autonomy of the Nations were soon lost to the university because of their inability to provide continuity and security.

College housing, as it developed in the United States during the colonial era, was a modification of the British system, with its idea that the student's place of residence was a vital part of the college experience.⁴ Tutors lived with the students and were responsible for their conduct away from the classroom. In contrast to the British method, which was intended to enhance the total education of the student, dormitories in America became mere places for board and lodging, and the administration of a stringent set of regulations governing the daily lives of students.⁵

There were a number of factors that led to a decreased emphasis on college housing by the mid 1800's. In fact, many new colleges founded at the time offered no on-campus housing for students. Two of the more significant changes that occurred during this period were 1) a general move from religious to secular control of the colleges, accompanied by a lessening of commitment to regulate the religious and moral aspects of student life, and 2) many administrators of the time, as well as faculty members, had

studied at German universities and became followers of the German system, which advocated little or no responsibility for the student outside of the classroom.⁶ Faculty members were therefore less interested in accepting positions in residence halls. In fact, Francis Wayland, president of Brown University, described the dormitory as the major contributor to all that was evil in American higher education. According to him, the requirement that students live together, often learning bad habits from one another, forced to adhere to the same regulations regardless of age, and isolated from the rest of society, led to an "unnatural" situation.⁷

Further compounding the problem of college housing was the poor financial stability of colleges and universities. Thus housing of students off campus became a pragmatic, as well as a philosophical, consideration.

The tide of sentiment regarding college-provided housing changed around the turn of the century. Noted administrators, such as William Rainey Harper of the University of Chicago and Jacob Schurman, expressed a deep commitment to the educational value of residence hall living. Prominent educators like Andrew West, who became president of Princeton in 1901, and Abbott Lawrence, who replaced Charles Eliot as president of Harvard in 1909, also supported their views.⁸ The significant point is that college officials were starting to express concern

for the "total education" of the student - an attitude which has generally prevailed to the present.

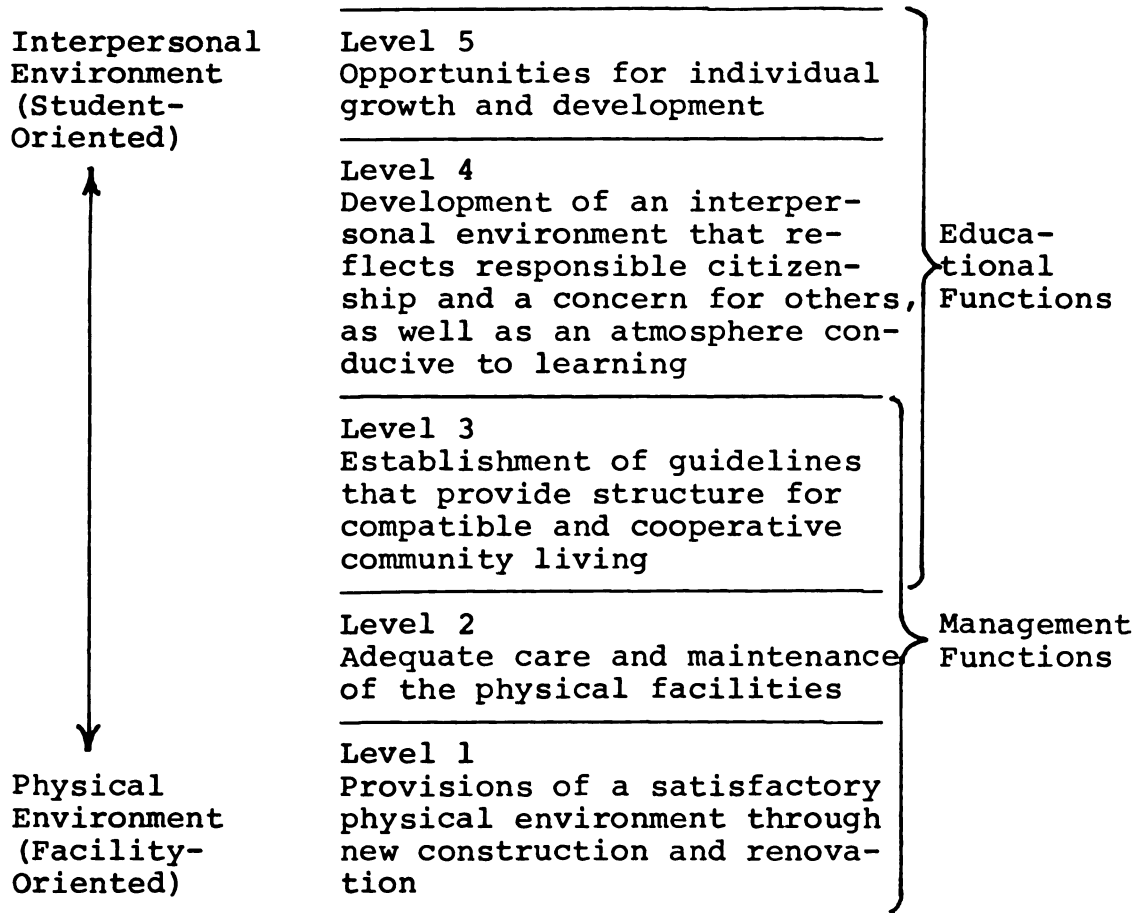
Residence halls experienced tremendous growth subsequent to World War II when college enrollments began to mushroom. Huge federal expenditures provided through the G.I. Bill put colleges and universities within the financial grasp of the general citizenry. Federal funds also played a significant role in the development of housing projects that solidified the residence experience as an inextricable part of college life both in terms of basic needs (i.e., food and shelter) and educational development.

Today, in addition to professional staffs trained in sociological and psychological concepts useful in dealing with students, one finds managerial personnel trained in institutional management providing for students' physical needs and an extensive array of student government groups all working to insure that the college experience will truly be a total education.⁹

Riker and DeCoster (1971) offer a model including five "General Objectives for College Student Housing" which describes the interrelationship between managerial and educational functions.¹⁰ These objectives of residence hall programs represent a broad spectrum of student development in differing environments. Riker and DeCoster suggest that these objectives are organized in a hierarchy in order to illustrate how the success of a total housing program depends upon the mutual cooperation and support of

both management and educational personnel. These authors depict the model as follows:¹¹

General Objectives for College Housing



Each level in the above model represents a somewhat distinct set of student needs. As with Maslow's Hierarchy of Needs Model (1959), success at any one level will depend to a large degree on how well student needs are fulfilled at lower levels.¹² It is also significant to note that in the Riker-DeCoster model the residence hall environment is categorized both in terms of the physical environment and the interpersonal or non-physical environment.

In order to determine environmental impacts and need fulfillment in college housing a substantial volume of professional research has been conducted. Significant findings regarding residence halls impact on college student development are discussed briefly.

THE IMPACT OF THE RESIDENCE HALL ENVIRONMENT

A number of authorities have advanced the proposition that residence halls have a significant impact on the growth and development of resident students (Feldman and Newcomb, 1969; Chickering, 1969; Riker, 1965; Brown, 1972; and Astin, 1977).^{13, 14, 15, 16, 17} Their belief in the educational value of the residence hall experience has prompted many university administrators to construct multi-million dollar living and learning residence halls which provide not only basic services such as room and board, but also classrooms, libraries, faculty offices, advising centers and program instruction centers. Staff in these programs are significantly different from the "house-mother" type of previous years. Such developments have evolved in an effort to address the needs of the total individual. The Committee on Higher Education (1968) expressed this concern dramatically with the following statement:

Despite our limited behavioral knowledge, the college must recognize that even its instructional goals cannot be effectively achieved unless it assumes some responsibility for facilitating the

development of the total human personality. A student is not a passive digester of knowledge elegantly arranged for him by superior curriculum design. He listens, reads, thinks, studies, and writes at the same time that he feels, worries, hopes, loves and hates. He engages in all these activities not as an isolated individual but as a member of overlapping communities which greatly influence his reactions to the classroom experience. To teach the subject matter and ignore the realities of the student's life and the social systems of the college is hopelessly naive.¹⁸

In their book, The Impact of College on Students, Feldman and Newcomb (1969) condensed over four decades of research on college and university impact on students.¹⁹ Their work was an attempt to integrate a wide variety of studies (many of them unpublished) of the effects of colleges on students covering a period from the mid-twenties to the mid-sixties.

Although most of their research on the impact of residence groupings covered greek-letter organizations, some studies examined the impact of residence halls on student behavior. And while it cannot be said with certainty, Feldman and Newcomb concluded that there does seem to be a tendency for students living in organized groupings (such as residence halls, cooperatives and the like) to be more "socially adjusted" and to participate more in extracurricular and campus activities than students living elsewhere - especially those living in rooming houses and with parents and relatives.²⁰ They go on to suggest that there are exceptions, however,

that appear to be a function, among other things, of the particular school and college class of students.²¹

Perhaps the most comprehensive examination of the impact of higher education on student development was offered by Chickering (1969) in his book Education and Identity. He identifies and describes seven developmental vectors which confront young adults as they experience their college education: 1) achieving competence, 2) managing emotions, 3) becoming autonomous, 4) establishing identity, 5) freeing interpersonal relationships, 6) clarifying purpose, and 7) developing integrity.²²

In his book Chickering asserts that college residences do provide a significant context for student development.²³ It is within the residence halls that close associations with students from different backgrounds occur. These associations provide numerous opportunities for residents to increase the ease and freedom in their relationships with others. A student living in a residence hall can observe the impact of his behavior on others and, in turn, feel the force of the group's behavioral norms and standards. Chickering suggests that the resident student can better develop a personal system of values that he can hold with integrity.²⁴ And because the college can control housing arrangements and the placement of students within the houses, it can create

conditions that more effectively contribute to the feeling of interpersonal relationships and to the development of integrity.²⁵

Dressel and Lehmann (1965) provide evidence of the importance of these relationships when they found that:

The most significant reported experience in the collegiate lives of these Michigan State University students was their association with different personalities in their living unit. The analysis of interview and questionnaire data suggested that discussions and bull sessions were a potent factor in shaping the attitudes and values of these students.²⁶

Newcomb (1962) found that roommates, whose proximity to each other was greatest of all, were particularly prone to develop close relationships.²⁷ Propinquity, of course, is not the only influential factor in the development of meaningful relationships, but at the outset it is a primary factor. Newcomb sums up its significance in this way:

For any individual there are many others, potentially, with whom he might form significant relationships. Those with whom he does in fact develop them are limited by opportunities for contact and reciprocal exploration, which in turn are influenced by physical propinquity. And, other things equal, he is most apt to maintain close relationships with those with whom he first develops them.²⁸

Proximity also has a negative side when closeness becomes a problem of crowding. For example, Griffitt and Veitch (1971) found a relationship among the variables of room density, decreased attraction to another person, and self-reports of negative affective states.²⁹ High

population density has also been linked with indices of social pathology (Zlutnick and Altman, 1971)³⁰ and affective relationships (Munroe and Munroe, 1971).³¹

In a complex study of the effects of crowding in the residence hall environment Zuckerman and Schmitz (1977) conducted a survey of students in eighty randomly selected double occupancy rooms from two different residence halls. The questionnaire included fourteen items - two pertaining to relationship with roommate, nine to the subject's mood, and three to the experience of crowding. One of the residence halls had smaller rooms and more students per corridor. The data supported the hypothesis that conditions which create less crowding may well serve as a better environment as far as the student's mood and interpersonal relationships are concerned.³²

Sherif and Sherif (1964) in Reference Groups provide a rationale regarding the significance of reference groups such as those found in residence halls. They suggest that people are strongly prompted to establish social ties with others for two major reasons. First, secure social ties provide a dependable basis for a consistent and stable self-picture, and a firm sense of identity. Although major personality changes may occur over a period of time, the feedback from day-to-day associations with friends gives a sense of personal constancy. Second, social ties provide both instrumental and emotional support as the business of living is carried out. The social ties that

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serve these functions are, for the most part, linked with membership in groups - informal friendship groups as well as more formal structures related to work, community activities and the like.³³

Centra (1968) complemented the reference group theory provided by Sherif and Sherif when he studied the extent to which living-learning residence halls differed from conventional residence halls in selected dimensions of their environment.³⁴ Large living and learning units, according to Centra, were viewed by students as being as friendly and cohesive as small, conventional residence halls, and he found that students in living-learning units did not perceive their residence environment as more intellectual than did students in conventional units.

Brown (1968), however, found intellectual attitudes increased as a result of residence hall programming that focused on student involvement in intellectual discussion groups.³⁵

Living in a residence hall, according to Astin (1973), was found to have very positive benefits on the students' education.³⁶ He observed that those in residence halls were less likely to drop out of school and more likely to graduate in four years. Astin further observed that living in a residence hall increased the chances that a student would be satisfied with the overall college experience.³⁷

Riker (1965) illustrates that the architectural design of residence halls facilities influences student interaction.³⁸ Group size and group cohesiveness will vary depending upon the arrangement of student rooms, traffic patterns within living units, and the availability of public areas such as floor lounges, study rooms and classrooms, as well as space designated for social, recreational and cultural purposes.³⁹

Because of the significant impact that college housing has on students, Van der Ryn and Silverstein (1967) developed a college housing and design analysis technique.⁴⁰ Their premise is that existing residence hall facilities have not been systematically evaluated to determine whether they are providing the kind of environment students want and need. They indicate that among administrators, there is much talk of the need of university-operated housing to provide the student with a humane, "educationally enriching" experience; yet these ideas have seldom found their way into brick and mortar.⁴¹

In order to determine the impact of residence halls on students relative to those who commute, Chickering (1974) made several interesting observations about the benefits of residence hall living.⁴² He states that resident students engage more fully with the academic program and associated intellectual activities. Chickering also found that they have more frequent and wider ranging contact with faculty members and fellow students.

Additionally, resident students more frequently participate in extracurricular activities and assume positions of leadership. Chickering also affirmed that resident students more frequently attend cultural events and discuss political, religious, and social issues.

The study of college impact on students was advanced four decades as mentioned previously by the research of Feldman and Newcomb in their book The Impact of College on Students (1969). Their work summarized the research in this area from the middle-twenties to the middle-sixties. Astin's book, Four Critical Years (1977), is a similar milestone in that it summarized the research on college impacts for the past decade.⁴³ In cooperation with the American Council on Education, Astin conducted the Cooperative Institutional Research Program (CIRP) from 1966-1977, covering some 200,000 students from a national sample of more than 300 post-secondary institutions of all types. Astin's work differed from previous research in two significant ways: 1) multiinstitutional data were collected simultaneously from students at contrasting types of institutions, and 2) longitudinal data, providing information on the ways in which students change between admission and some subsequent point in time, were utilized.⁴⁴ Perhaps the most important outcome of this research effort is what Astin called the initial "development of a theory about how students learn and develop in an educational environment".⁴⁵ The concept in this theory

is what he called "student involvement". Briefly, the theory states that the more the student is involved in the academic experience, the greater the learning and growth.⁴⁶ The less the involvement, the less the learning and the greater the chance that the student will be dissatisfied with the educational experience and drop out to seek something more meaningful.

Astin makes several observations about the impact of residence halls on students when compared to commuting students that include the following:

1. Residents show slightly greater increases in artistic interests, liberalism, and interpersonal self-esteem and show slightly larger declines in musical interests.
2. Residents show much larger declines in religiousness and much larger increases in hedonism.
3. Residents are more likely to interact with faculty and to become involved in student government.
4. Residents are more likely to persist in college as well as being more likely to aspire to graduate or professional school.
5. Residents are more likely to achieve in extracurricular areas, in particular leadership and athletics.
6. Among men, undergraduate grade point averages increased as a result of living on campus.
7. Residents express more satisfaction than commuters with their undergraduate experience, particularly in the areas of student friendships, faculty-student relations, institutional reputation, and social life.⁴⁷

The above findings are consistent with Chickering's results in Commuting Versus Resident Students. Astin's theory about "student involvement", however, best describes why residence halls have a significant impact on the lives of students who live on campus. Residence halls provide a unique context that maximizes the student's exposure to the academic community and intensifies the quality of college experience.

The findings from these different studies document three significant points: first, that residence halls impact the "total" individual in terms of his attitudes, beliefs, values, academic performance, perceptions, associations and involvement in the university experience; second, the residence hall environment is complex and is composed of many sub-environments (i.e., physical, organizational structure, policy, social, educational and others) that students move into and out of on a daily basis; and, third, the impact of residence halls can be either good or bad depending on how the "accommodation" between the individual student and his various sub-environments is managed.

Because colleges can impact the interior design and structure, site planning and location of buildings, and at least the initial placement of students, Chickering (1969) suggests conditions that foster development can be established by the following:

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1. Let each unit be assigned - as far as possible, given the range of characteristics of students enrolled - persons of diverse backgrounds, differing interests, and differing values.
2. Let the interior of each unit be designed so as to foster association among students in the unit, and let each unit be located so as to foster interrelationships with other units nearby.
3. Let the members of each unit face meaningful decisions that require significant exchange; in this way, the diversity of orientation may be revealed, examined, and tried on for size.
4. Let housing regulations be such as to permit spontaneous, heated and extended discussions that can be held without the imposition of arbitrary cut-off times and that are free from adult interruption, intrusion, or surveillance.⁴⁸

Brown concludes that, "The living environment (which includes people as well as the physical setting) of the student can have a profound impact upon his personal and educational development".⁴⁹ He goes on to assert the following:

We must consider it (residence halls) as a very complex environment and one that should be considered as a whole - the people, the physical facilities, the administration, and the programming. When thinking about the residence hall environment or especially when studying it, we tend to sort out one or two isolated variables. Sometimes it is the people variable, for example, when we look at roommate compatibility and grade point averages. At other times it is the physical variable and occasionally the program variable. This is the scientists' approach - sort out all the factors except one and study what happens when you manipulate that one variable. But we need to consider the whole and recognize that all dimensions are

important. A residence hall system is in a sense hydraulic. To change one dimension sometimes means affecting the whole; to bring about one change sometimes means changing all the dimensions.⁵⁰

STATEMENT OF THE PROBLEM

Although there are notable exceptions, the development of college and university residence halls is fraught with lack of intentionality in planning facilities and programs. Billions of dollars have been poured into the construction of many residential facilities without sufficient regard for the needs and interests of their inhabitants. Van der Ryn and Silverstein (1967) suggest that administrators responsible for the development of housing programs were caught in a three-way squeeze: 1) an increasing number of students looking for housing, 2) a growing proportion of these students that were limited financially, and 3) construction costs rising faster than real income.⁵¹ As a result, the major preoccupation of administrators has focused on problems of growth, costs and budgets, thus basic assumptions about residence hall design have seldom been questioned. Van der Ryn and Silverstein also suggest that it is indeed ironic that large universities who make investments in physical facilities that run into the hundreds of millions of dollars, have so rarely concerned themselves with the students relationship to their physical environment.

For better or for worse, college administrators are stuck with their current physical environments because of past construction and financing. The challenge of the next decade will be to creatively and responsively mold or reshape these environments to adjust to the changing needs of resident students.

With the prospect of declining enrollments and spiraling inflation, student personnel administrators can no longer afford the "luxury" of being either unintentional or unsystematic when providing for the needs of resident students. The traditional role of responding to students who were not adjusting to their residence hall environments by easing them out or referring them to a service that would aid them in making an adjustment is no longer acceptable. We know from the volumes of research that equal attention must now be given to making the environment adjust to the needs of students. We have as many "sick environments" as we have "sick students".

Also, with the increasing emphasis on student consumerism, those residence hall programs that can provide for reciprocal adjustment between the student and the environment are those who are most likely to maintain maximum occupancy without repressive rules and regulations for required residency.

Although there is considerable research on the impact of residence halls on students and the perceptions that students have of their residence hall environments,

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very little research has been conducted on the development of methodologies for improving the reciprocal relationships between resident students and their living environments.

Student personnel administrators who are conducting research in this area have dubbed their effort the "ecosystem" approach. A study of this nature is an important step toward the advancement of ecosystem research, because it goes beyond the mere assessment of residence hall environments, and provides a mechanism for individuals to bring about change in their respective environments.

For students and environments to reach their full potential, a systematic body of knowledge must exist to help describe and predict behavior resulting from the interaction between the students and the various residence hall sub-environments.

PURPOSES OF THE STUDY

The three primary purposes of this study are to 1) assess student perceptions of the residence hall environment along different environmental subscales, 2) determine the usefulness of ecosystem methodology for making environmental improvements in residence halls, and 3) utilize the results from the assessment to make recommendations for intentional program changes. These three

purposes are sequential and interdependent. It is through their interdependency that the secondary purpose is derived.

The secondary purpose is to establish a climate of responsiveness to student needs in residence halls at The University of Iowa. The entire sequence of instrument development through program change will occur with student involvement, over a period of time (one academic year) where all those involved in the process of change will have the opportunity to see the results of their efforts.

A tertiary purpose is to contribute to the growing body of research pertaining to ecologically oriented inquiry.

RESEARCH QUESTIONS

The focus of the study is on the environmental or ecological assessment of the residence halls at The University of Iowa. The methods used to answer questions about the residence hall environment are consistent with those used in the growing body of research regarding ecological assessment. The following questions will be examined:

1. How do students perceive the residence hall environment along different environmental scales?
2. Why do students say they have certain perceptions about the residence halls along different environmental subscales?

3. What do students recommend to improve the residence halls along different environmental subscales?
4. What environmental changes will be made as a result of data derived from the above questions?
5. Is the ecosystem methodology an effective means of making environmental improvements in residence halls?

ECOSYSTEM METHODOLOGY

There is now growing interest within post secondary education in the ecosystem approach that identifies adjustments institutions can make to facilitate student retention and growth.⁵² The ecosystem theory does recognize that some students should leave college because they are either unable or unwilling to benefit from the learning potential in the college environment. It also recognizes that some students will need individual academic or personal assistance while in college. However, the primary assertion of ecosystem theory is the identification of data which permits the design of environments that ameliorate unnecessary problems and enhance student retention and growth.

Kaiser (1973) has identified eight central themes on which the ecosystem model's design philosophy is rooted.

These are:

1. The campus environment consists of all the stimuli that impinge upon the students' sensory modalities and includes physical, chemical, biological, and social stimulation.

2. A transactional relationship exists between college students and their campus environment, i.e., the students shape their environment and are shaped by it.
3. For the purpose of environmental design the shaping properties of campus environments are focused upon; however, students are still viewed as active, choice-making agents who may resist, transform or nullify environmental influences.
4. Every student possesses capacity for a wide spectrum of possible behaviors. A campus environment may facilitate or inhibit any one of these behaviors. The campus should be intentionally designed to offer opportunities, incentives, and reinforcements for growth and development.
5. Students will attempt to cope with any educational environment in which they are placed. If the environment is not compatible with the students, the students may react negatively or fail to develop desirable qualities.
6. Because of the wide range of individual differences among students, fitting the campus environment to the students require the creation of a wide variety of sub-environments.
7. Every campus has a design, even if the administration, faculty and students have not planned it or are not consciously aware of it. A design technology for campus environments, therefore, is useful for both the analysis of existing campus environments and the design of new ones.
8. Successful campus design depends upon input from every sector of the campus, including students, faculty, staff, administration, and trustees or regents.⁵³

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The ecosystem model's design process is utilized to identify environmental shaping properties in order to eliminate dysfunctional features and to incorporate features that facilitate student academic and personal growth. For purposes of this study the "micro-level" ecosystem approach will be utilized. This method has as its focus residence halls, a sub-environment of the campus community (macro-level).

The design process itself consists of seven stages that include the following (Kaiser, 1975):

Stage 1 - The design team (students, faculty, staff and regents) generate numerous environmental values they consider desirable for the college environment. These environmental values are humanistic qualities built into the habitat which have high probability of evoking corresponding behaviors in the residents of the college environment . . . The selection of environmental values is necessarily a subjective process but must result in enough consensus on core values to proceed with the design effort. To achieve such consensus exercises in value clarification may be necessary.

Stage 2 - From the list of environmental values, a few are selected for design implementation. Stage 2 thus represents a prioritization of general values enumerated as Stage 1 and also a level of commitment by members of the design team. The selected values are rephrased into measurable goal statements. High level, abstract, philosophic statements produced in Stage 1 are converted into programmatic goals in Stage 2.

Stage 3 - The goal statements are translated into tangible programs and activities in Stage 3. Each goal in a planned

space can be traced to visible events that are its expression. Each visible event in turn can be traced to a goal statement. Stage 3 moves beyond paper planning to the planning of observable student activities.

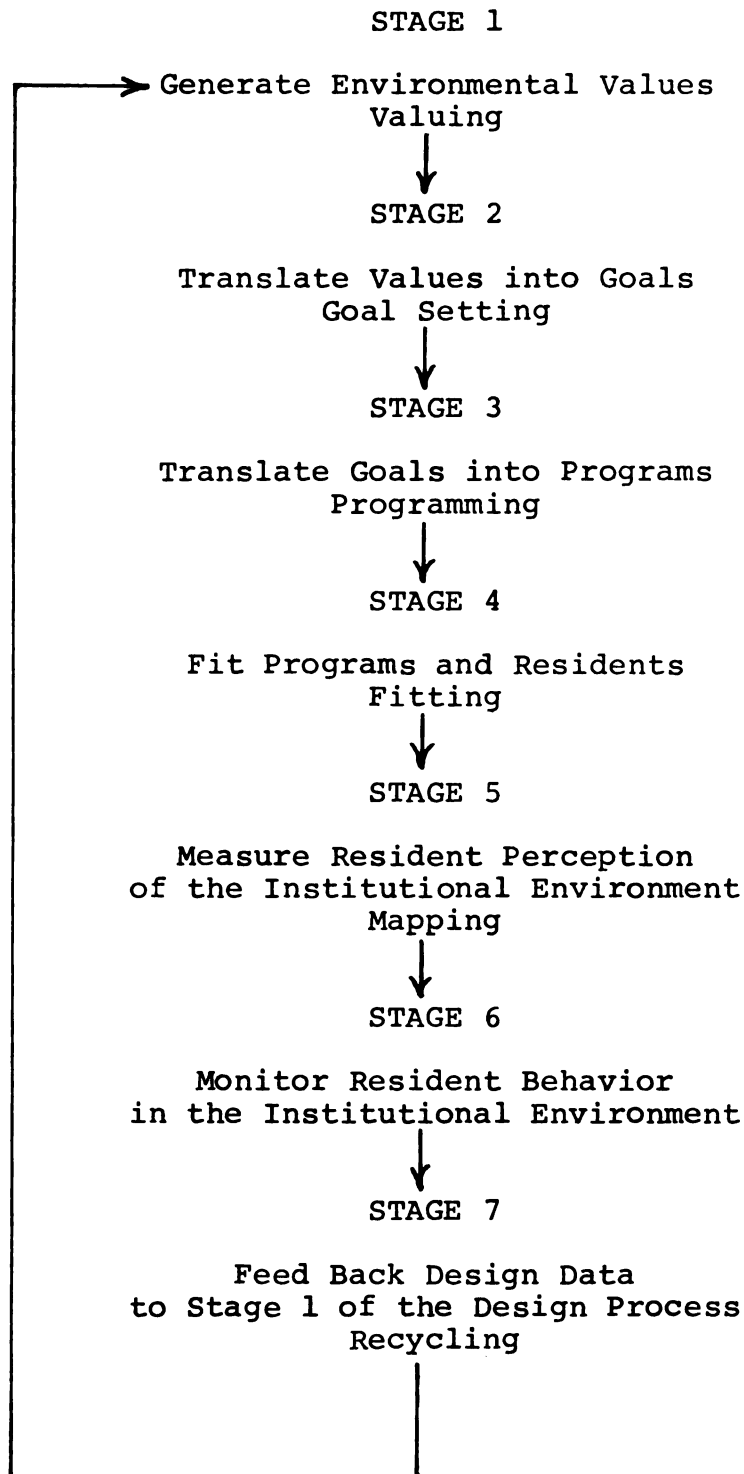
Stage 4 - The environmental programs are fitted to the residents (students, faculty, staff). A good program is only good in the sense that it fits the consciousness of its users . . . During this implementation stage feedback loops are built in to assist in customizing the program fit and making necessary adjustments.

Stage 5 - In Stage 5 the student's perception of the designed campus space is measured and compared with the goals in Stage 2. Is the space doing what it was designed to do? A number of psychometric tests have been developed for measuring campus climate. Depending upon the circumstances, any one of them might be appropriate. The consensual environment perceived by the student is then related to the referents of these perceptions, i.e., stimuli in the college environment that evokes the perceptions. A consensual referent environment constitutes the data for the redesign effort. The tagged stimuli can be redesigned. The referents might include people, policies, procedures, curriculum, building, and other campus stimuli.

Stage 6 - Student behavior is observed and if possible related to student perceptions measured in Stage 5. The assumption is that student behavior is related to student perception of the campus environment.

Stage 7 - All of the design data collected in the preceding six stages is gathered and analyzed. The design process is then repeated. Through successive design approximations the values and goals in Stages 1 and 2 are even more nearly approached.⁵⁴

THE DESIGN PROCESS



The point of entry into this model for the study is Stage 5 - measuring student perceptions because the current residence hall environments are already established with implicit and explicit values and goals. It follows then that an important step is to assess how students view the translation of these values and goals. How students perceive what is happening to them in the residence hall environment, and equally important, why they have these perceptions and what can be done to improve dysfunctional aspects of the environment are key elements to the implementation of an ecosystem model. It is in this third area - what can be done, that makes this study relatively unique.

Extensive research has been conducted utilizing instruments that measure people's perceptions, however the resultant data do not reveal why people have these perceptions; consequently, there is not sufficient information for redesigning environments. Without obtaining environmental referents (ERs) - the specific causes and/or conditions in the environment that produce student perceptions - designers can eliminate good features with bad ones, and thus redesign an environment that falls short of its intended purpose. This research will therefore use an Environmental Referent (ER) questionnaire in conjunction with the more common instrument for assessing perceptions.

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In summary, the ecosystem model is a political approach to problem solving both in terms of its design personnel (planning team) and design process. It utilizes input from the collaboration with all areas of residence halls. It requires involving all the principals that might be affected by changes in the environment in order to obtain support and ownership for these changes. It requires the establishment of clear goals and educational values that subsequently lead to the development of specific programs and activities and environmental changes. The process calls for continuous feedback on student behavior as it is measured through the utilization of an environmental assessment tool. This feedback data is then recycled to redesign dysfunctional elements of the various residence hall environments.

THEORETICAL FOUNDATION

Residence halls professionals are inclined to be practical people. They have important work to do that includes a wide variety of programs and services. The pressures to get the job done are constant - from the State Regents, the administration, from the students and their parents. Residence halls professionals, in short, have a fiduciary responsibility for the care and well-being for hundreds of lives on a twenty-four hour a day basis.

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This situation results in costs that often go unnoticed because of the demands of every day activities. Often residence hall professionals proceed with only a dim notion of how to perform complex jobs without benefit of a blueprint or a guiding set of principles for job performance. Cowley (1964), one of the pioneers in student services, noted that student service professionals are currently struggling with the same problems that afflicted them twenty-five years ago, and that the confused and irritating situation of the past has continued to prevail.⁵⁵

One of the primary reasons that progress has been slow is that there has been very little systematic research with a theoretical basis on which professional practice could be constructed. Wrenn (1959) commented: "There is unmistakably a set of generally accepted value oriented aims or scientifically based understanding of human nature. In short, student personnel work has philosophic and psychological foundations which have only haltingly developed and are disturbingly incomplete."⁵⁶

Widick, Parker and Knefelkamp (1978) suggest that if residence halls educators are to encourage development, they must know what development is - what changes can, do and should take place in students and what particular factors serve to challenge and support them. From their

perspective the creation of a developmental community in residence halls requires a theoretical knowledge base which describes:

1. Who the college student is in developmental terms. We need to know what changes occur and what those changes look like.
2. How development occurs. We need to have a grasp of the psychological and social processes which cause development.
3. How the college environment can influence student development. We need to know what factors in the particular environment of a college/university can either encourage or inhibit growth.
4. Toward what ends development in college should be directed.⁵⁷

Nevertheless, a good theory is a practical tool that, if used skillfully, holds great promise for problem solving and development. It reduces the need for regarding every problematic situation as unique, requiring different skills and orientations for resolution. It affords an opportunity for not having to repeat mistakes of the past. More importantly, it provides a foundation upon which one can develop an understanding of how residents develop and reach maturity as a result of the residence hall experience.

What is a theory? In general, theory in the behavioral sciences has its roots in the physical sciences. The theoretical structures that have been utilized by

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physical scientists have been used as models in order to guide the development of theories in other disciplines. According to Walsh (1973), a formal theory has the following characteristics:

1. A theory rests on a set of unproven assumptions. These assumptions define the field which the theory is investigating. The assumptions must be verifiable, susceptible to development, and suggest deduction of observable data.
2. Concepts are operationally defined in order that may be related to observable data in research experiments. The stated assumptions and operationally defined concepts make possible the development of testable hypotheses. The theory should predict new facts or relations and organize and interpret existing knowledge in a meaningful frame of reference.⁵⁸

Walsh goes on to suggest that the effectiveness of a theory depends on 1) how comprehensive it is, 2) clarity, precision and explicitness, 3) the inclusion of extant empirical findings within a logical, consistent framework, 4) parsimony - communicable and understandable, and 5) empirical research generated by the theory.⁵⁹

This researcher has thoroughly reviewed the ecosystem literature and has been unable to find a complete theory that utilized the person-environment interaction format for predicting behavior. Person-environment interaction as noted previously is the basic "theoretical orientation" of the ecosystem approach to studying behavior.

The interrelationship among individuals, the environment and the behavior of those individuals has been

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a matter of research for years. Lewin (1936) formulated the classic statement, "Behavior (B) is a function of the person (P) and the environment (E)".⁶⁰ The equation reads as follows:

$$B = f (P,E)$$

The equation is used as a coordinating system 1) for considering psychological theories and investigations and 2) for coordinating theoretical concepts with educational practice.

$B = f (P,E)$ is not in itself a theory to explain behavior, but, rather, it is a means of classification; it is metatheoretical - a way of thinking about and considering theories - rather than being an actual theory.

Although incomplete, there are a number of partial theories that have been developed to explain and predict the interrelationship between the individual and the environment. These partial theories will be explored more fully in the review of literature in Chapter Two. Walsh (1973) has characterized several partial theories on a continuum from least phenomenological to most phenomenological.⁶¹ He considers Barker's Behavior Setting Theory (1968) on the least phenomenological continuum because of Barker's "objective" approach to the environment as the primary determinant of behavior with emphasis on overt behavior, to the neglect of individual perceptions. The most phenomenological theory is Pervin's (1968)

transactional approach which emphasizes the individual's perception of the ideal self and the environment. Between either end of the continuum are the subcultural approaches (Clark and Trow, 1966 and Newcomb, 1967), Holland's Theory of Personality Types and Model Environments (1966), Stern's Need x Press = Culture Theory (1970), Moos' Social Ecological Approach (1974) and Pervin's Transactional Approach (1967).

Although the theoretical orientations are not complete (in that they do not satisfy all the criteria of a formal theory) they do provide a foundation for explaining and predicting behavior. It must be emphasized once again that the paradigm $B = f(P, E)$ is not a theory; however, it is a means of viewing various theoretical orientations regarding the interaction between the individual in the environment, many of which are suggested above.

This ecological study (utilizing the $B = f(P, E)$ model) of the residence hall environment has three basic assumptions: 1) student behavior cannot be understood apart from the environment in which it finds its expression; 2) physical and non-physical environments must be studied together since neither can be fully understood without the other. For example, both architectural design and psychological milieu significantly influence behavior; and, 3) ecologically oriented inquiry has an

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explicit value orientation in that it attempts to potentiate the development of the individual and the environment.

DEFINITION OF TERMS

Most of the language used in this study is of a general nature and thus provides a basis for common understanding. However, much of the ecosystem terminology requires definition. Although some terminology are common words, they take on new meaning when used in the context of the discipline - social ecology. The following is a list of definitions that will be helpful in terms of understanding the language utilized in this study:

1. Environment - all of the conditions, circumstances and influences surrounding and affecting the development of a person or group of persons. For purposes of this study the environment will be researched in terms of both its physical and non-physical properties.
2. Physical Environment - those tangible properties of the environment that influence the behavior of the individual(s) including architectural design, geographic conditions, climatic conditions, noise levels, and other factors.
3. Non-Physical Environment - those intangible properties of the environment that influence the behavior of

the individual(s) including mood states, interpersonal policy, organizational structure, social climate, and education.

4. Ecology - the general concept used to represent the study of organism-environmental interactions.

5. Human Ecology - the investigation, principally by sociologists and geographers, of the distribution of human population groups in relation to material resources, health, social, economic and cultural patterns.

6. Social Ecology - the multidisciplinary study of the impact that physical and social environments have on human beings. It is concerned with the assessment and development of optimum human milieus.

7. Person-Environment Fit - the degree of congruence, harmony, agreement or suitability between an individual and his/her environment.

8. Ecosystem Model - a design process utilizing an ecological approach. The essence of an ecological approach is the interaction that occurs between persons and their environment. The theory that underlies this model was developed by Dr. Leland Kaiser and was refined by members of the Western Interstate Commission on Higher Education program task force (1970-1973). The model has seven steps that include 1) selecting educational values, 2) translating values into goals,

3) designing environments to reach totals, 4) fitting environments to students, 5) measuring student perceptions, 6) monitoring student behavior and, 7) feedback data on the design.

9. Perceptual Survey - the first part of a two-part assessment instrument used in Stage 5 of the ecosystem model to measure how students perceive their environment. Questions in the survey are categorized in order to provide general information about specific residence hall sub-environments.

10. Environmental Referent (ER) Survey - the second part of a two-part assessment instrument used in Stage 5 of the ecosystem model to measure why students perceive their environment as they do and what can be done to improve the environment. The student is asked to refer back to his/her perceptual responses in Part I of the instrument and respond to a selected number of responses that have particular significance.

11. Consensual Response - statistical method used to determine the level or degree of mutual concern on various questions asked in the second part of the assessment instrument.

12. Ecomapping - method of assessing various aspects of the environment.

13. Macro-level Assessment - for purpose of the study, macro-level assessment would entail ecomapping the entire university environment - a study of the whole.

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14. Micro-level Assessment - the study is a micro-level assessment - the study of a campus sub-environment or part of the whole - residence halls.
15. $B = f(P, E)$ - an equation developed by Lewin (1936) that states that behavior (B) is a function (f) of the individual person (P) and the environment (E).
16. Residence Halls - a system of ten buildings that range in size from one hundred to thirteen hundred residents. The buildings are sometimes referred to as dorms.
17. Resident Assistants (RAs) - upperclass or graduate students who are employed to provide basic support programs and services for students who live in residence halls. For the most part there is one RA per floor. These individuals were instrumental in the distribution and collection of survey forms.
18. Phenomenological - the definition of the behavioral environment according to the individual's perceptions of it and his or her reactions to these perceptions.

LIMITATIONS OF STUDY

The following limitations are significant because of their impact on the interpretation of data and subsequent environmental change:

1. There are no complete theories that provide a foundation for ecologically oriented inquiry. There are, however, several partial theories that provide different approaches to studying the relationship between the

individual and his/her environment, but all are incomplete. This weakness is significant because it limits the predictive validity of the research effort and limits the utility of application of resultant data.

2. There is a scarcity of research that uses the ecosystem approach to mapping - assessing environments and making environmental change. Much descriptive research is needed to categorize environments in order to prevent overlapping environmental influences. Research efforts must also focus on instrumentation. Many problems are inherent in the current utilization of perceptual surveys as the primary method of data gathering; efforts are needed to objectify data without losing its personal significance. Environmental referents aid in the personalization of data, however, their research applications are at a state of infancy in their development.

3. Ecologically oriented inquiry should by definition focus on problems of a general nature in the environment. The scientific methodology utilized by this technique focuses on holistic data - it does not attempt to isolate and control environmental and personal elements in order to establish cause and effect relationships. Although ecologically oriented research is limited in the above fashion, this limitation is also its strength. By focusing on holistic data the researcher has a better contextual command of the data - a greater sense of the human problem.

4. Ecological research is tailored to uncover information about specific environments. As such, it is difficult to make generalizations to other environmental situations. Also, there are enough significant differences among residence halls programs that caution should be used in generalizing the results of this study beyond the subject population.

5. Although it is desirable to redesign the environment in the same year that participants are involved in the research effort, there may not be sufficient time to accomplish this objective. Nevertheless, it is imperative that some environmental changes are made within the desired time frame in order to insure a maximal level of commitment.

ORGANIZATION OF THE STUDY

Chapter One provides a comprehensive review of the importance and scope of the problem within a methodological and theoretical context. Chapter Two is devoted to a review of the literature related to theoretical orientations of person-environment interaction, methods of assessing environments, university application of environment assessment techniques and residence hall applications of the ecosystem method. A description of measures employed and the research design and procedures is presented in Chapter Three. A thorough review of

ecosystem methodology will also be provided in this chapter. Analysis techniques and a description of finds relative to each research question is presented in Chapter Four. Chapter Five contains the summary, conclusions, discussion of results and implications for further study.

Footnotes

Chapter One

FOOTNOTES

CHAPTER ONE

1. Howard Adelman, The Beds of Academe (Toronto: Praxis Books, 1969), p. 15.
2. Ibid.
3. Ibid., p. 16.
4. John R. Powell, Samuel A. Plyler, Barbara A. Dickson and Stephen D. McClellan, The Personnel Assistant in College Residence Halls (Boston: Houghton Mifflin Company, 1969), p. 4.
5. Ibid.
6. Ibid., p. 6.
7. Ibid.
8. Ibid., p. 8.
9. Ibid., p. 9.
10. David A. DeCoster and Phyllis Mable, Student Development and Education in College Residence Halls (Washington, D.C.: American Personnel and Guidance Association, 1974), p. 27.
11. Ibid., p. 28.
12. A. H. Maslow, "A Theory of Human Motivation," Readings in the Psychology of Adjustment, eds. L. Gorlow and W. Walkowsky (New York: McGraw Hill, 1959).
13. Kenneth A. Feldman and Theodore M. Newcomb, The Impact of College on Students (San Francisco: Jossey-Bass, 1969).
14. Arthur W. Chickering, Education and Identity (San Francisco: Jossey-Bass, 1969).
15. Harold C. Riker, College Housing as Learning Centers (Washington, D.C.: American Personnel and Guidance Association, 1965).
16. R. D. Brown, Student Development in Tomorrow's Higher Education: A Return to the Academy (Washington, D.C.: American College Personnel Association, 1972).

17. Alexander W. Astin, Four Critical Years (San Francisco: Jossey-Bass, 1977).
18. Committee on the Student in Higher Education, The Student in Higher Education (New Haven: Hazen Foundation, 1968), p. 5.
19. Feldman and Newcomb.
20. Ibid., p. 198.
21. Ibid.
22. Chickering.
23. Ibid., p. 221.
24. Ibid.
25. Ibid.
26. Paul L. Dressel and I. J. Lehmann, "The Impact of Higher Education on Student Values and Critical Thinking Abilities," Educational Record, 46 (1965), p. 245.
27. Theodore M. Newcomb, "Student Peer-Group Influence and Intellectual Outcomes of College Experience," Personality Factors on the College Campus, eds. Robert Southerland, Wayne Holtzman, Earl Koile and Bert Smith (Austin, Texas: Hogg Foundation, 1962), pp. 69-92.
28. Ibid.
29. W. Griffitt and R. Veitch, "Hot and Crowded: Influences of Population Density and Temperature on Interpersonal Behavior," Journal of Personality and Social Psychology, 17 (1971), pp. 92-98.
30. S. Zlitnick and I. Altman, "Crowding and Human Behavior," Environment and the Social Sciences: Perspectives and Applications, eds. J. F. Wohlwill and D. H. Carson (Washington, D.C.: American Psychological Association, 1972).
31. R. L. Munroe and R. H. Munroe, "Population Density and Affective Relationships in Three East African Societies," Journal of Social Psychology, 88 (1972), pp. 15-18.

32. Miron Zuckerman, Marie Schmitz and Andrew Yosha, "Effects of Crowding in a Student Environment," Journal of Applied Psychology, 7 (1977), p. 72.
33. M. Sherif and C. Sherif, Reference Groups (New York: Harper and Row, 1964).
34. John A. Centra, "Student Perceptions of Residence Hall Environment: Living Learning vs. Conventional Units," The Journal of College Student Personnel, 9 (1968), p. 266.
35. R. D. Brown, "Manipulation of the Environmental Press in a College Residence Hall," The Personnel and Guidance Journal, 46 (1968), p. 555.
36. Alexander W. Astin, "The Impact of Dormitory Living on Students," Educational Record, 54 (Summer, 1973), p. 204.
37. Ibid.
38. Riker.
39. Ibid.
40. Sim Van der Ryn and Murray Silverstein, Dorms at Berkeley (Berkeley, California: The Center for Planning and Development Research, 1967), p. 6.
41. Ibid.
42. Arthur W. Chickering, Commuting Versus Resident Students (San Francisco: Jossey-Bass, 1974), p. 53.
43. Astin, Four Critical Years.
44. Ibid.
45. Alexander W. Astin, "Observations on Higher Education: An Interview with Alexander Astin," NASPA Field Report, 3 (Fall, 1978), p. 1.
46. Ibid.
47. Astin, Four Critical Years, pp. 220-221.
48. Chickering, Education and Identity, p. 225.

49. R. D. Brown, "Student Development and Residence Education: Should it be Social Engineering?," Student Development and Education in College Residence Halls, eds. David A. DeCoster and Phyllis Mable (Washington, D.C.: American College Personnel Association, 1974), p. 52.
50. Ibid.
51. Van der Ryn, Dorms at Berkeley, p. 6.
52. Lu Anne Aulepp and Ursula Delworth, Training Manual for an Ecosystem Model (Boulder, Colorado: Western Interstate Commission for Higher Education, 1976), p. viii.
53. L. R. Kaiser, The Ecological Perspective: Mapping and Designing the Student Educational Community (Preliminary Report for the Western Interstate Commission for Higher Education Task Force II - Epidemiology, Campus Ecology and Program Evaluation), Unpublished Manuscript, Boulder, Colorado, 1972.
54. L. R. Kaiser, "Designing Campus Environments," National Association of Student Personnel Administrators Journal, 13 (1975).
55. W. H. Cowley, "Reflections of a Troublesome But Hopeful Rip Van Winkle," Journal of College Student Personnel, 6 (1964), pp. 66-73.
56. C. G. Wrenn, "Philosophical and Psychological Bases of Personnel Services in Education," Personnel Services in Education, ed. N. B. Henry (Chicago: University of Chicago Press, 1959), p. 46.
57. Lee Knepfelkamp, Carole Widick and Clyde A. Parker, Applying New Developmental Findings, (San Francisco: Jossey-Bass, 1978), p. x.
58. W. Bruce Walsh, Theories of Person-Environment Interaction: Implications for the College Student, The American College Testing Program, No. 10 (Iowa City, Iowa: ACT Press, 1973), p. 5.
59. Ibid.
60. K. Lewin, Principles of Topological Psychology (New York: McGraw Hill, 1936).
61. Walsh, p. 7.

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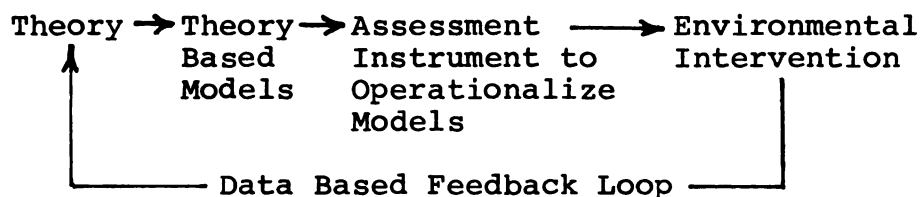
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CHAPTER TWO

REVIEW OF THE LITERATURE

The focus of the review of literature is to 1) inform the reader about the main theoretical orientations and instruments that utilize the $B = f(P, E)$ formula; 2) present research findings that support this model; 3) summarize the theories and their limitations; 4) review environmental assessment instruments for college and residence hall environments; 5) present methodologies for data-based institutional intervention; and, 6) review selected ecosystem studies that have been conducted in the last five years.

This chapter is developmental in the sense that it is organized in four stages that are sequential and interdependent. The following model depicts the stages of review:



Utilizing this model for reviewing the literature, the reader can derive a unity of thought proceeding from the ideal-theoretical to the real-environmental intervention.

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THEORETICAL ORIENTATION

$B = f(P, E)$, as stated earlier, is not a theory to explain behavior but rather a means of classification; it is a way of thinking about and considering theories - rather than theoretical. The B - P - E paradigm states the problem in an operational sense but does not solve it. However, its primary value as an analytic tool is captured in the notion that defining the problem is the critical part of finding the answer to significant questions about person-environment interaction. The paradigm suggests that attention must be given to characterizing persons in terms of their differential reactions to environmental influences. As Lewin (1951) stated:

A law is expressed in an equation which relates certain variables. Individual differences have to be conceived as various specific cases. In other words, general laws and individual differences are merely two aspects of one problem: they are mutually dependent on each other and the study of one cannot proceed without the study of the other.⁶²

Although it is important to characterize both the individual and the environment in order to understand and predict behavior, it is the individual(s) that has the primary focus of ecologically oriented inquiry. As Moos (1974) stated, "Ecology has an explicit value orientation in that it attempts to provide knowledge relevant to promoting maximally effective human functioning".⁶³

It is likely, for this reason, that the study of environments is not as well researched in the literature as is the individual.

RESEARCH SUPPORTING THE MODEL $B = f(P, E)$

Lewin (1936) observed that a "scientific psychology must . . . find methods of representing person and environment in common terms as part of one situation . . . in other words our concepts have to represent the interrelationships of conditions".⁶⁴ Lewin goes on to assert the reasons for this are methodological as well as theoretical because 1) only those entities which have the same conceptual dimensions can be compared as to their magnitude; and 2) everything which has the same conceptual dimensions can be compared quantitatively; its magnitude can be measured, in principle, with the same units of measurements.⁶⁵

Early findings from sociologists Park and Burgess (1925) and Faris and Dunham (1939) supported the assumption that behavior is influenced by the immediate environment.^{66, 67} Various psychologists, including Angyal, Sears and Murphy, have espoused similar positions regarding the transactional properties of behavior. However, the only formal system which lends itself to a detailed analogous representation of both person and environment in common terms and in comparable magnitudes is the need-press model developed by Murray (1938).⁶⁸

Murray defines needs as organizational tendencies which appear to give unity and direction to personality. Press refers to the phenomenological world of the individual, to the unique and inevitable private percept which each person has of the events in which he takes part.⁶⁹ Based on a review of significant research the following conclusions seem tenable regarding Murray's need-press model:

1. Percepts of institutional environments are not a function of the personal characteristics of the participant (McFee, 1961).⁷⁰
2. Percepts of the environment by experienced participants are consensual (Stern, 1962).⁷¹
3. The consensual percept of the environment reflects the objective personality characteristics (Stern, 1960).⁷²
4. The collective needs of selected groups of persons reflect their objective personality characteristics (Stern, 1960).⁷³
5. Although the need-press factors are independent of one another, their contents are substantially parallel to Lewin's model $B = f(P, E)$ (Stern, 1963).⁷⁴

Piaget's theory of intellectual development is generally viewed in the literature as an interactive theory that emphasizes both person and environment in describing the course of cognitive development. Four transition factors from lower to higher stages of development are considered by Piaget (1964) to clarify this interaction:

1. Maturation: . . . cognitive structures are not innate, but that the maturation of the nervous system determines the possibilities for development at a given stage.
2. Social interaction: . . . social interaction is important because it helps the child progress from egocentric, concrete modes of thought to more sociocentric, abstract modes of thought.
3. Physical experience: . . . the child's experience in acting on objects enables him to obtain knowledge about an object and to abstract from this knowledge.
4. Equilibration: . . . this is a central process that serves to balance assimilation and accommodation . . . it is the progressive interior organization of knowledge in a stepwise fashion.⁷⁵

Other psychologists have called attention to the importance of the environment in influencing behavior.

Sherif and Cantril (1947) emphasized the importance of the social environment and criticized psychoanalysis for missing the continuous relationship between the individual and the environment.⁷⁶ Barker (1960) has worked on the importance of behavior setting as places containing opportunities for achieving multiple satisfaction of motives.⁷⁷ In a similar way, Chein (1954) emphasized the environment as a limiting and determining factor in the way an individual satisfies his motives.⁷⁸

The issues of person-environment interaction and satisfaction has particular salience to the academic situation. In one of their early works, Pace and Stern (1958) suggested the study of congruence between needs and press in determining successful performance and/or satisfaction

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in the college environment. They concluded that "the total pattern of congruence between personal needs and environmental press will be more predictive of achievement, growth and change than any single aspect of either the person or the environment".⁷⁹ Similarly, Funkenstein (1962) reported results which suggest that many dropouts from medical school result from an incongruity between the basic attributes of an individual and those of the college.⁸⁰ At the other extreme of attempts to measure the college environment is the research by Pervin (1967) which focuses on the way students as individuals and as groups perceive the environment.⁸¹ In this research, students rate themselves and such concepts as My College, Faculty, Students and Administration on the same scale. Discrepancies between ratings on pairs of concepts are then related to reported probability of dropping out and various types of satisfaction or dissatisfaction with the college environment.

Recent studies indicate that the relative proportions of variance attributable to different factors may vary importantly according to particular sample of persons, settings, and responses chosen for study. However, Moos (1969) found that the variance accounted for by consistent differences among settings and by the interaction between environmental characteristics and personal characteristics is generally as great or greater than the variance accounted for by consistent differences among

persons.⁸² Later Insel and Moos (1974) affirmed, "the climate of environments in which people function relates to their satisfaction, mood, and self esteem and to their personal growth. Environments shape adaptive potentials as well as facilitate or inhibit initiative and coping behavior".⁸³

THEORY-BASED MODELS OF PERSON-ENVIRONMENT RELATIONSHIPS

In recent years research into person-environment interaction has increased substantially. The community psychology movement of the late sixties and seventies brought a return to the ideology and vocabulary of interactionism - a concern with the immediate person x environment phenomenon. The college-based version of this movement found acceptance in the early 1970's and has continued as a primary force in the student services literature. Six theoretical orientations utilizing the person-environment relationship will be reviewed in this section. These include: 1) Barker's (1968) theory of behavior settings; 2) the subcultural approach (Clark and Trow, 1966); 3) Holland's (1973) theory of personality types and model environments; 4) Stern's (1970) need x press = culture theory; 5) Moos' (1973, 1974) social climate dimensions; and 6) Pervin's (1968) transactional approach. The theories are ordered and presented on a continuum from least phenomenologically

oriented (Barker) to most phenomenologically oriented (Pervin). The least phenomenologically oriented theories have attempted to define the environment more "objectively". The more phenomenologically oriented theories have attempted to define the environment as it is perceived.

Barker's Behavior Setting Theory

Environments select and shape the behavior of people who inhabit them is the basic rationale for Barker's theory of behavior setting. In Ecological Psychology (1968) Barker maintains that people tend to behave in highly similar ways in specific environments, regardless of their individual differences as persons.⁸⁴ Thus Barker asserts that human environments seem to have a coercive influence upon human behavior.

Barker utilized a paper by Heider (1959) in the development of his theory. The title of the paper was "Things and Medium".⁸⁵ In this paper Heider noted that objects in the environment have physical properties which differ from the behavior that intervenes between these objects and the organism. He classified the former objects "things" (behavior settings) and the latter entities "media" (people). According to Heider there are two differences between things and media: 1) things are internally constrained, and they are relatively

independent of external stimuli for their form and energy, and 2) things are unitary - the parts of things are interdependent upon each other. A change in one part causes a change in the next part.⁸⁶

From the above information Barker developed three basic assumptions that underlie his behavior setting theory. The first assumption is that the media comply with the forces of the thing: people tend to be receivers and transducers in response to the structure and pattern of forces from the behavior setting. The second assumption states that the thing imposes its pattern upon media via its own driving forces: the behavior setting is the operator. The final assumption suggests that if we measure the docility of the media and measure the driving forces of the thing, it may be possible to account in some degree for the consequences which occur across person-environment boundaries.⁸⁷

To operationalize his theory Barker developed the Behavior Setting Survey, which he considers the most objective way to measure and describe environments. Basic operations include 1) identifying potential behavior settings, 2) eliminating potential settings that do not meet criteria of behavior settings, and 3) describing the behavior settings. By completing these operations one is able to test the association between the number of people in a setting and the frequency, intensity, origin, and termination of forces that impinge on these people.

According to Walsh (1973) the theory proposes that there are differences between undermanned settings and optimally manned settings.⁸⁸ Undermanned settings have fewer people but the same standing patterns of behavior. Setting functions are threatened, and the people sense the possibility of losing the satisfaction the setting provides. Therefore, the inhabitants are involved in more actions, stronger actions, and more varied actions in order to maintain the behavior setting. The people tend to be busier, more vigorous, more versatile and more involved in the setting.⁸⁹

Research. Studies of behavior settings provide that they are stable, extra-individual units with great coercive power over the behavior that occurs within them (Barker and Wright, 1955; Gump and Sutton-Smith, 1955; Gump, Schoggen and Redl, 1957; Raush, Dittman and Taylor, 1959 and 1960; Barker, 1960; Jordan, 1963; Gump, Schoggen and Redl, 1963; Soskin and John, 1963; Ashton, 1964; Barker and Gump, 1964; Wicker, 1967).⁹⁰

Walsh (1973) summarized the results of several studies focusing on the effects of the size of the behavior setting on the behavior of the individual. He found that relevant behavioral differences exist between the inhabitants of small behavior settings and the inhabitants of large behavior settings. Inhabitants of small behavior

settings differ from inhabitants in large behavior settings in the following ways:

1. They function in a wider range of activities, assume positions of responsibility and importance more frequently, engage in more social greetings, and are more familiar with their setting.
2. They participate voluntarily more frequently.
3. They are more satisfied.
4. They report more forces toward participation in behavior settings.
5. They are absent less often, more punctual, more interested in the affairs of the behavior setting and more productive.
6. They exhibit more group cohesiveness.
7. They evidence less centralization of communication, increased ease in communication, and greater social interaction among inhabitants.
8. They demonstrate more leadership behaviors and exhibit greater ability to identify outstanding persons.
9. They tend to be more important to behavior settings and exhibit less turnover.
10. They show evidence of broader role conception and seem to be more cognitively complex.
11. They report more frequently on participation as having been meaningful.⁹¹

The theory allows one to generate predictions from one behavior setting to another. These behavioral predictions, however, are within the bounds of a standing pattern of a behavior setting, and limitations do exist. For instance, motives and experiences of inhabitants cannot be predicted.

SUBCULTURAL APPROACHES

Identifying attitudinal or behavioral dimensions along which students tend to vary is the central focus of the subcultural approach. When analyzing the college environment these dimensions are cross categorized or the variables are dichotomized and used to approximate student subgroups or cultures. A subculture implies more than a collection of people with similar attitudes or behaviors; it implies that these people interact with one another, that they are mutually attracted to one another, and they are aware of their common orientation.⁹²

Clark and Trow Subculture Model

In their 1960 publication Determinants of College Student Subcultures, Clark and Trow discussed their model which describes types of orientations of four student subcultures.⁹³ They hypothesized that there are certain broad patterns of student orientation toward college which give meaning to the informed relations among students. They further hypothesized that these orientations may be identified as subcultures if they tend to stimulate shared perceptions and behaviors among students exhibiting common orientation. The following is a representation of their model:

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		Involved with Ideas	
Identify with their College	much	much	little
	little	academic	collegiate
		nonconformist	vocational

The four subcultures derive their identity from the combination of two dimensions: 1) the level which students identify with ideas; and 2) the extent to which students identify with their college. Serious students who are involved with ideas and who identify with their college make up the academic subculture. Those students who are involved in ideas but tend not to identify with their college are in the nonconformist subculture. In contrast, those students who tend to be loyal to their college but indifferent, if not resistant, to serious intellectual demands are in the collegiate subculture. These individuals tend to value social life and extracurricular activities more than others. Likewise, the vocational subculture tends not to be intellectually inclined. Moreover, to these students a college education is off-the-job training leading to a diploma and a better job.

Peterson (1965) operationalized the Clark and Trow typology as part of the College Student Questionnaire (CSQ).⁹⁴ Through this instrument students are asked to rank brief paragraph statements on each of the four orientations in order of their accuracy as self-descriptions. Peterson found that responses to the four paragraph

statements by entering college freshmen tend to be related in expected ways in the Clark-Trow frame of reference to a number of variables measured by the CSQ.

Other research suggests that the four orientations tend to be related in predictable ways to scales measuring similar constructs; however, no research shows that students entering a common orientation actually interact with one another. Walsh (1973) suggests that there is also no evidence indicating that students indeed enter and participate in interactional environments that are congruent with their major subcultural orientation.⁹⁵

Newcomb Subcultural Model

Utilizing the subcultural approach, Newcomb and his associates (1967) cross-categorized the two dichotomized dimensions of individualism and intellectuality to obtain the following four subcultures:⁹⁶

		Individualism	
		high	low
Intellectuality	high	1 creative individuals	3 the scholars
	low	2 the wild ones	4 the social group

Heist and Yonge (1962), utilizing the Omnibus Personality Inventory, found that the most striking group differences were found between the creative individualists and the social group.⁹⁷

Research findings showed that creative individualists and the members of the social group, in particular, seemed to evidence a significant degree of intragroup attraction to interact with one another, and to choose each other as friends. Of the four groups research suggests that the wild ones do not seem to be a subcultural group.

Holland's Theory of Personality Types and Model Environments

In his theory of personality types and model environments Holland (1966) is concerned with assessing the individual and the environment.⁹⁸ Holland asserts that human behavior is a function of both the individuals' personality and the environment in which he lives. According to Holland the choice of a vocation is in part an expression of personality. Thus vocational interests are not an isolated entity, but moreover a product of an individual's life history. Because the members of a vocation tend to have similar personalities, they probably tend also to respond in similar ways in many situations.

Holland states three basic assumptions about his theory of personality types and model environments. They are as follows:

1. People may be characterized by their resemblance to one or more personality types. Holland defines a type as a cluster of personal attributes which may be used to measure the person. The six personality types are 1) realistic, 2) investigative, 3) social, 4) conventional, 5) enterprising, and 6) artistic. An individual's dominant type or orientation is the product of his or her life history.
2. The environments in which people live may be characterized by their resemblance to one or more model environments. Six model environments are presented corresponding to the analogous personality types. Thus, for each personality type there is a related environment. The individual is therefore concerned about the degree of fit or congruence between his personality and his environment.
3. Congruent person-environment relationships lead to outcomes that are predictable and understandable from the knowledge of the personality types and the environmental models.⁹⁹

In order to operationalize the personality aspect of his theory, Holland developed the Vocational Preference Inventory (VPI, 1965).¹⁰⁰ The rationale for the development of this assessment instrument is based on the assumption that preferences for occupations are expressions of personality. The formulation of personality types developed out of Holland's clinical experiences and were subsequently utilized to provide the foundation for the VPI.

The VPI is composed of one hundred sixty occupational titles. It is self administering - individuals

record their preferences for occupations on an answer sheet. Although the primary purpose of the VPI is to assess personality, it may also be used as a conventional interest inventory as well as to stimulate occupational exploration by the person taking it.¹⁰¹

Holland also asserts that it is necessary to assess the environment as well as the person in order to predict behavior effectively. Therefore, to compliment the personality types, Holland proposed six model environments to characterize the physical and social settings in our society. To assess these environments Astin and Holland (1961) developed the Environmental Assessment Technique (EAT).¹⁰² The EAT is based on the notion, substantiated by Linton (1945) and others, that a major portion of environmental forces is transmitted through other people.¹⁰³ One can infer from this that the character of a social environment is dependent upon the nature of its members. Therefore, the dominant features of an environment are dependent upon the typical characteristics of its members. It follows, then, that if we know the character of the people in a group, we should know the climate of that group.

The EAT is composed of eight variables that include: 1) the total number of students in the college; 2) the average intelligence of the students; and 3) the six model environments. To obtain a measure of the six orientations at any institution, the number of majors (i.e.,

students in a major field) of each orientation was expressed as a percentage of the total number of classifiable majors. For example, the realistic orientation of college would be:

$$\text{Realistic Orientation} = \frac{\text{Number of Majors Classified Realistic} \times 100}{\text{Total Number of Classifiable Majors}}$$

In this way, each institution can be characterized by the proportion of its students belonging to each of the six personal orientations, as determined by their choice of major field.

The following are the six theoretical model orientations that apply to both personality and environment:

1. Realistic - characterized by an orientation toward the physical, concrete or the practical.
2. Investigative - characterized by thinking, scientific orientation, or the abstract.
3. Social - characterized by humanistic, interpersonal, or helping orientation.
4. Conventional - characterized by systematic routine, structured orientation. Also, little emphasis on physical skills.
5. Enterprising - characterized by verbal skills, supervisory roles or power orientation.
6. Artistic - characterized by original and individualistic expression, imagination or personal interpretation of feelings, ideas, and facts.¹⁰⁵

Research based on the theory seems to support the existence of the personality types and environmental

models as elaborated in Holland's original theoretical formulation. Holland and others have conducted more than one hundred fifty studies related to the theory and its constructs (Walsh, 1973).¹⁰⁶

Need x Press = Culture Theory

Stern's theoretical approach (1970) is based on the work of Lewin (1936) and Murray (1938).¹⁰⁷ The basic rationale for the theory is that the organism must be studied within the context of the environment. Behavior is defined in terms of its functional relationship to the person and the environment. As stated earlier, Lewin's classic definition of behavior is:

$$B = f (P,E)$$

where B = Behavior

f = Function

P = Person

E = Environment

To Stern this model suggests the necessity of developing methods of representing person and environment in commensurate terms as a part of a unitary situation. Within the same frame of reference Murray developed a need-press model predicated on the assumption that behavior is an outcome of the relationship between the person and the environment.

There are four formal assumptions that underlie Stern's model. They are as follows:

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1. Behavior is a function of the transactional relationships between the individual and his environment.
2. The psychological significance of the person may be inferred from behavior. Here, the person is represented in terms of needs, as indicated by his self-reported behavior.
3. The psychological significance of the environment may be inferred from behavioral perceptions.
4. A relatively congruent person-environment relationship may produce a sense of satisfaction or fulfillment for the participants.¹⁰⁸

As a part of the fourth assumption Stern describes a congruent-dissonance dimension (described above) and an anabolic-catabolic dimension. A pattern of relationships that are anabolic in nature tend to stimulate self-enhancement and self-actualization. Patterns that are catabolic hinder personal development and self-actualization.

The Activities Index (AI) was developed by Pace and Stern (1958) in order to operationalize Murray's concept of need.¹⁰⁹ The rationale for the development of the AI is based on the assumption that an individual's needs may be inferred either from his behavior or from his reported personal behavioral preferences. The AI is composed of three hundred items, ten items for each of the thirty need scales, to which the individual responds "like" or "dislike". The index may be used to measure personality traits or to explore individual or group need-pressure relationships when used with an environmental index.

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Pace and Stern (1958) developed the College Characteristic Index (CCI) in order to measure the environmental press in the need-press framework.¹¹⁰ They assert that if students differ on certain variables, it is probably realistic to think that college environments also differ. The basic rationale behind the development of the CCI is that the press may be inferred from the consensual or aggregate behavioral perceptions of interpretations about the environment.¹¹¹

The CCI was developed to measure the thirty kinds of press, each paralleling the analogous need scale of the AI. This instrument may be used for institutional self-analysis and to study individual or group need-press relationships when used in conjunction with the AI.

In summary, research testing the need-press interaction theory is limited (Walsh, 1973).¹¹² The lack of sound research in this area appears to be related to the technical problems involved in associating needs with press for individuals. The two sets of scales (CCI and AI) were designed to be commensurate to each other, however one would have difficulty attempting to relate each instrument on a scale for scale basis. Behavior to some extent may be functionally related to needs and press, but more research is needed to validate this and other assumptions about the theory.

Moos' Social Ecological Approach

Moos (1974) developed the social ecological approach while attempting to understand how environments function, particularly in psychiatric treatment settings.¹¹³ In his approach, Moos suggests that environments, like people, have unique personalities that can be characterized along common dimensions.

The following are the two basic assumptions to Moos' approach:

1. The psycho-social qualities of environment (perceived climate) may be inferred from behavioral perception. Here Moos is primarily concerned with describing environments as perceived by the people in them.
2. The way one perceives his/her surroundings influences the way one behaves in that environment. Environments tend to shape potentials as well as facilitate or inhibit initiative and coping behavior.¹¹⁴

Moos and his associates developed a number of perceived climate scales in order to characterize the psycho-social qualities of environments of different social organizations. They studied nine different types of environments relatively extensively and developed perceived climate scales for each. The environments are: 1) psychiatric wards; 2) community-oriented psychiatric treatment programs; 3) correctional institutions; 4) military basic training companies; 5) university student residences such as residence halls; 6) junior high and high school classrooms; 7) group environments; 8) work

environments; and 9) family environments.¹¹⁵ A significant aspect of this work is that conceptually similar dimensions seem to be relevant to this wide variety of environments.

Moos conceptualized three basic types of dimensions that characterize and discriminate among different subunits in each of the nine environments that include the following:

1. Relationship dimensions assess the extent to which individuals are involved in the environment and the extent to which they tend to support and help each other.
2. Personal development dimensions assess the opportunity afforded by the environment for self-enhancement and the development of self-esteem.
3. System maintenance and system change dimensions tend to be relatively similar across the nine environments studied. The basic dimensions are order and organization, clarity and control.¹¹⁶

Research shows that these techniques which are used to assess the psychosocial and organizational climate characteristics of institutions have been used relatively widely and are potentially important in the identification of salient environmental dimensions.¹¹⁷ Moos also suggests that they appear to be highly relevant to the measurement of personality - environment congruence and to effecting environmental change.

Pervin's Transaction Approach

The most phenomenologically oriented theory of person-environment interaction that will be reviewed in this chapter is Pervin's transaction approach (1968).¹¹⁸ Pervin defines the individual and the environment by the individual's self-reported perceptions and his or her reaction to these perceptions. This approach focuses on the transactions and interactions that occur between the individual and the environment.

The theoretical rationale of this approach is that human behavior can best be understood in terms of the interactions (cause-effect relationships) and transactions (reciprocal relationships) between the individual and his environment.¹¹⁹ Pervin asserts that for each individual there are interpersonal and non-interpersonal environments which tend to match or to fit the individual's personality characteristics. A match of individual to environment will probably contribute to a higher degree of performance and satisfaction. A low degree of fit will probably result in decreased performance and satisfaction.¹²⁰

The transactional approach derives its foundation from the cognitive balance orientation where it is assumed that: 1) cognitive consistency permits individuals to predict more accurately and behave more effectively in their interactions with others; and 2) there is a basic

tendency for individuals to attempt to reduce imbalanced states such as cognitive dissonance and inconsistencies (Argyris, 1969).¹²¹

Pervin hypothesized that high performance and satisfaction are associated with environment which tend to reduce the discrepancies between the individual's perceived self and his perceived ideal self. His three basic theoretical assumptions are as follows:

1. Individuals find painful and unpleasant large discrepancies between their perceived actual selves and their perceived ideal selves.
2. Individuals are positively attracted toward objects in the perceived environment which hold potential for moving them toward their perceived ideal selves; conversely, individuals are negatively disposed toward stimuli that hold potential for moving them away from their ideal selves.
3. Similarity in regard to objects of importance to the individual is desirable where the individual has a low actual self/ideal self discrepancy and undesirable where the individual has a high actual self/ideal self discrepancy.¹²²

Pervin's theoretical approach has been operationally defined in an instrument called the Transactional Analysis of Personality and Environment (TAPE, 1967).¹²³ Subjects are asked to rate their actual selves, their ideal selves, and the college environment on various semantic differential scales. On the standard form TAPE requires that certain concepts (College, Self, Students, Faculty, Administration, and Ideal College) be rated on fifty-two scales.

Each scale consists of polar adjectives on an eleven-point semantic differential. Thus, the student indicates which adjectives he perceives to be the most descriptive of his college and the degree to which they are descriptive.

The TAPE instrument has two forms (A and B). The forms consist of the same format but the content of the scales differ. Each form opens with initial information where students report biographical material. In the middle of the questionnaire, the student responds to sixteen questions about his satisfaction with the college environment. In the final section of the questionnaire students rate the concepts on the same polar adjective scales. Approximately forty-five minutes are required for a student to respond to the TAPE.

Although the results of TAPE can be used in a number of different ways, the instrument was developed in order to pursue interinstitutional research, intrainstitutional research, and the dynamics of student-college relationships.

Most of the research on this model has been concerned with the congruency-satisfaction hypothesis. A few studies tend to support the hypothesis, however additional research needs to be completed in order to verify and to generalize the transactional approach.

LIMITATIONS OF THEORETICAL MODELS

Each of the above models to some degree utilize a similar orientation in terms of describing and predicting behavior of the individual(s) in various environmental situations. Although their theoretical constructs differ, they all recognize that behavior is a function of the interaction between the individual in his/her environment, and therefore help explain behavior. There are limitations that Walsh (1973) summarizes regarding each theoretical model.¹²⁴

One of the major limitations of Barker's behavior setting theory is its complexity, utilizing terms and detail that would discourage even the most skilled researcher. Problems may also exist regarding the sampling unit. It is quite possible that a small unit or small group is not undermanned according to Barker's definition. Likewise, it is possible that a large unit or large group may be overmanned rather than optimally manned. Nevertheless, the various sampling units may not be consistently defined. Barker's model does not account for any assessment of the perceived environment, nor does he account for individual change or personal growth.

Most subcultural models only partially meet the requirement that individuals or students in a subculture interact with one another and that they be aware of their common orientation. Another weakness of the subcultural

models is that they do not differentiate between a type and a subculture. Students may be classified as a type if they share common characteristics. However, if the subculture concept is to be a distinct and meaningful concept, it must be differentiated in theory and practice from the concept of type. A basic limitation of these models is that the existing research does not really test the model - no studies clearly indicate that the Clark-Trow subcultures actually exist in the first place. Another limitation of the subcultural model is that there is no conceptually distinct orientation to the individual and to the environment. Finally, the models discussed here appear to be restrictive in nature - it would be difficult to generalize the models to a noncollege population.

Research based on Holland's theory seems to support the existence of the personality types and environmental models, however, there are some shortcomings that must be discussed. One of the major shortcomings of Holland's theory is the failure to study more representative samples over longer periods of time. As a result problems occur in terms of the validity and the relevance of the theory to certain populations including the noncollege population and older students. The theory also has limitations in terms of making very little contribution to the study of individual change and learning. Although certain types of people tend to vary in their sensitivity to

environmental pressure, the exact nature and process of these changes remain unanswered. A further limitation of this theory is that it explains very little about the underlying foundation and process of personality development. The theory also encounters problems in terms of its differential treatment of men and women. Specifically, many of the occupational titles of the VPI are not appropriate for women.

Research on Stern's Need x Press theory is limited. Those findings that are available suggest that satisfaction and achievement behavior are not positively related to person-environment congruency. This may, in part, be due to a lack of parallelism between the needs measured by the AI and the press measured by the CCI. As with Holland's theory, there is very little in Stern's theory that directly focuses on learning and change. The theory also does not explain the process of need development. Stern does suggest that individuals develop need patterns, however, he does not identify a developmental process. As a result one is left to make inferences about the dynamic relationships between individual need patterns and environmental situations. Evidence also suggests that behavior is not necessarily a function of only needs and press. This problem is further compounded by the reliance upon self-reported behavior to define personal needs and environmental press.

One of the major problems with the more phenomenological theories is their reliance on individual perceptions to validate objective conditions. Such is the case with Moos' social-ecological approach. Social climates as perceived by the individual(s) provide the foundation for this theory. Obvious problems are presented because divergent settings are perceived differentially, thus creating variability within general dimensions. As the range of variability increases the usefulness of the tool diminishes. Considerable research is also needed in order to develop an environmental description system that will enable one to answer more questions about the effects of various types of programs. Without such systems the effect of overlapping settings will blur the precision of predicting specific environmental impacts on behavior.

Little research has been conducted on Pervin's transactional approach. As a result it is not known if his model will survive in its present form. As with the previous model Pervin does not attempt to define the environment in an objective sense. He relies completely on the discrepancy between the individual's perceived selves and perceived ideal selves to explain behavior. Pervin assumes that large discrepancies between the way students perceive themselves is a source of pain. From this assumption, it is hypothesized that such discrepancies will be related to dissatisfaction and low performance.

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However, in some individuals there is a greater degree of tolerance for these differentials and for more flexibility in coping with such differences. A broader base of research is needed before the value of the theory can be satisfactorily judged.

OTHER ASSESSMENT TECHNIQUES FOR COLLEGE AND RESIDENCE ENVIRONMENTS

The preceding section discusses a number of different assessment instruments used to operationalize various theoretical orientations of person-environment interaction. However, it is likely that the most frequently used instrument for the assessment of college and residence environments is the College and University Environment Scales (CUES). This section will describe the CUES and three other distinguished techniques for measuring residence hall environments that include the Residence Hall Environmental Index (Duvall, 1969), Southern Illinois University Residence Environment Scale (Miller and Moore, 1972), and the University Residence Environment Scale (Moos, 1974).

Developed by Pace (1963), CUES is an outgrowth of the College Characteristics Index (CCI).¹²⁵ The primary purpose of the CUES instrument is to aid in defining the atmosphere or intellectual, social, or cultural climate of a college as students see it. Students are asked to say whether each of one hundred basic and sixty experimental statements is generally true or false regarding their campus. The one hundred basic items form five scales of

twenty items each. In addition, two special subscales have been created using items from the five basic scales: Campus Morale, and Quality of Teaching and Faculty-Student Relationships. The five major dimensions assessed are the student's view of the Practicality, Sense of Community, Awareness, Priority, and Scholarship of their particular campus.

Duvall (1969) developed the Residence Hall Environmental Index (RHEI) in an attempt to measure student and residence hall staff perceptions of the total residence hall program at the Indiana University.¹²⁶ Much of the research related to residence halls at this time only dealt with one particular aspect of the total residence hall program (e.g. building construction, room assignment procedures, staffing, etc.). The RHEI was designed to measure: 1) whether certain residence hall environmental conditions are perceived as being worthwhile and desirable; and 2) the extent to which these conditions are believed to exist in the residence halls. Fifty statements describing conditions in residence halls are used in the index. Each statement describes a condition which might exist in a hall. Statements are then placed in five broad categories which were developed into the following five scales of the index:

1. Group Living: This scale described some of the kinds of learning situations which are the result of interactions between residents in the hall (i.e., promotion of tolerance of others, developing competence

in social relationships, increasing one's respect for the rights of others, etc.

2. Programming: This scale includes statements which are concerned with the educational and social programs activities which are conducted in the residence halls (i.e., faculty speakers, discussion groups, dances, picnics, etc.).
3. Student Government: On this scale students are provided an opportunity to evaluate certain purposes and objectives which have been established for residence hall student government (i.e., developing leadership skills, enforcing hall rules, promoting high academic atmosphere, etc.).
4. Counselor: This scale included statements regarding the counselor's role in encouraging students to participate in campus and hall activities, setting a good example for students, orienting the student to college life, and being fair and objective in disciplinary matters.
5. Physical Facilities: This scale dealt with some of the major aspects of the physical surroundings and facilities in the halls (i.e., the hall libraries as a place for quiet study, adequate facilities in each room for study, aesthetic aspects of building design and furnishings, etc.).

Students are asked two different questions for each of the fifty statements in the index. First, the odd-numbered questions request the student to respond "yes" or "no" to the question on whether he/she felt the condition was worthwhile and desirable. Second, the even-numbered questions request the student to rate on a five-point scale from almost never (1) to almost always (5) the extent to which he/she felt the particular condition to exist in the halls. Thus, responses numbered one and

two both related to the same statement, and so on. Space is also provided on the index for respondents to write any comments or suggestions which he/she might care to make regarding the residence halls.

In the original study where the index was first applied, results indicated that as a student progressed toward the completion of his/her college career, they became increasingly discontented with the residence hall environmental conditions. However, the results also indicated that satisfaction with the residence hall environment had a spill-over effect in terms of overall satisfaction with the university.

Southern Illinois University
Residence Hall Environment Scale

(SIURHES) was developed by the university's Counseling Center under the direction of William G. Miller and James Moore in 1972.¹²⁷ This instrument is composed of one hundred sixteen items categorized into seven scaled-item scales and one informational scale that include the following:

1. Individual Rights and Freedom, i.e., the sense of personal freedom, and right to act independently in a living unit.
2. Personal Conduct and Responsibility, i.e., acceptance of the consequences of personal actions affecting self and other persons in the living unit.
3. Assimilation and Homogeneity, i.e., the perceived pressure to adapt to group goals and attitudes and commonality of perception, background, interests and attitudes among residents.

4. Academic emphasis, i.e., perceived emphasis on academic success, combining of living with learning and group involvement with ideas and intellectual pursuits.
5. Facilities, i.e., perception of the physical characteristics of the residence hall and its administrative arrangements.
6. Personnel, i.e., reactions of residents to resident staff and interactions with university personnel.
7. Interpersonal relations and social interaction, i.e., social and personal interaction among residents in a living unit.
8. Informational, a collection of non-scaled items providing specific information on student opinions, regarding services, costs, conveniences, etc.¹²⁸

Six professional staff members from the Division of Student Affairs at Southern Illinois University assisted in the development of this instrument. They were asked to categorize items according to concept measured, using the description of each scale. Items that were correctly categorized by four or more staff members were retained. Items were then scaled by submitting them to twelve additional Student Affairs professionals.

The purpose for developing this instrument was to measure certain aspects of residential life and to provide specific observations on other areas of interest to the central administrative staff of the residence hall program. One of the strengths of the SIURHES is its adaptability or ease of modification for use in the measurement of differing residential programs.

The majority of four-year schools in the country have probably utilized the well-known assessment techniques constructed by investigators such as Astin and Pace. These techniques vary considerably in their methods of comparing institutions. Researchers have paid much less attention to the dynamics of environmental interaction such as those found in college and university residence halls. The University Residence Environment Scale (URES) has been expressly designed by Moos (1974) for use in assessing the important features of the university student living unit and in understanding the dynamics of this setting over a period of time.¹²⁹

The URES is one of nine Social Climate Scales developed by the Social Ecology Laboratory at Stanford University to measure the social milieus of educational environments, treatment environments, total institutions, and community settings.¹³⁰ The rationale used for the development of the URES has its foundation from the theoretical contributions of Henry Murray (1938) and his conceptualization of environmental press. Moos suggests that an environmental "climate" can exert a directional influence on behavior and that a consensus of individuals characterizing their environment constitutes one measure of such a climate.

The URES consists of one hundred items grouped on ten subscales, each containing nine or ten items. The subscales cover Relationship Dimensions (involvement,

emotional support), Personal Growth or Development Dimensions (independence, traditional social orientation, competition, academic achievement, intellectuality) and System Maintenance and System Change Dimensions (order and organization, student influence, innovation). The following is a brief description of the subscales:

<u>Subscale</u>	<u>Description</u>
Involvement	Degree of commitment to the house and residents; amount of interaction and feeling of friendship in the house.
Emotional Support	Extent of manifest concern for others in the house; efforts to aid one another with academic and personal problems; emphasis on open and honest communication.
Independence	Diversity of residents' behaviors (versus socially proper and conformist behavior) allowed without social sanctions.
Traditional Social Orientation	Stress on dating, parties, and other "traditional" heterosexual interactions.
Competition	Degree to which a wide variety of activities such as dating, grades, etc., are cast into a competitive framework.
Academic Achievement	Extent to which strictly classroom and academic accomplishments and concerns are prominent in the house.
Intellectuality	Emphasis on cultural, artistic, and other scholarly intellectual activities in the house, as distinguished from strictly classroom achievements.

Order and Organization	Amount of formal structure or organization (e.g. rules, schedules, established procedures, etc.) in the house; neatness.
Student Influence	Extent to which student residents (not staff or administration) perceive their own control in running the house; formulating and enforcing the rules, controlling use of money; selecting staff, food, roommates, policies, etc.
Innovation	Organizational and individual spontaneity of behaviors and ideas; number and variety of activities; new activities. ¹³¹

Students or staff members in a living unit (floor, house, wing, building, etc.) respond true or false for each item on the questionnaire. The average score across all individuals in the unit on each subscale is the unit score for that subscale. Information derived from this instrument can be used for internal understanding and possible change, or for comparison with other houses, either on the same campus or at other schools.

TECHNIQUES FOR EVALUATING THE COLLEGE ENVIRONMENT

Presently there is a considerable amount of interest in studying institutions of higher education. The reasons for this interest are as varied as the assessment instruments that have been developed to measure college environments. The major focus of environmental assessment to date has been on classifying and/or differentiating institutions rather than on studying the unique features of a single institution. Nevertheless, a review of the

literature reveals that environmental assessment techniques can be classified under four major approaches - demographic, perceptual, behavioral, and multimethod. Many of the instruments and techniques could be placed in more than one category, in that they contain elements of each approach. However, they are classified in the category that reflects their major emphasis of approach.

The demographic approach to environmental assessment emphasized objective, readily-measured institutional characteristics such as number of students, percentage of males, tuition, operating budget per student, class size, number of library books, etc. Astin and Holland (1961) are two of the first to use this approach. Astin's Environmental Assessment Technique (EAT) is an example of the demographic approach.¹³² The demographic technique, therefore, is largely a descriptive approach.

The perceptual approach to environmental assessment characteristically involves responses to a series of descriptive statements that yield an overall perspective of the institution in terms of a predetermined series of scales or factors. Perceptual measures are quite sensitive to environmental change, and resultant data is easier to interpret and apply. However, perceptual measures may only reveal the "perceived" environment and not necessarily the actual environment. Nevertheless, the perceptual approach to environmental assessment is the best developed and most widely used technique available today.

Some perceptual instruments include College Characteristic Index (CCI, Pace and Stern, 1958), College and University Environment Scale (CUES, Pace, 1969), College Characteristic Analysis (CCA, Pace, 1964), Institutional Functioning Inventory (IFI, Peterson and others, 1970), Transactional Analysis of Personality and Environment (TAPE, Pervin, 1967), College Student Satisfaction Questionnaire (CSSQ, Staff, Betz and Menne, 1971), and the University Residence Environment Scale (URES, Gerst and Moos, 1974).¹³³

The behavioral approach to environmental assessment is less developed than the first two. This approach, characterized by Astin's Inventory of College Activities (ICA), emphasizes behavioral measures that provide a detailed account of activities within a university setting. It measures specific observable student behaviors such as time spent in study, number of extracurricular activities per week, attendance at cultural events, etc. A major advantage of this approach is its ability to pinpoint issues specific to a particular campus that may inadvertently be missed by demographic or perceptual approaches.

Other assessment techniques combine the demographic, perceptual and behavioral approaches in an attempt to gather a variety of information in a single effort. The Questionnaire on Student and College Characteristics (QSCC, Centra, 1970) is an example of this approach.¹³⁵

An evaluation of these four approaches to environmental assessment must take into account the specific purpose

for which the assessment is to be conducted. Each method has its advantages and disadvantages. It would be ironic to attempt to measure the degree of person-environment "fit" by using an instrument that is "ill-fitted" to do the job.

METHODOLOGICAL APPROACHES FOR RESIDENTIAL INTERVENTION

While the environment is generally considered to be a pervasive and extraordinarily powerful influence on behavior, the exact specification of environmental or situational variables has been relatively neglected.¹³⁶ Instruments have been developed in an attempt to measure certain aspects of environments, however, few methodological approaches beyond administering surveys have been developed for residential intervention. This section will discuss five such approaches that include Van der Ryn and Silverstein's Environmental Analysis Method (1965), Menne's Intervention Paradigm (1967), Moos' Social Ecological Intervention Approach (1974), Daher, Corazzini and McKinnon's Residence Environment Adaptation Intervention Program (1977), and Kaiser's Ecological Intervention Method (1973).

Van der Ryn and Silverstein's Environmental Analysis Approach

In a near classic study Van der Ryn and Silverstein (1965) developed a multimethod technique for measuring the effectiveness of a complex residence hall system that

was designed for living and learning.¹³⁷ Their focus was on the "silent partner" in the design process - the student who is affected by design decisions. Van der Ryn and Silverstein found that some of the most cherished assumptions of administrators and designers of environments are inconsistent with the actual preference and activity patterns of students.¹³⁸ Thus, they relied on describing and evaluating activities and processes as they took place in the residence hall setting. The following is a summary of their intervention technique:

	Identify Issues	Qualify Use of Environment	Quantify Use of Environment
Observation	Informal reconnaissance of building complex - written notes	Structured observations of hallway behavior 15 two-hour periods	
Interview	Non-directed interviews with students - tape recorded	40 directed interviews of students in their rooms	
Questionnaire		Open-ended questionnaire to determine range of problem	Specific questions on use and furnishings of the student's rooms - 115 respondents
Activity Log			80 students kept diaries over 4 days, noting use of space and equipment
Literature	Books, journals, local newspapers, reports	Directed research of comparative literature portraying situations on other campuses	

Five methods as described above were employed in this study - observation, interview, questionnaire, student "diary" or activity log, and literature search. Each method provided information that personalized the environment assessment process.

Four basic reasons for environmental analysis and systematic design were asserted by Van der Ryn and Silverstein:

1. Environmental analysis has an evaluative function. Evaluation may reveal conflicts between owner's goals and those of the users.
2. Analysis has an informative function. It provides organized information for the designer and reduces the realm of uncertainty in which he works.
3. Environmental analysis has an innovative role to play in the design process. By unlocking relationships between form and function, environmental analysis opens the way for innovation in programming and design.
4. Environmental analysis has a scientific function. Analysis adds to our knowledge about the relationship of individuals to their environment.¹³⁹

It becomes the perplexing job of the analyst to identify constancies - "fit" between form and activity, and between individuals and their environment. Van der Ryn and Silverstein summarized this dilemma in the following way:

Such invariant relationships express connections between human needs, forces, or tendencies and physical environments. These may be physiological, psychological or culturally based. Design problems result when needs are not readily accommodated by the environment and can find no adaptive outlet. Issues, as we have defined them, result when conflicting needs and values are not resolved by the environment.¹⁴⁰

Menne's Intervention Paradigm

Menne's (1967) intervention paradigm is operationalized by asking the question, "What approach to environment assessment should be used given a certain set of

objectives?".¹⁴¹ If the purposes of the environmental study are to 1) provide information to serve as a basis for manipulation of the environment, 2) measure the effectiveness of such manipulations, and 3) provide information to prospective students which will facilitate their adaptation to the residence hall environment, then the following paradigm for intervention is applicable:

1. A systematic assessment is made of the environment at the first stage. The assessment may concern behaviors in the environment; or it may concern both image and behaviors. Thus the first assessment in the paradigm would include the following types of studies:
 - a. Perceptions of the environment . . .
 - b. The perceptions of the "ideal" environment . . .
 - c. The expectations of the environment . . .
 - d. The changes in the perceptions of the environment over time . . .
2. The second stage in the paradigm would then be accomplished as follows:
 - a. Manipulations attempting to change the residence hall environment.
 - b. Manipulation of the public image of the residence halls.
3. The third stage of the paradigm involves a reassessment, a replication of the studies in the first stage. The second assessment will result in a measure of the effectiveness of the environmental manipulation as well as providing new first stage information as a basis for further manipulative efforts.¹⁴²

Moos' Social Ecological Intervention

Moos (1974) developed an intervention methodology for facilitating social change which is particularly relevant to small environments such as residence halls that have a

moderate to high frequency of interaction among milieu members.¹⁴³ This methodology has four components:

1. Everyone involved in the residence hall environment is given the opportunity to report his/her view of how the current environment is functioning . . . In addition all participants are asked to convey information about their conceptualization of an ideal social system. Thus, the goals and general value orientations of residents are systematically assessed.
2. Individualized feedback is then given on the results of these assessments. Particular attention is paid to similarities and differences in the perceptions of various important groups within the environment. In addition, emphasis is placed on the similarities and differences between the "real" and the "ideal" social environment and the subsequent implications for change.
3. Practical planning of specific methods by which change might occur along specified dimensions is then instituted . . .
4. The change process itself is assessed by one or more reassessments of the characteristics of the social environment. These results are continuously fed back to the participants providing an ongoing systematic approach to achieving the kind of environment residents would like to have.¹⁴⁴

This intervention methodology includes elements of problem-solving, goal setting, coping, and adaptive behavior. Thus important human needs are accounted for, in terms of actively helping to mold one's social environment in desired directions.

Daher, Corazzini and McKinnon's
Resident Environment Adaptation Program

Although it has been demonstrated that environments are major contributing factors to student growth and/or dysfunction, little effort has been applied to campus redesign (Craig, 1973; Insel and Moos, 1974; Moos, 1973).¹⁴⁵ Past targets of intervention have been individuals and groups rather than the environment. Daher, Corazzini and McKinnon assert that a systematic program that maximizes the congruence between student's needs and their environment seems necessary.¹⁴⁶ To this end they developed the Resident Environment Adaptation Program (REAP, 1977).

REAP is composed of five stages that are designed to help students identify the different components of their environment, provide a structure to discuss and evaluate the environment, and, where desired, to develop the means for improvement. The stages include the following:

1. Stage I involves the entry process and attends to contact and contract issues. The planning team usually makes initial contact with hall directors who are provided a written rationale and overview of the program. The directors, in turn, provide this information to the student assistants who work with them on different floor sections. Once the assistants have been oriented to the program, they are invited to schedule a contract interview with the REAP team to discuss how the service can benefit their living unit . . .
2. Stage II involves data collection. During this phase of the program, the REAP team meets with the residents, presents an overview of the service, and answers

questions. Once it is clear how the service will be used, a questionnaire, consisting of Moos and Gerst's University Residence Environment Scale (URES), is administered. It is important to clarify that the data collection is necessary for redesign and is not primarily for a research project . . .

3. In Stage III data is analyzed and a report is prepared for the residents. The report includes a written description of the environment and a profile that contrasts the ideal environment with the actual one . . . The primary focus of interpretation is on the degree of the differences between what is desired (the ideal) and what is experienced (the real).
4. Stage IV provides consultation to the residents. Soon after the data has been analyzed, a meeting is arranged between the entire floor section and the REAP team . . . If more than 70 percent of the residents agree on the need for change and there are some individuals who are willing to work on an environmental change team, then a meeting with the REAP team is scheduled.
5. Stage V consists of program development. Depending on what areas are chosen for strengthening or change, resource persons from the university community may be asked to join the change team . . .¹⁴⁷

This REAP intervention model has several elements that are comparable to the ecosystem model that follows.

Kaiser's Ecological Intervention Model

The ecosystem intervention model is a design process that was developed by Leland Kaiser (1973) utilizing an ecological approach to environmental change.¹⁴⁸ The focus of the ecological approach is the interaction that occurs between persons and their environment or how an environment affects people, their work, their leisure, and their

personal growth. The theory and philosophy that underlies this model is presented in Chapter One. Subsequent refinements to the model were made by members of the Western Interstate Commission on Higher Education (WICHE) program task force on which Dr. Kaiser served. Members of the task force represented all segments of the campus community - students, faculty, governing boards and staff. The charge of the task force was to develop a delivery system for student services that would foster well-being on campus. Through the utilization of the ecosystem approach, the model becomes a tool for the creation of campus environments that can foster both educational and personal growth among students.

The design process includes seven steps that are interacting components. Unless one is establishing an entirely new environment, the entry into the model is most natural at step five. The seven interdependent steps include the following:

1. Designers, in conjunction with community members, select educational values.
2. Values are then translated into specific goals.
3. Environments are designed that contain mechanisms to reach the stated goals.
4. Environments are fitted to students.
5. Student perceptions of the environments are measured.
6. Student behavior resulting from environmental perceptions is monitored.

7. Data on the environmental design's success and failures, as indicated by student perceptions and behavior, are fed back to the designers in order that they may continue to learn about student/environment fit and design better environments.

Along with the traditional instrument for assessing perceptions this model advocates an Environmental Referent (ER) questionnaire in order to determine "why" students have certain perceptions of the environment and "what" can be done to improve the negative aspects of the environment. (For more detail in this model see Chapter One.)

Because one of the basic philosophic assumptions of this model is that of successful campus design a planning team composed of various campus constituencies is utilized to implement the ecosystem model.

ECOSYSTEM STUDIES

The ecosystem model attempts to provide an intervention methodology of how to assess (map) environments and construct (design) environments to produce more optimal person-environment fits. Therefore, on a university campus, the emphasis is on designing environments in which the transactions between the student and environment will foster optimum educational growth and development. The ecosystem model suggests that the design process can be implemented at three different levels: Level I (campus community - macrodesign), Level II (groups on campus -

microdesign), and Level III (individuals on campus - life space design).¹⁵⁰ The following section will review two Level I studies and five Level II studies that have been conducted at various campuses.

Macrodesign Studies

Studies conducted at the macrodesign level focus on how to design campus environments that will fit large numbers of students. For example, if one were developing a new institution, the design process would demand that the environment's community members spell out the educational values for the institution and then proceed from step to step in the model. Since this opportunity is seldom afforded, a more practical entry into the redesign process begins at step five - mapping out student perceptions of the entire campus environment. Two such efforts include the macrodesign studies at Colorado State University (1975) and the Community College of Denver (1975).

Colorado State University Ecosystem Study. In 1975 a study was conducted at Colorado State University that was intended to contribute to macrodesign.¹⁵¹ The College and University Environment Scale (CUES) and the College Student Questionnaire (CSQ) were used as sources of data on mismatches between students and their environments. The results of this study strongly suggested that there were serious mismatches between students and the CSU environment and that many students were not satisfied with their

environment. A report was distributed to the university vice-presidents, deans and other administrators, summarizing the results of the study. High emotions, criticism and accusation immediately followed. Claims were made that the sampling was unrepresentative, not random and quite small with only two hundred eighty-four students being surveyed. As a result the Research and Evaluation Team was asked to replicate the study utilizing a larger, representative, random, stratified sample from the entire student population.

The second study was conducted the following winter. This time the sample (1,454 students or nine percent of the student population) was broader with 952 or 65.7 percent of the students responding. The College Student Questionnaire (composed of two hundred multiple choice items) and Environmental Satisfaction Questionnaire (Corazzini, Wilson and Huebner, 1976) were used as the assessment instruments.¹⁵² The ESQ was specifically designed by members of the research team because existing instruments were not easily applied to environmental redesign. Also, the ESQ was tailored to meet the practical and unique requirements of the CSU environment.

The ESQ is a two-part instrument. Part one validates mismatches between students and their environment by responses to questions on a five-point Likert Scale continuum

from "strongly disagree" to "strongly agree". Part two of the ESQ elicits environmental referents and include coping mechanisms and recommendations for change.

The data from this second study suggested that students were much more satisfied than they had appeared to be in the previous study (this fact seemed to confirm sampling error from the first study). As a result the model broke down at this point because university administrators did not feel compelled to respond to the specific mismatches validated by the ESQ.

Although the broad goals of macrodesign were not achieved, some program changes were suggested as a result of the assessment process. Along with these changes three recommendations for future environmental interventions were suggested that included the following:

1. In order to have a major impact on the university, it is important to have sanction from the upper levels of the administrative arm of the university. The researchers must employ consultative expertise to effect a liaison that will result in change . . . It is essential that team members integrate the skills of the researcher with those of the change agent and consultant.
2. Most environmental assessment instruments are descriptive of environments but do not provide data that facilitate the redesign of environments. The ESQ does pinpoint specific mismatches between students and their environment and furnish recommendations for change. There is a need for more new instrumentation.

3. Environments change as people come and go. One group's mismatches are not necessarily those of another group. The environmental assessment and design process is an ongoing one. As such we concur with Banning and Kaiser (1974) who have suggested that campus design centers be created . . .

Community College of Denver Ecosystem Study. The Counseling Division at the Community College of Denver, much like other counseling centers elsewhere had been working directly with individuals in the remediation of student problems. The goals and objectives of the Counseling Center were relatively narrow and reactive, rather than broad and proactive. In short, the philosophic point-of-view placed emphasis on therapy and crisis intervention rather than on educational and developmental activities. To change this orientation the Counseling Division undertook a macrodesign study in 1975 in order to broaden the scope of outreach programming and to take a more proactive approach to intervention.¹⁵⁴

Early in 1975, the Counseling Center contacted the Western Interstate Commission for Higher Education (WICHE) to seek assistance in conducting a needs assessment of the relationship between students and the campus environment. An equally important need was to design an environment that is more conducive to learning and good mental health. After receiving administrative approval to apply the Ecosystems Assessment and Design model, a planning committee composed of the following was developed:

1. General Studies student
2. Occupational Studies student
3. General Studies instructor
4. Occupational Studies instructor
5. Instructional Labs Coordinator
6. Counselor
7. Counseling Division Director
8. Assistant to the Vice-President
9. Two consultants from WICHE

The committee met for three hours weekly for almost a year and a half. During this period the committee developed its own assessment instrument - Student Opinion Survey (SOS).

The SOS is a two-part instrument that is designed to 1) assess student opinions regarding campus environments, utilizing a five-point Likert Scale in Part I, and 2) obtain environmental referents in Part II, that would be subsequently used to redesign environments, based on expressed needs. Eighty-one questions are contained in Part I of the SOS. In Part II of the survey students were asked to go back and choose five items that were significant based on their direct experience, and state why the item was significant, and what should be done to change or improve the situation.

Fifteen implementors were trained to administer the SOS. The actual sample was seven hundred forty-two students, which represented 10.5 percent of the student enrollment (6,905). The response rate to the questionnaire was near 100 percent because the SOS was administered to students and collected while they were in class.

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The results of the SOS were presented in terms of six different categories: 1) Learning Needs, 2) Physical Needs, 3) Transactional/Communication Needs, 4) Information Needs, 5) Psychological Needs, and 6) Social Needs. Although the results in each category were specific and revealing, they were not utilized to design campus environments. As one team member put it:

"The entire process took too long, drained our energy and we had very little energy left to implement the changes that were needed. We also failed to provide status reports to the administrative council, consequently, almost no one knew what we were doing except taking up valuable time away from our regular work and causing others to take up the slack . . ."155

When questioned further regarding an overall evaluation of the ecosystem study the same person responded:

"The experience was very positive in spite of previous comments. Because we were a model site we had to learn as we went along, consequently we took too much time. We also profited by our mistakes. It was a very rewarding professional experience. The process is very worthwhile."156

Microdesign Studies - Residence Halls

Microdesign studies are concerned with designing environments for specific groups on campus, including groups like class level, ethnic origin, special interest, residence halls, etc. The design effort is focused on determining the congruities and incongruities that specific groups are experiencing with their immediate environment. This section will review five microdesign

studies that include the University of Arizona (1974), the University of Northern Colorado (1975), Arizona State University (1976, 1977) and Indiana University (1978).

University of Arizona Ecosystem Study. In 1974 the University of Arizona participated with the Western Interstate Commission for Higher Education in testing the ecosystem approach to assessing student perceptions of residence hall environment. Staff members were concerned about the "fit" students experience when enrolling in the university. It was apparent to university officials that the adjustment process was entirely on the shoulders of the students. As a result the ecosystem study was undertaken to check the total environment to see if the university could make some changes and get the "fit" just a little better.¹⁵⁷

The Dean of Students, Counseling Center, Student Health and Student Housing were the primary forces behind the project. The committee was chaired by the director of Student Health and included representatives from each of the four offices. After careful study the planning group selected the residence halls for their area of study. It was believed that the residence hall system was large enough to give a valid picture of the university community, yet small enough to study within a short time frame. A random sample (940) of the total residence hall population (4,700) was selected to test the ecosystem approach.

Particular attention was given to informing the residence hall population as well as the general university community about the ecosystem study. Individual letters were sent to head residents, articles were printed in the student newspaper and time was spent with individual students. A great deal of time was also spent developing confidence that the study was not just another research project, but that changes would be made where problems were evident.

The instrument that was used for the study was an adaptation of the Southern Illinois - Residence Hall Environment Scale, that included additional information specific to the University of Arizona. The eight categories of the instrument included 1) Demographic Data, 2) Activities - Interpersonal Relationships and Characteristics, 3) Decision Making, 4) Facilities, 5) Student Government, 6) Staff and Administration, 7) Communication of Rules and Regulations, and 8) Hall Programs and their Impact on Students.

Initially, individual testing was considered the best approach because it personalized the research part of the study. However, it soon became evident that this method would require a considerable amount of time. Therefore, the planning group decided to use a "mass testing" approach for the remaining subjects.

Representatives from WICHE provided extensive training for the planning group which facilitated the group's understanding and implementation of the ecosystem model.

The results of the survey data were written up in five separate reports that were submitted to senior administrative officers of the university. The fifth report summarized the significant findings along with recommendations for environmental change. The planning group was a very positive experience for group members, many of whom still meet and re-hash elements of the ecosystem study.

University of Northern Colorado Ecosystem Study. In 1975 a doctoral dissertation was undertaken to study the Social Ecology of the University of Northern Colorado Residence Halls.¹⁵⁸ The three major objectives of the study were 1) to investigate resident student and staff perceptions of an ideal residence hall environment as compared with their perceptions of an actual environment in their respective halls throughout the school year, 2) to compare resident student and staff ideal perceptions to a theoretically ideal environment as indicated by a nationwide panel of housing administrators, and 3) to examine the variables of residence hall size, sexual makeup, college class structure, and role position related to perceptions of ideal and actual residence hall environments. The research also provided a detailed mechanism for assessing, evaluating and planning residence hall environments.

The populations sampled included students and staff members who lived in fourteen residence halls as well as a panel of housing administrators selected from two standing committees of the Association of College and University Housing Officers. A random sample, stratified by individual residence hall floors was drawn to provide a sample of one half of the student resident population.

The planning group was composed of six area directors in the housing system and the researcher's dissertation committee. Each area director was selected in order to provide broad representation from each area complex. The dissertation committee was included in order to satisfy the research component of the study.

The University Residence Environment Scale, Form I-2 (Ideal Environment), was sent to resident subjects, to residence hall staff members, and to the administrative panel prior to the Fall Quarter, 1973. At five testing dates throughout the 1973-74 school year, those students not previously tested were sampled and, along with their respective staff member, were administered the University Residence Environment Scale, Form R-2 (Actual Environment).

Environmental referents (ERs) were not used in this study. In retrospect, the chairperson of the planning group believed that they should have been used in order to make the necessary environmental changes. Because of the limited nature of the study (i.e., assessing the psychosocial climate of the residence halls) and the lack of

environmental referents no clear data was available to redesign the environment. However, the ecosystem model was perceived by the planning group as a useful tool that broadened their thinking about interactions in the various residence hall environments.

Arizona State Ecosystem Studies. During the Fall, 1976 term, the ecosystem model was implemented on the campus of Arizona State University.¹⁵⁹ The purpose for implementing the model was to assess student perceptions of certain aspects of residence life at the university.

Because the level of interest in assessing the residence hall environment was so high, several members of the Housing Department at Arizona State attended a workshop sponsored by the Western Interstate Commission for Higher Education (WICHE) which focused on environmental assessment. Little research had been done in the past on the residence hall environment. Therefore, it was agreed before the training session that the ecosystem model would be implemented at the ASU campus.

The original membership of the planning team consisted of four members of the Housing Department. To expand the scope of the team, representatives from Food Service, Health Services, Security Department and the Dean of Student's office joined the team. One of the primary reasons for expanding the team was because the Housing Department provided only limited services for residential

students. A basic philosophic commitment to redesigning the environment after data collection and analysis was viewed as crucial by each team member.

The planning team decided to assess the living environment within the campus residence halls, including the services represented by the team members. Only those environmental factors that could be redesigned were reviewed by the team. Thus students responded to items concerning housing, residence hall programs, Student Health Services, Food Services, University Police Services, and the Student Affairs Department.

A two-phase assessment instrument was developed by the team instead of using one of the many standardized instruments that are available for assessing campus environments. The first phase of the instrument is a limited choice questionnaire, where each item referred to a specific aspect of the environment. A goal statement format was utilized for those items and subjects responded by indicating on a modified Likert Scale the importance of the items ranging from "of no importance" to "extremely important". The total number of items were limited to forty-four.

The second phase of the instrument was most important in that it generated environmental referents for program change. After completing the first phase, students were asked to go back through items they had completed and identify no more than ten items they felt very

strongly about, either positive or negative. On these ten items, the student was asked to write what it was about the situation that made them feel strongly and what could be done to enhance the situation.

A stratified random sample consisting of ten percent of the population of each residence hall was selected, resulting in four hundred fifteen students in the sample. The total residence hall population was 4,200 students.

The questionnaires were distributed by the residence hall staff six weeks after the semester began. The staff members were informed as to the nature and purpose of the project as well as their role in data collection and providing assistance to students who completed the instrument. Seventy-seven percent of the sample responded to the survey.

Data that was generated was organized in such a way as to present an overall view of the environment, to identify specific problem areas within the environment, and to develop recommendations for redesigning the environment. After the data was analyzed, the team members went back to their individual departments to begin evaluation and redesign activities.

The team members unanimously agreed that the ecosystem project had been very helpful in generating student recommendations for changing the campus environment. The following observations were made by the planning team:

1. Because the project took less than three months to complete, the changes were seen by students, which enhanced the credibility of the entire project.
2. Having individuals on the team familiar with research methods made some of the technical problems, such as instrument construction, easy to deal with and to solve.
3. Having administrative support was necessary since the team realized that changes would be made as a result of their work.¹⁶⁰

A second implementation of the ecosystem model for environmental assessment was undertaken the following year. This implementation of the ecosystem model was the first time that it was administered for two consecutive years at a large university.¹⁶¹ The same model was utilized, however different departments represented were new additions. Three major conclusions were drawn from the second study:

1. The data provided was very useful in reinforcing the actions taken as a result of the first implementation. The changes developed as a result of the first implementation indicated that student needs were being met. In those cases where students recommended changes, but changes were not made, the need was still very apparent.
2. For those departments which had participated in the first implementation, the data yielded did not change markedly from year to year. Such may be a reflection of a relatively stable resident population or that students needs did not change drastically from year to year.
3. For those departments new to the process, the data generated a number of recommendations for change. The assessment process was more beneficial to the new departments in terms of making changes than

for the returning ones, simply on the basis of the number of changes suggested by students, and the changes made by the departments.¹⁶²

Indiana University Ecosystem Study. At Indiana University (1978), the ecosystem project was conducted because questions were being raised by faculty and students concerning the quality of life on campus.¹⁶³ The university is a residential campus with over 12,000 students living in the residence halls. It was determined that research needed to be conducted to determine how students perceived their environment, what problems there were, and what changes would be necessary to improve the quality of student life.

The Department of Residence Life and the Halls of Residence Department provide comprehensive services and programs for students on campus. As a result the project was self-contained within these two areas. Members of the planning team therefore, consisted only of housing staff, with the exception of the representative from the Counseling Center. This individual provided expertise for the research component of the study. In developing the planning team three criteria were used for the basis of recruitment: 1) commitment to completing the project, 2) interest in the project, and 3) commitment to creating change. After the planning team was formulated, each member was asked to secure support from their direct

supervisor. Support also came from the Dean for Student Services and the campus chief executive officer, both of whom were very interested in the results of the study.

The planning team agreed in advance to keep meetings to a minimum. It was their collective opinion, based on prior efforts with the ecosystem model, that the best way to make their study tedious and nonproductive was to devote too much time to meeting. As a result the team did not meet more than three times. Most work was done by the subcommittee or individuals who were delegated certain aspects of the study.

The initial meeting of the planning team served to make introductions, orient each member to the model, and to delegate tasks to team members. Particular attention was given to determining aspects of the environment that were satisfactory or unsatisfactory. Only those items that were subject to change were addressed in the development of the assessment instrument.

The planning team members met independently to generate potential topic areas for review. When they came together for the second meeting, team members reviewed each other's assessment targets. Content areas were examined at this point in order to insure that items examined specific aspects of the environment - items should not be so broad that they lose their meaning or do not focus on a target area.

The assessment instrument developed by the planning team utilized a perceptual format for the first part that asked students to respond to items on a Likert Scale. Responses could range from "very strongly agree" to "very strongly disagree". Items were intentionally kept to a minimum in order not to generate volumes of data for analysis. The perceptual format was used because it would satisfy this criteria as well as because of its simplicity.

The second part of the instrument contained environmental referents. After completing the first part of the questionnaire, students were asked to go back through all the items and identify five that were particularly important to them. Students wrote in why they felt strongly about a situation or item, and what they would recommend to improve the situation.

Because of the large residence hall population (12,000 students) a random sample of five percent was drawn for the study. In all cases the team was satisfied that the sample drawn was representative of the residence hall population.

Resident assistants provided the basic support for the data collection process. They were thoroughly briefed on their role in the project and how the results could be utilized to benefit both staff and students. One week before the questionnaires were distributed a "prop" letter was sent to the sample informing them that they would be receiving an important questionnaire from their

resident assistants. A week later the questionnaires were delivered by the resident assistants who informed the respondents that the questionnaire should be returned to them or the main residence hall desk. The response rate was sixty-one percent.

Item analysis and environmental referent ratings were compiled and sent to participating subunits for their study. Each subunit submitted a written report of their analysis and interpretation to the planning team for inclusion in a final report. From these individual reports, recommendations for environmental change were made,

Significant findings by the planning team included the following:

1. Administrators involved in the ecosystem process were pleased with the results.
2. The process was such that the project took less than four months to complete.
3. Students appreciated seeing changes made in their living areas during their tenure.
4. The costs involved in the process were minimal.¹⁶⁴

Other Ecosystem Studies

The above ecosystem studies represent a substantial percentage of the total number of studies of this nature that have been conducted at a college or university. Studies not cited include Eastern Oregon State College (campus study, 1974), Lewis and Clark College (campus study, 1975), Wartburg College (campus studies, 1978 and 1979), Indiana University (residence hall study, 1979),

Arizona State University (residence hall study, 1978), University of Utah (residence hall study, 1979), University of Texas (residence hall study, 1979), Boston College (campus police study, 1978), University of Missouri (medical school study, 1976-78), University of Rhode Island (campus study, 1978), Illinois State University (campus study, 1977), and Central Michigan University (residence hall study, 1978).

SUMMARY

A review of the literature and responses to this researcher's questionnaires resulted in the identification of only twenty applications of the ecosystem model at different colleges and universities. Only a few of these institutions have chosen to publish their efforts in the literature. As a result, the research in this area is limited. Consequently the implementation of the ecosystem methodology is far behind the conceptual development of the process.¹⁶⁵ Nevertheless Paul (in press) has found that most setting applications include the same general sequence of steps.¹⁶⁶ As such, the following has been found to be evident from research conducted to date, utilizing the ecosystem approach:

1. The area of person-environment interaction is a long way from having a theory that may be considered a full-fledged general theory (Walsh, 1973).¹⁶⁷
2. The ecosystem methodology has been found to be an effective tool for environmental

research and environmental change (Blocher, 1974; Delworth, 1975; Conye, 1975 and 1978; Schuh, 1976, 1977 and 1978; Corazzini and Wilson, 1977; Schuh and Alan, 1978; Huebner, in press, Paul and Morrill, in press; and Elliott, 1977).¹⁶⁸⁻¹⁷⁷

3. Even though a number of standardized instruments designed to measure various aspects of the college environment exist, most ecosystem efforts have chosen to develop their own data collection devices that utilize a perceptual format.¹⁷⁸
4. Most environmental assessment instruments are descriptive of environments but do not provide data that facilitate the redesign of environments. There is a need for more new instrumentation utilizing the ER format. Most ecosystem studies that have been conducted use a two-part instrument with an ER format.¹⁷⁹
5. The size and composition of planning teams for studies that have been conducted vary. Schuh (in press) recommends that the planning teams not exceed ten members and that areas that are subject to change be represented on the team. He also advises that at least one committee member have research expertise.¹⁸⁰
6. Early ecosystem studies were hampered by excessive time committed to the first four stages of the model. Recent studies, however, have been refined and are capable of resolving this conflict. Schuh at Indiana University, for example, has completed two successful studies that required only four months to complete. Most studies, however, are completed in an academic year framework. Schuh also suggests that meetings should be kept to a minimum.¹⁸¹
7. Early ecosystem studies were also hampered because too many items were included in the assessment instruments (some in excess of 175 items). As a result respondents were discouraged with the time required to fill out questionnaires and too much data resulted from the studies. Schuh

recommends that items be kept to a minimum and has been very successful with instruments that contain approximately fifty items.¹⁸²

8. Although some ecosystem studies were too broad in scope, most studies focused only on those areas that 1) could be changed, 2) were within the authority of those on the planning team to change, and 3) needed change (attempts were made to focus primarily on problematic areas).¹⁸³
9. All ecosystem studies were conducted after students had enough time to "experience" the environment in a broad fashion. Schuh (in press) suggests that a minimum of eight weeks transpire before the assessment stage of the model is implemented.¹⁸⁴
10. Ecosystem studies that have utilized the ER format assessed a random sample of the entire population under review. This has been necessitated because of the volume of data that is collected through a two-part instrument and because of the open-ended nature of ER questions.
11. Successful application of the ecosystem model requires support both from the "top" of the area to be studied and from the milieu inhabitants. Model applications that have been unsuccessful invariably did not secure support from one or both of the above.

Current research seems to indicate that the ecosystem approach to environmental change holds great promise for college and university campuses. However, there is a need for further applications and refinements of the model. Although the stages in the design process appear to be simple and logical, the process of changing environments is masked by complex human needs and desires.

The next chapter will focus on the methodology and procedures used in the study.

Footnotes

Chapter Two

FOOTNOTES

CHAPTER TWO

62. K. Lewin, Field Theory and Social Science (New York: Harper and Brothers, 1951), p. 243.
63. R. Moos and P. Insel, Issues in Social Ecology: Human Milieus (Palo Alto, California: National Press Books, 1974), p. x.
64. Lewin, p. 12.
65. Ibid., p. 37.
66. R. E. Park and E. W. Burgess, The City (Chicago: University of Chicago Press, 1925).
67. R. Faris and H. Dunham, Mental Disorders in Urban Areas (Chicago: University of Chicago Press, 1939).
68. H. Murray, Explorations in Personality (New York: Oxford Press, 1938).
69. Ibid.
70. A. McFee, "The Relation of Students to Their Perception of a College Environment," Journal of Educational Psychology, 52 (1961), pp. 25-29.
71. G. Stern, "Environments for Learning," The American College: A Psychological and Social Interpretation of the Higher Learning, ed. R. N. Sanford (New York: Wiley, 1962), pp. 690-730.
72. G. Stern, "Congruence and Dissonance in the Ecology of College Students," Student Medicine, 8 (1960), pp. 304-339.
73. G. Stern, "Student Values and Their Relationship to the College Environment," Research on College Students, ed. H. T. Sprague (Boulder, Colorado: Western Interstate Commission for Higher Education, 1960), p. 67-104.
74. G. Stern, "Character of the Intellectual Climate in College Environments," Harvard Educational Review, 33 (1963), pp. 5-41.

75. J. Piaget, "Cognitive Development in Children: Piaget Papers," Piaget Rediscovered: A Report of the Conference on Cognitive Studies and Curriculum Development, eds. R. E. Ripple and D. W. Rockcastle (Ithaca, New York: School of Education, Cornell University, March, 1964), pp. 7-20.
76. M. Sherif and H. Cantril, The Psychology of Ego Involvement (New York: Wiley, 1947).
77. R. Barker, "Ecology and Motivation," Nebraska Symposium on Motivation, ed. M. R. Jones (Lincoln, Nebraska: University of Nebraska Press, 1960), pp. 1-49.
78. I. Chein, "The Environment as a Determinant of Behavior," Journal of Social Psychology, 39 (1954), pp. 115-127.
79. C. R. Pace and G. G. Stern, "An Approach to the Measurement of Psychological Characteristics of College Environments," Journal of Educational Psychology, 49 (1958), p. 227.
80. D. H. Funkenstein, "Failure to Graduate From Medical School," Journal of Medical Education, 37 (1962), pp. 585-603.
81. L. A. Pervin and D. B. Rubin, "Student Dissatisfaction with College and the College Dropout: A Transactional Approach," Journal of Social Psychology, 72 (1967), pp. 285-295.
82. R. Moos, "Sources of Variance in Responses to Questionnaires and in Behavior," Journal of Abnormal Psychology, 74 (1969), pp. 405-412.
83. P. Insel and R. Moos, "Psychological Environments - Expanding the Scope of Human Ecology," American Psychologist, 29 (1974), p. 186.
84. R. Barker, Ecological Psychology: Concepts and Methods for Studying the Environment of Human Behavior, (Stanford: Stanford University Press, 1968).
85. F. Heider, "On Perception, Event Structure and the Psychological Environment, Selected Papers," Psychological Issues, 1 (1959).
86. Ibid.
87. Walsh, p. 10.

88. Walsh, p. 19.
89. Barker, p. 189.
90. R. Barker, "The Ecological Environment," Issues in Social Ecology: Human Milieus, eds. R. Moos and P. Insel (Palo Alto, California: National Press Books, 1974), p. 255.
91. Walsh, p. 32.
92. Feldman and Newcomb, Impact of College on Students, 1969.
93. R. Clark and R. Trow, "Determinants of College Student Subcultures," Mimeographed (Berkeley, California: Center for the Study of Higher Education, 1960).
94. R. Peterson, Technical Manual: College Student Questionnaire (Princeton, N.J.: Educational Testing Service, Institutional Research Program for Higher Education, 1965).
95. Walsh, p. 49.
96. Ibid., p. 51.
97. P. Heist and G. Yonge, Manual for the Omnibus Personality Inventory (New York: The Psychological Corporation, 1968).
98. J. L. Holland, The Psychology of Vocational Choice: A Theory of Personality Types and Model Environments (Waltham, Mass.: Blaisdell, 1966).
99. Ibid.
100. J. L. Holland, Manual for the Vocational Preference Inventory (Palo Alto, California: Consulting Psychologists Press, 1965).
101. Ibid.
102. A. W. Astin and J. L. Holland, "The Environmental Assessment Technique: A Way to Measure College Environments," Journal of Educational Psychology, 52 (1961), pp. 308-316.
103. R. Linton, The Cultural Background of Personality (New York: Century, 1945).
104. Astin and Holland, p. 309.
105. Ibid., p. 310.

106. Walsh, p. 79-92.
107. Ibid., p. 97.
108. G. G. Stern, People in Context (New York: Wiley, 1970).
109. Pace and Stern, pp. 269-277.
110. Ibid.
111. Ibid.
112. Walsh, pp. 146-477.
113. R. Moos, Evaluating Educational Environments (San Francisco: Jossey-Bass, Inc., 1979), p. vii.
114. Insel and Moos, pp. 179-189.
115. Ibid., p. 18.
116. Ibid., pp. 18-19.
117. Ibid., p. 19.
118. L. A. Pervin, "Performance and Satisfaction as a Function of Individual-Environmental Fit," Psychological Bulletin, 69 (1968), pp. 56-58.
119. Pervin and Rubin, pp. 285-295.
120. Pervin, pp. 56-68.
121. C. Argyris, "The Incompleteness of Social-Psychological Theory: Examples from Small Group, Cognitive Consistency, and Attribution Research," American Psychologist, 24 (1969), pp. 893-908.
122. Pervin, pp. 56-68.
123. Pervin, pp. 285-295.
124. Barker, pp. 32-171.
125. R. Pace, CUES: College and University Scales (Princeton, N. J.: Educational Testing Service, 1963).

126. W. H. Duvall, "Student-Staff Evaluations of Residence Hall Environment," Journal of College Student Personnel, 10 (1969), p. 52.
127. William G. Miller and James Moore, Measuring Student Perceptions of a Residence Hall Environment (Southern Illinois University, July, 1973).
128. Ibid., p. 2.
129. A. DeYoung, R. Moos, B. Dort and M. Smail, "Expectations, Perceptions and Change in University Residence Climates: Two Case Studies," Journal of College and University Student Housing, 2 (1972), p. 4.
130. Ibid.
131. Ibid., p. 5.
132. Astin and Holland, pp. 308-316.
133. Sue Hyne, Institutional Assessment in Outreach Counseling: A Comparison of Two Techniques, Unpublished Masters Thesis (Colorado State University, June, 1973).
134. A. Astin, Manual for the Inventory of College Activities (Minneapolis: National Computer Systems, 1971).
135. J. Centra, "The College Environment Revisited: Current Descriptions and a Comparison of Three Methods of Assessment," College Entrance Examination Board Research and Development Reports, RDR-70-71, No. 1 (Princeton, N. J.: Educational Testing Service, 1970).
136. R. Moos and M. Gerst, "The Social Ecology of University Student Residences," Issues in Social Ecology: Human Milieus (Palo Alto, California: National Press Books, 1974) p. 441.
137. Van der Ryn and Silverstein, p. 7.
138. Ibid.
139. Ibid.
140. Ibid., p. 88
141. J. Menne, "Techniques for Evaluating the College Environment," Journal of Educational Measurement, 4 (1967) pp. 219-222.

142. Ibid.
143. Insel and Moos, p. 187.
144. Ibid.
145. D. Daher, J. Corazzini and R. McKinnon, "An Environmental Redesign Program for Residence Halls," Journal of College Student Personnel, 18 (1977), p. 11.
146. Ibid.
147. Ibid., pp. 112-114.
148. Aulepp and Delworth, p. vii.
149. Ibid, p. ix.
150. J. Banning and L. Kaiser, "An Ecological Perspective and Model for Campus Design," Personnel and Guidance Journal, 52 (1974), pp. 372-374.
151. J. Corazzini and S. Wilson, "Students, the Environment and Their Interaction: Assessing Student Needs and Planning for Change," Journal of the National Association for Women Deans, Administrators, and Counselors, 40 (1977) pp. 68-72.
152. J. Corazzini, S. Wilson and L. Huebner, The Environmental Satisfaction Questionnaire (Fort Collins, Colorado: Rocky Mountain Behavioral Science Institute, 1976).
153. Corazzini and Wilson, P. 72.
154. R. Harris, K. Hodgson and R. Riley, Ecosystem Report A: Student Opinion Survey (Community College of Denver, Red Rock Campus, July, 1976), p. 1.
155. This quote was taken from a questionnaire that was completed by the coordinator of the planning team for the Ecosystem Study conducted at the Community College of Denver, Red Rock Campus, September, 1979.
156. Ibid.
157. R. Svob, "Designing Campus Ecosystems," National Association of Student Personnel Administrators Journal, 13-14 (1975/1977), p. 42, (Panel Presentations reviewed by Ursula Delworth).

158. Michael Ford, The Social Ecology of Northern Colorado Residence Halls (Unpublished Doctoral Dissertation, University of Northern Colorado, 1975).
159. John Schuh and Milissa Allan, "Implementing the Ecosystem Model," Journal of College Student Personnel, 19 (March, 1978) pp. 119-122.
160. Ibid., p. 121.
161. John Schuh, "Implementing the Ecosystem Model: Phase II," Journal of College and University Student Housing, 8 (1978-79), pp. 6-8.
162. Ibid., p. 8.
163. John Schuh, "Assessment and Redesign in Residence Halls," Applying the Ecosystem Model, ed. Lois Huebner (San Francisco: Jossey-Bass, in press).
164. Ibid.
165. Aulepp and Delworth, p. vii.
166. Stephen Paul and Weston Morrill, "Applying the Ecosystems Perspective to the Ecosystems Perspective," Applying the Ecosystem Model, ed. Lois Huebner (San Francisco: Jossey-Bass, in press).
167. Walsh, p. 188.
168. D. Blocher, "Toward an Ecology of Student Development," Personnel and Guidance Journal, 52 (1974), pp. 360-365.
169. U. Delworth, "Designing Campus Ecosystems," NASPA Journal, 13-14 (1975), pp. 40-44.
170. R. Conyne, "Environmental Assessment: Mapping for Counselor Action," Personnel and Guidance Journal, 54 (1975), pp. 150-155.
171. R. Conyne, "An Analysis of Student-Environment Mismatches," Journal of College Student Personnel, 19 (1978), pp. 461-465.
172. J. Schuh, in press.
173. Corazzini and Wilson, pp. 68-72.
174. J. Schuh and M. Allan, pp. 119-122.

175. L. Huebner, "Emergent Issues of Theory and Practice," Applying the Ecosystem Model, ed. L. Huebner (San Francisco: Jossey-Bass, in press).
176. Paul and Morrill, in press.
177. O. V. Elliott, "Assessing Student Needs," Programming and Activities in College and University Residence Halls, ed. J. Schuh (Princeton, N. J.: Association of College and University Housing Officers, 1977).
178. Huebner, in press.
179. Corazzini and Wilson, p. 72.
180. Schuh, in press.
181. Ibid.
182. Ibid.
183. Paul and Morrill, in press.
184. Schuh, in press.

CHAPTER THREE

METHODOLOGY

This ecosystem study was conducted at The University of Iowa to determine the perception of selected residence hall students about their living environment, and to redesign problematic areas of the environment. Thus the focus was on developing a methodology for making intentional program changes.

Traditional research is aimed at the advancement of scientific knowledge through hypotheses and theory testing. As such there is little need for research of this nature to be immediately useful or practical; however, there must be a primary concern for making sure that any findings are stated as accurately as possible, and that the exact relationship between independent and dependent variables is known.

On the other hand, evaluative research, the methodology used for this study, is aimed at identifying problem areas and making environmental improvements. The interpretation of results will focus on immediate, practical application. Oetting (1976) distinguishes evaluative research from more traditional scientific inquiry with the following statement:

Evaluative research has a different purpose than traditional modes of scientific inquiry. It is aimed at collecting data that will help in making decisions about programs. The decisions often involve further evaluation, but cannot simply be 'we must wait for further research'. If the best estimate by the evaluator is that the program works, then further effort might be devoted to it, including further evaluation; if not, then staff times and effort are needed elsewhere . . . The evaluator's responsibility is to design the research so that it can be used, and unless research can be included without interference or excess cost, the design must favor short-term, more immediate, and practical benefits.¹⁸⁵

Recognizing the difference between traditional modes of scientific inquiry and evaluative research is not, however, a call for "quick and dirty" research. Oetting suggests that, "We should still attempt to design and carry out the best and cleanest research that we can do. It is a plea that evaluators become less defensive about the practical limitations that are inherent in applied work and not restrict their efforts to those few situations where completely adequate experimental designs are possible."¹⁸⁶

Data that were derived from the study were used to enhance the positive aspects of the residence hall environment and to redesign those areas that required change. Although usable data was an important "outcome", the focus of the study was on "process" - developing a viable mechanism for environmental change.

The sample population used for the study, the assessment instrument used to measure student perceptions about

the residence halls environment, and the procedures utilized in the ecosystem approach, are described in this chapter.

SAMPLE

The study was conducted during the Fall Semester, 1979, in residence halls at The University of Iowa. The total university enrollment was approximately 23,000 and the residence hall population was approximately 5,500 at the time of the study (see Table 1).

The subjects for this study were a ten percent random sample of students drawn by computer from each of the ten different residence halls on campus.

TABLE 1
TOTAL NUMBER OF MEN AND WOMEN
IN SPECIFIC BUILDINGS

	MEN	WOMEN	TOTAL
BURGE	576	695	1,271
CURRIER	361	363	724
STANLEY	0	563	563
HILLCREST	561	353	914
DAUM	230	242	472
QUADRANGLE	211	159	370
RIENOW	270	254	524
SOUTH QUADRANGLE	54	46	100
SLATER	254	269	523
WESTLAWN	37	38	75
TOTAL	2,554	2,982	5,536

The buildings in residence halls differ according to the percentage of students housed from each class. Table 2 shows the percentage of students by classification in specific buildings.

TABLE 2
PERCENTAGE OF STUDENTS BY
CLASSIFICATION IN SPECIFIC BUILDINGS

	FRESH	SOPH	JR	SR	PROF	UNCLASS	%
BURGE	86.94	6.99	4.45	.69	.54	.38	100
CURRIER	28.90	38.62	19.17	8.90	3.83	.55	100
STANLEY	72.59	16.91	7.47	1.07	1.96	-	100
HILLCREST	47.12	27.04	16.82	7.50	.98	.54	100
DAUM	41.42	33.89	19.04	4.82	.63	.21	100
QUADRANGLE	61.93	22.53	10.99	3.22	.81	.54	100
RIENOW	22.31	50.48	19.85	5.86	1.51	-	100
S. QUAD	29.00	21.00	25.00	22.00	3.00	-	100
SLATER	43.66	36.01	14.93	3.54	1.31	.56	100
WESTLAWN	14.67	14.66	26.67	10.67	26.66	6.67	100

Ten percent of the above students from each building were randomly drawn by computer and were subsequently contacted by personal letter from the chairperson of the environmental assessment planning team to request their participation in this study. Of these 545 students, 384 completed the survey instrument and mailed it back to the housing assignment office. This produced a seventy

percent response rate from those who received the survey. Percentages and numbers of respondents are presented by building in Table 3.

TABLE 3
NUMBER AND PERCENTAGE
OF RESPONSES BY RESIDENCE HALL

	NUMBER OF RESIDENTS CONTACTED	NUMBER OF RETURNS	PERCENTAGE OF RETURNS
BURGE	126	92	73
CURRIER	72	47	65
STANLEY	56	44	79
DAUM	47	36	77
HILLCREST	91	55	60
QUADRANGLE	37	23	62
SOUTH QUADRANGLE	10	8	80
RIENOW	52	30	58
SLATER	52	44	85
WESTLAWN	7	5	71
TOTAL	550	384	70

Because of the lack of proportional representation from all demographic categories (e.g. sex, class, length of stay, ethnic group, and building) in the various residence halls, no attempt was made to stratify the sample by buildings. Stratification was impractical because some buildings were single sex facilities, some were coed, while other buildings were filled predominantly with

freshmen or upperclass students. Significant differences were also found in building size (ranging from Westlawn with seventy-eight students to Burge with 1,300 students) and room types (some buildings had predominantly triple rooms, such as Burge and Daum, while other buildings had exclusively double rooms, such as Rienow and Slater). The residence halls were also divided geographically by the Iowa River with Currier, Stanley, Burge and Daum on the east campus and Hillcrest, Quadrangle, Rienow, Slater, South Quadrangle and Westlawn on the west campus.

Although the west campus had the greatest number of residence halls, both sides of the river had approximately the same number of students. This was accounted for because the greatest number of triple rooms and the largest residence hall were on the east campus.

It is this researcher's opinion that the ten percent random sampling of residence hall students from each building, and the seventy percent response to the survey mitigated problems of data bias. However, caution should be exercised when making comparisons among the demographic categories considering the diversity and composition of the different residence halls.

Nevertheless, it should be emphasized again that the major purpose of the study was not the scientific collection of data for its own sake, but, the development and testing of the ecological approach to system evaluation and change. Therefore, the most relevant questions were

1) did this approach support immediate, real-life application, and 2) did the methodology permit the collection of data about the residence hall environment that were usable and sufficient for making environmental changes?

INSTRUMENTATION

The instrument used in the study was The University of Iowa Residence Halls Environmental Assessment Survey (UIRHEAS), developed by the ecosystem planning team - a panel of expert judges composed of faculty, residence hall staff, students, and student service representatives at The University of Iowa (see Appendix A for survey form). Instrument development was supervised by consultants with research skills from the offices of Evaluation and Examination Services and the University Counseling Center. The director of the Counseling Center pioneered the development of the ecosystem approach while employed by the Western Interstate Commission for Higher Education. Recent research utilizing this approach strongly recommended the development of instruments that were tailored for the specific environment(s) that was to be studied. Although several standardized tests were available to assess residence hall environments, they often included items or terminology that was occasionally unfamiliar to persons in certain settings, and did not account for the specific needs that might have been problematic in certain environments. It was essential to the ecosystem methodology

that only relevant questions were asked in the assessment instrument that were sufficient for making environmental changes.

Since it was strongly recommended that the assessment instrument be tailored to the specific residence hall environment(s), and since this was done by the planning team as a part of the ecosystem approach, it is important to describe this process.

The UIRHEAS is the product of a series of steps that included 1) brainstorming sessions by the planning team regarding the perceived problem areas in residence halls, 2) categorizing problem areas into environmental scales for the instrument, 3) developing items-questions within each subscale, 4) pilot testing and validating both categories and items, and 5) developing the instrument format.

The results from the first two brainstorming sessions of the planning team yielded thirty-six identifiable problem areas (see Appendix B). A problem area was defined as a kind of activity, such as programming, as opposed to individual activities or events. Before the fourth meeting the planning team was divided into subgroups chaired by the assistant directors of residence halls for each functional area (Maintenance, Student Development Program and Food Service). Each of the subgroups took their respective lists back to their constituents in order to validate them. Two groups chose personal interviews as their method of validation while one group chose a combination

of personal interviews and group meetings as their method for validation. When the results were compiled the list had been expanded to forty-seven identifiable problem areas (see Appendix C). The subgroups reconvened in order to 1) categorize problem areas into subgroups, 2) drop those problem areas that could not be changed, and 3) prioritize the categories according to level of importance. When the planning team met again seven categories were selected for the study.

The subgroups were reconvened once again in order to develop items within each category. Two subgroups were given two categories each to develop. The third group was given three categories. Some categories required several items while others needed only a few. Once this task was completed, the subgroups reviewed their categories and items with the research consultant from the office of Evaluation and Examination Services to ensure the face validity of the instrument, and to secure assistance in the development of the format and wording of the instrument.

Because the resident assistants (RAs) on each floor of the residence halls served as disseminators of the survey and facilitators for those responding to the survey, they were selected as the pilot test group. Living on the floor with the residents also gave the RAs a unique opportunity to experience first hand many of the problems students face in the residence hall environment.

Based on the results from the pilot test, final modifications were made to the assessment instrument. Responses to the pilot test were not computer scored for analysis because it was more important to review individual reactions to the items, and to determine if the items were prompting good ER responses. The latter was determined by comparing the ER responses to their parent items on the instrument. The length of the instrument was designed so that it would not take over forty-five minutes to complete. This was verified during the pilot tests with the resident assistants.

The final instrument, as constructed by the planning team, had two parts. Part I was composed of seven environmental scales that contained ninety-two items. Residents were asked to respond to each item on a five point Likert Scale ranging from "strongly agree" to "strongly disagree". This portion of the survey was constructed to measure "how" students perceive certain aspects of the residence hall environment. The seven scales measured by the UIRHEAS were:

1. Physical environment - perceptions of facilities and other tangibles and their arrangement throughout the residence halls.
2. Regulatory environment - how students perceived policies, rules and procedures that govern their lives while living in residence halls.
3. Programming environment - how students perceived programs that addressed

their developmental needs including social, recreation, cultural and educational needs.

4. Security environment - the degree to which students felt safe from external and/or internal intrusions into their living areas.
5. Food environment - the degree to which students perceived their nutritional, personal tastes and scheduling needs being accommodated for by food services.
6. Intellectual/Academic environment - the perceived emphasis on academic success, combining living and learning with the pursuit of ideas and educational activities.
7. Interpersonal Relations and Responsibility environment - how students interacted socially and personally in a given residence hall.

Part II of the instrument was different from most standardized survey instruments in that it was designed specifically to yield data that was sufficient to make environmental changes. Respondents were asked to go back through the first part of the instrument and identify five items that they felt strongly about, either positively or negatively. In each case, the respondents were asked "why" they had their particular perception and "what" they would do to enhance that particular situation. The responses to the second part of the instrument were called environmental referents (ERs) because they were either qualitatively and/or quantitatively related to how respondents perceived various aspects of the residence hall environment. Through this procedure, the researcher was able to identify areas needing attention and change rather

than by using statistically significant perceptions alone. One could easily have perceived the environment in a certain way, but without the ERs, specific environmental changes would have been more difficult to identify.

It is the researcher's opinion that the series of steps involved in the construction of the UIRHEAS (utilizing a panel of expert judges), coupled with environmental referents, provided a valid and reliable means of 1) assessing the residence hall environment, and 2) providing data sufficient for making decisions about environmental changes. As Oetting suggests, evaluative research is not concerned with disproving or proving a theory or hypothesis, but whether the program (environment) should be changed.¹⁸⁷

PROCEDURE

The procedures utilized in the study included seven stages: 1) obtaining sanction, 2) selecting a planning team, 3) determining what to assess, 4) instrumentation, 5) distribution and collection of instrument, 6) data analysis, and 7) redesign and evaluation.

Stage I - obtaining sanction

Approval for the study was sought from the vice president of Student Services and dean of Academic Affairs. By obtaining his sanction for the project, the planning team was able to 1) get the authority of the

highest level administrative officer possible in support of the project, 2) familiarize the vice president with the nature and purpose of the study, 3) obtain Committee D approval (Committee D is the group that approves all research on human subjects at the university), and 4) secure support to implement environmental changes that were substantiated as needed from the results of the study.

It was equally important to gain the approval of residence hall staff and students who would be affected by the process and results of the study. To accomplish this objective, several staff meetings were held in order to generate a high level of commitment and expectation from the study. Staff were informed that they would have a representative on the planning team to provide input from their respective constituents. Thus, they were assured that "outsiders" would not be unilaterally evaluating their programs and services, and subsequently recommending changes. Students were also assured that they would have representatives on the planning team who would represent their point of view.

A series of articles appeared in the Residence Services newsletter, the residence hall student government newspaper, the local newspaper, and the university newspaper notifying the various communities that a major environmental study was underway that was designed

to improve the residence hall environment. As a result of these efforts, a high level of interest and commitment was obtained from staff and students.

Stage II - selecting the planning team

The ecosystem model required that a planning team be formed to conduct its processes. There were a number of important and practical reasons for this, some of which included the following:

1. Environments are perceived in different ways by different people. Therefore, a team approach provides representation for various groups that are impacted by the process.
2. The ecosystem design requires a collaborative effort to improve environmental conditions by those who are in the environment and those responsible for its maintenance.
3. Research designed and implemented by one individual often lacks credibility with members and decision makers in that environment.
4. Few environments exist alone. As such, a team effort can afford representation from major, interrelating environments.
5. The team approach allows the work load to be distributed among team members.

The criteria used in the selection of team members included 1) representation from the various areas of residence halls that might be subject to change, 2) selecting individuals who were willing to make changes, 3) selecting individuals who were enthusiastic and willing to see the project through, and 4) selecting at least one person who

had research expertise in the areas of instrument development and data analysis. Utilizing these criteria the following individuals were chosen for the planning team:

1. Director of Residence Services - Chairperson
2. Assistant Director for Maintenance
3. Assistant Director for Student Development
4. Assistant Director for Food Service
5. Two resident assistants - one from each side of the river
6. Two head residents - one from each side of the river
7. Two student government representatives
8. One faculty representative
9. Assistant Director of Evaluation and Examination Services

Each functional area of residence halls was represented on the team (i.e., maintenance, student development program and food service). Live-in staff assigned responsibility for the delivery of programs and services were represented on the team (head residents and resident assistants), as well as students who are impacted by the residence hall environment. Research expertise on the team was provided by the assistant director of Evaluation and Examination Services and the director of the Counseling Center. The faculty representative was chosen because of his participation on the Educational Program Committee for Residence Halls and because he conducted a class in residence halls.

The first two meetings of the planning team were designed to accomplish a number of objectives that included 1) acquainting team members with each other, 2) providing a rationale for why the study was being conducted and why the ecosystem approach was being utilized,

3) providing each member with a workbook on a selected review of ecosystem literature, as well as operating guidelines and information for the planning team, 4) establishing a meeting time and place, and 5) an initial exploration of problem areas in residence halls.

It was agreed in advance that in order to keep a high level of enthusiasm and participation by team members, meetings would be kept to a minimum in terms of length and frequency. Group meetings of the team were also enhanced after the third session by the establishment of subgroups, chaired by the assistant directors for their respective functional areas of residence halls. Each subgroup was given an assignment to complete before each meeting of the planning team. After the third session, most of the work was accomplished in subgroups. Team meetings after the subgroups were formed were basically information sharing sessions that led to further assignments to each subgroup. The planning team met nine times (nine weeks) in order to finalize the instrument that was used in the study. Subgroup leaders were utilized extensively to answer questions for their team members and to resolve problems and/or conflicts that arose.

Stage III - determining what to assess

The first task of the planning team was the generation of ideas on what to assess. Brainstorming sessions were used in the first two meetings of the planning team to identify "problem areas". An example of a problem is

"programming". Programming in this case is composed of a number of activities. Other examples of problem areas included facilities, services, bureaucracy and housekeeping. Ground rules that were established to facilitate the exchange of ideas included the following:

1. All suggestions would be recorded as long as they were not too broad or too narrow.
2. Problem areas had to fall within the authority of the residence hall system.
3. The list of problem areas would be expanded as far as possible.
4. Problem areas would be validated at a later time.
5. Problem areas would not be raised for the sake of curiosity. Each problem area was to be raised under the assumption the time and resources would be allocated to resolve them.
6. Each team member had the right to suggest a problem area regardless of where it might exist in residence halls.

A list of forty-seven problem areas were identified by the planning team after two team meetings and two subgroup meetings. Each subgroup was then asked to validate the problem areas by surveying their respective constituencies and to combine common problem areas into categories. Fourteen categories were identified by the planning team and seven of these categories were chosen for the study. Although these categories do not represent all problem areas, it was essential that the team limit the scope of the study to manageable limits (one academic year).

Stage IV - instrumentation

The section on instrumentation is included in the first part of this chapter, in keeping with established procedures for detailing the methodology employed.

Stage V - distribution and collection of instrument

A distribution and collection mechanism was developed to ensure a high response rate to the survey. These steps included 1) notifying the media about the ecosystem study, 2) soliciting support from resident assistants (RAs) at their staff meetings, 3) pilot testing the instrument with the RAs, 4) requesting the RAs personally deliver the instruments to selected residents on their respective floors, 5) utilizing the RAs as facilitators for their floor residents who might have difficulty filling out the survey, and 6) sending a letter to the sample population a few days before the study, requesting their support in carefully filling out the survey.

Articles were published in the media notifying residents that an important study was under way to change the residence hall environment, based on their input. Specific emphasis in these articles was placed on assuring students that this was not just another survey; but, that environmental changes would be made during the second semester, based on their feedback.

Resident assistants were given detailed information about the ecosystem study, and the role they would play.

Several opportunities were provided at their staff meetings to clarify any questions or concerns they might have about the study.

The RAs were asked to serve as the pilot test group for the instrument. Based on their first-hand experience with the survey during the pilot testing sessions, recommendations for changes were solicited. The RAs also received a letter from the chairperson of the planning team requesting that they personally deliver the assessment instrument to the selected residents on their respective floors, and to serve as facilitators for those students who might have questions about filling out the survey (see Appendix D - letter requesting RA participation in the study).

Students also received a letter from the chairperson of the planning team stating that they had been chosen to participate in the ecosystem study, and their responses would be significant determinants of subsequent changes in the residence hall program. The letter also informed students that their RAs would personally deliver the instrument to them within a week and that the results of the survey would be kept strictly confidential (see Appendix E - letter requesting student participation in the study).

The RAs delivered the surveys to the selected residents on their floors instructing them that they should fill out the survey, without assistance from others (except for clarification that the RA or head resident could

provide) at their earliest convenience and mail them back to the Housing Assignment Office in the enclosed self-addressed envelope.

The RAs and head residents played a central role in the distribution and collection of the survey instruments. Therefore, it was essential that they receive extensive training and support from their supervisors and the planning team.

Stage VI - statistical examination of data

The statistical examination of data was accomplished in two parts. Initially, the raw data from each part of the survey were scored. Following this process the data were ready for analysis. Frequency distributions of the ratings in Part I were calculated by computer utilizing the Statistical Package for the Social Sciences (SPSS)¹⁸⁸. Cross tabulation of the different demographic categories in the SPSS program provided the chi square statistic that minimized chance differences between groups (.01 level).

Scoring. A Likert Scale was used to score the subjects' responses to Part I of the survey. Subjects were asked to respond to items in terms of their perceptions, ranging from strongly agree (5) to strongly disagree (1). Percentage scores were generated from these responses within each item for the purpose of comparative analysis. If an item did not apply to a respondent's experience

he/she was asked to mark (0). Thus, the six options paralleling the numerical values were strongly agree, agree, neutral, disagree, strongly disagree, does not apply. Hence, any score for a given item above three (3) reflects a positive perception and any score below three (3) other than 0 reflects a negative perception (this is the case for those items that are phrased positively; the reverse is true for those items that are phrased negatively).

Scoring the environmental referents (ERs) in Part II of the survey was accomplished by taking an ER count by hand (each ER response refers back to an item in Part I of the survey). The ER item count entails a simple tally of the number of ER responses recorded per item from Part I of the survey. A tally chart might look like the following:

<u>Total ER Count</u>	
<u>Item</u>	<u>Number of ER Responses</u>
1	3
2	0
3	25
4	15
.	.
.	.
.	.
92	3

Data Analysis. Responses to each item in Part I of the survey were recorded directly on the survey form. The surveys were forwarded to the computer center where the results were keypunched onto data cards. A "distribution

count" of all responses to each item in the survey was recorded by demographic category. The numbers and percentage of responses to each scale (strongly agree to strongly disagree) will be reported in Chapter Four. The data were also treated statistically in order to compute chi square scores (.01 level of significance) that were used to minimize chance differences between groups within each demographic category.

The open-ended responses (ERs) in Part II of the survey required a different form of treatment before they could be analyzed. After the responses were scored and displayed in a tally chart, those items with a high ER response rate were chosen for descriptive analysis. From the sample illustrated below, items three and four are good candidates for analysis:

Total ER Count

<u>Item</u>	<u>Number of ER Responses</u>
1	1
2	0
3	20
4	23
.	.
.	.

Four raters from the planning team were trained by the director of the Counseling Center to provide a descriptive analysis of ERs. Once a high degree of inter-rater reliability was achieved among the raters the ERs were grouped according to environmental category for analysis. Through this procedure the raters were able to determine 1) the frequency count of ERs, 2) to which of

the seven parent environmental scales the ER response belonged, and 3) the category of ER responses. This procedure was repeated for each category on the rating scale (i.e., strongly agree or strongly disagree). The other rating scales were omitted because the subjects were asked to respond only to items they felt strongly about, either positively or negatively.

Once the ER responses were grouped according to category, each category was analyzed by "consensual response" (i.e., agreement among a panel of trained raters), in terms of why respondents had certain perceptions about a given item, and what they recommended to improve the situation (see Appendix F - guidelines for Part II ER analysis).

Stage VII - environmental redesign and evaluation

A primary objective of this stage was to implement as many environmental redesign projects as possible during the current school year. The success of ecosystem studies, in large measure, is dependent upon respondents, who live in the environment, having the opportunity to see immediate environmental change as a result of their input. Therefore, the focus of redesign activity may have been on policy, programs, physical properties, food service or others, but the primary concern at this stage was immediate intervention.

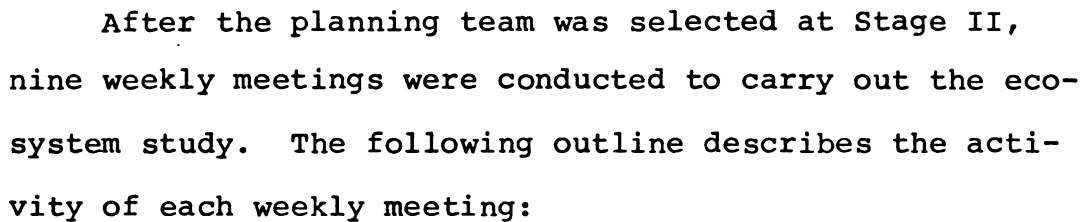
After the data were analyzed in Stage VI the results were given to each functional area head (i.e., assistant

directors for Maintenance, Food Service, and Student Development, and the director of Residence Halls) for review. They shared the data with their respective staffs and subgroups and then developed a set of recommendations in order of priority that were forwarded to the planning team. A "master" list of recommended environmental changes were reviewed and ranked in order of priority by the planning team. The following criteria were used to rank-order the recommendations:

1. Part I data analysis
2. ER data analysis
3. Expense for environmental redesign
4. Timing (the magnitude of some recommendations require scheduling over time)
5. Need for further study

Some recommendations were implemented during the second semester while others were incorporated into existing planning and budgeting systems.

Although the scope of this study was limited to activity within the given academic year, ongoing evaluation is an important part of the ecosystem process. However, the evaluation of behavior, as a result of environmental redesign, could not be conducted realistically until the following year. Nevertheless, the evaluation stage completed the cycle for the ecosystem model as modified in this study. The following depicts the seven procedural stages that were utilized by the planning team:



- I. First Team Meeting
 - A. Introduction of team members
 - B. Statement of purpose
 - C. Introduction to ecosystem methodology
 - D. Development of weekly meeting schedules
- II. Second Team Meeting
 - A. Review workbooks that included literature on ecosystem research
 - B. Initial brainstorming session on problem areas in residence halls
- III. Third Team Meeting
 - A. Training session on ecosystem methodology
 - B. Divide planning team into three subgroups (according to functional area)
 - C. Continue brainstorming on problem areas, within subgroups
- IV. Fourth Team Meeting
 - A. Review problem areas from each subgroup
 - B. Discussion about problem areas falling into categories
 - C. Assign subgroups to validate problem areas
 - D. Brief discussion about developing the assessment instrument
- V. Fifth Team Meeting
 - A. Validate problem areas
 - B. Review categories
- VI. Sixth Team Meeting
 - A. Reduce the number of categories for study
 - B. Training session on item writing
 - C. Assign each subgroup two categories (one group to have three because seven categories were chosen)
- VII. Seventh Team Meeting
 - A. Share and expand items from each subgroup
 - B. Finalize category titles
 - C. Discussion session on instrument development - with consultant
 - D. Task force assigned to work on rough instrument
- VIII. Eighth Team Meeting
 - A. Review assessment instrument
 - B. Establish procedures to pilot test instrument
 - C. Identify pilot test group
- IX. Ninth Team Meeting - final modifications of the assessment instrument based on the results of the pilot test

- X. Tenth Team Meeting - review and prioritize recommendations from each functional area (this meeting took place during the second semester)

SUMMARY

Approximately five hundred forty-five students living in residence halls at The University of Iowa were administered the UIRHEAS in order to determine their perceptions of various aspects of the residence hall environment. These students were also asked to respond to why they have these perceptions and what they recommend to improve areas they felt strongly about. The response rate to the survey was approximately seventy percent. Differences among demographic categories were also measured. The validity and reliability of the UIRHEAS instrument was determined to be sufficient for making environmental changes, particularly considering the "representative process" whereby the instrument was developed for a specific population and considering it was developed by a panel of expert judges. The resulting data were statistically analyzed by examining the perceptual differences by demographic category to the seven environmental scales, and by statistically examining the environmental referents to determine why students had certain perceptions and what they recommended to improve the residence hall environment.

Footnotes

Chapter Three

FOOTNOTES

CHAPTER THREE

185. E. R. Oetting, "Evaluative Research and Orthodox Science: Part I," Personnel and Guidance Journal, 56 (September, 1976) p. 11.
186. Ibid., page 12.
187. Ibid.
188. Norman Nie, C. Hadlai Hall, Jean G. Jenkins, Karin Steibrenner and Dale H. Brent, Statistical Package for the Social Sciences, 2nd ed. (New York: McGraw Hill Book Company, 1975).

CHAPTER FOUR

RESULTS

This chapter will present findings about the residence halls environment along seven environmental subscales. These findings will be described in terms of 1) overall results from Part I of The University of Iowa Residence Halls Environmental Assessment Survey, 2) selected results as perceived by each demographic category, 3) significant overall environmental referents as reported in Part II of the survey, 4) integration of Part I and Part II results, and 5) environmental redesign. Specific attention will be given to similarities of response to items with high frequency percentage scores in Part I and selected environmental referents in Part II.

RESULTS OF THE UNIVERSITY OF IOWA RESIDENCE HALLS ENVIRONMENTAL ASSESSMENT SURVEY, PART I

Overall Results

Based on a frequency count of responses and percentage scores from Part I of the Environmental Assessment Survey, some general observations can be made about the residence halls environment (see Appendix G - Tabular data on overall results).

Physical Environment. Residents appeared to be generally satisfied with their physical surroundings in residence halls. The great majority of students (in excess of seventy-five percent) agreed that they have sufficient opportunity to make their rooms attractive and comfortable, and that their rooms were adequately furnished to meet their needs. When asked about the cleanliness of their building, most (over eighty percent) responded that their floors were kept clean and neat by the custodians and that their buildings were generally kept clean and neat. However, three-fourths of all residents felt there were not enough laundry facilities in their respective buildings. Even though this perceived shortage of laundry facilities was expressed, most were unwilling to pay twenty-five cents more per wash to increase the number of laundry machines. The regulation of room temperature was also expressed as an important concern. Sixty-three percent of all residents indicated that room temperatures were not well regulated. The two cubic foot refrigerators that are rented to students, on the other hand, were considered to be adequate. Over sixty percent responded that the two cubic foot refrigerators satisfactorily cared for their needs. Table 4 reveals the frequency distribution of selected items from the Overall Analysis of responses.

TABLE 4

FREQUENCY DISTRIBUTION OF SELECTED
ITEMS FROM THE OVERALL ANALYSIS OF
RESPONSES - PHYSICAL ENVIRONMENT

Category	Frequency	Percent
ITEM #1 - Room Attractive and Comfortable		
Does Not Apply	1	0.3
Strongly Disagree	4	1.0
Disagree	25	6.5
Neutral	34	8.9
Agree	213	55.5
Strongly Agree	107	27.9
Total	384	100.0
ITEM #11 - Adequate Outdoor Recreation		
Does Not Apply	5	1.3
Strongly Disagree	23	6.0
Disagree	80	20.8
Neutral	67	17.4
Agree	160	41.7
Strongly Agree	49	12.8
Total	384	100.0
ITEM #18 - Room Not Adequately Furnished		
Does Not Apply	-	--
Strongly Disagree	61	15.9
Disagree	194	50.5
Neutral	56	14.6
Agree	57	14.8
Strongly Agree	16	4.2
Total	384	100.0
ITEM #23 - Floor Lounges Well Furnished		
Does Not Apply	19	4.9
Strongly Disagree	52	13.5
Disagree	86	22.4
Neutral	34	8.9
Agree	156	40.6
Strongly Agree	37	9.6
Total	384	100.0

Table 4 (cont'd)

Category	Frequency	Percent
ITEM #29 - Floor Not Clean and Neat by Custodians		
Does Not Apply	1	0.3
Strongly Disagree	185	48.2
Disagree	159	41.4
Neutral	16	4.2
Agree	14	3.6
Strongly Agree	9	2.3
Total	<u>384</u>	<u>100.0</u>
ITEM #35 - Building Kept Clean and Neat		
Does Not Apply	2	0.5
Strongly Disagree	14	3.6
Disagree	41	10.7
Neutral	56	14.6
Agree	204	53.1
Strongly Agree	67	17.4
Total	<u>384</u>	<u>100.0</u>
ITEM #41 - Not Enough Laundry Facilities		
Does Not Apply	7	1.8
Strongly Disagree	10	2.6
Disagree	50	13.0
Neutral	29	7.6
Agree	106	27.6
Strongly Agree	182	47.4
Total	<u>384</u>	<u>100.0</u>
ITEM #48 - Pay 50 Cents for Wash		
Does Not Apply	8	2.1
Strongly Disagree	147	38.3
Disagree	134	34.9
Neutral	41	10.7
Agree	42	10.9
Strongly Agree	12	3.1
Total	<u>384</u>	<u>100.0</u>

Table 4 (cont'd)

Category	Frequency	Percent
ITEM #68 - Temperature Not Well Regulated		
Does Not Apply	2	0.5
Strongly Disagree	21	5.5
Disagree	80	20.8
Neutral	38	9.9
Agree	116	30.2
Strongly Agree	127	33.1
Total	384	100.0
ITEM #74 - Refrigerators are Adequate		
Does Not Apply	47	12.2
Strongly Disagree	25	6.5
Disagree	48	12.5
Neutral	30	7.8
Agree	171	44.5
Strongly Agree	63	16.4
Total	384	100.0

Regulatory Environment. Residents seemed to be familiar with the Department of Residence Services student Guidebook that contains rules and regulations regarding student conduct. Over fifty-four percent of all respondents indicated that they were familiar with the Guidebook and the Standards of Behavior. Most residents also perceived their resident assistant as a consistent enforcer of rules and regulations on their respective floors. When asked if they knew the alcohol policy, over eighty-six percent responded affirmatively, and over three-fourths agreed that they abide by the alcohol policy. Most respondents (fifty-four percent) also indicated that the current policy regulating the use of drugs in residence halls is satisfactory. Although the removal of window screens are a specific violation of residence hall policy, students continued to do so at will. When asked if they were aware that window screens were to remain in place at all times, over eighty-two percent responded affirmatively. Another major concern for staff is regulating room parties. Students frequently complained about noise in adjacent rooms. However, when asked if room parties should be prohibited over sixty-nine percent disagreed. Most students (over sixty-seven percent) also disagreed that the atmosphere in their residence hall is one of disorder. Respondents also felt strongly that bicycles should not

be prohibited in student rooms. Table 5 shows the frequency distribution of selected items from the Overall Analysis of responses.

TABLE 5

FREQUENCY DISTRIBUTION OF SELECTED
ITEMS FROM THE OVERALL ANALYSIS OF
RESPONSES - REGULATORY ENVIRONMENT

Category	Frequency	Percent
ITEM #2 - Familiar with Guidebook		
Does Not Apply	2	0.5
Strongly Disagree	21	5.5
Disagree	50	13.0
Neutral	102	26.6
Agree	168	43.8
Strongly Agree	41	10.7
Total	384	100.0
ITEM #12 - Aware of Stan- dards of Behavior		
Does Not Apply	8	2.1
Strongly Disagree	19	4.9
Disagree	69	18.0
Neutral	64	16.7
Agree	181	47.1
Strongly Agree	43	11.2
Total	384	100.0
ITEM #24 - RA Consistent Enforcer		
Does Not Apply	3	0.8
Strongly Disagree	30	7.8
Disagree	61	15.9
Neutral	87	22.7
Agree	153	39.8
Strongly Agree	50	13.0
Total	384	100.0
ITEM #31 - I Know Alco- hol Policy		
Does Not Apply	6	1.6
Strongly Disagree	7	1.8
Disagree	18	4.7
Neutral	20	5.2
Agree	223	58.1
Strongly Agree	110	28.6
Total	384	100.0

Table 5 (cont'd)

Category	Frequency	Percent
ITEM #42 - I Abide by Alcohol Policy		
Does Not Apply	16	4.2
Strongly Disagree	7	1.8
Disagree	27	7.0
Neutral	45	11.7
Agree	193	50.3
Strongly Agree	96	25.0
Total	<u>384</u>	<u>100.0</u>
ITEM #49 - Drug Policy Satisfactory		
Does Not Apply	28	7.3
Strongly Disagree	33	8.6
Disagree	49	12.8
Neutral	82	21.4
Agree	139	36.2
Strongly Agree	53	13.8
Total	<u>384</u>	<u>100.0</u>
ITEM #63 - Window Screens in Place		
Does Not Apply	7	1.8
Strongly Disagree	7	1.8
Disagree	30	7.8
Neutral	22	5.7
Agree	212	55.2
Strongly Agree	106	27.6
Total	<u>384</u>	<u>100.0</u>
ITEM #80 - Rooms Not Used for Parties		
Does Not Apply	3	0.8
Strongly Disagree	115	29.9
Disagree	152	39.6
Neutral	66	17.2
Agree	31	8.1
Strongly Agree	17	4.4
Total	<u>384</u>	<u>100.0</u>

Table 5 (cont'd)

Category	Frequency	Percent
ITEM #85 - Atmosphere is Disorder		
Does Not Apply	5	1.3
Strongly Disagree	48	12.5
Disagree	211	54.9
Neutral	70	18.2
Agree	41	10.7
Strongly Agree	9	2.3
Total	<u>384</u>	<u>100.0</u>
ITEM #87 - Bicycles Should be Prohibited		
Does Not Apply	39	10.2
Strongly Disagree	115	29.9
Disagree	127	33.1
Neutral	63	16.4
Agree	27	7.0
Strongly Agree	13	3.4
Total	<u>384</u>	<u>100.0</u>

Programming Environment. Large amounts of money, time, and effort are provided for social and recreational programs in residence halls. Only twenty-three percent of the respondents indicated that they do not participate in these programs. Over fifty-four percent responded that they do. Although a significant amount of misconduct in residence halls is alcohol related, only twelve percent of the respondents indicated that they would participate in alcohol education programs. Most students felt, however, that staff did a good job of helping new students feel at home through their programming efforts. Only thirteen percent of the respondents disagreed with this. Table 6 displays the frequency distribution of selected items from the Overall Analysis of responses.

TABLE 6

FREQUENCY DISTRIBUTION OF SELECTED
ITEMS FROM THE OVERALL ANALYSIS OF
RESPONSES - PROGRAMMING ENVIRONMENT

Category	Frequency	Percent
ITEM #13 - Pay \$2 for Additional Programs		
Does Not Apply	2	0.5
Strongly Disagree	27	7.0
Disagree	70	18.2
Neutral	75	19.5
Agree	126	32.8
Strongly Agree	84	21.9
Total	<u>384</u>	<u>100.0</u>
ITEM #25 - Participate in Al- cohol Education Program		
Does Not Apply	26	6.8
Strongly Disagree	86	22.4
Disagree	116	30.2
Neutral	107	27.9
Agree	41	10.7
Strongly Agree	8	2.1
Total	<u>384</u>	<u>100.0</u>
ITEM #50 - Staff Helps New Students		
Does Not Apply	17	4.4
Strongly Disagree	13	3.4
Disagree	38	9.9
Neutral	108	28.1
Agree	162	42.2
Strongly Agree	46	12.0
Total	<u>384</u>	<u>100.0</u>
ITEM #70 - No participation in Soc-Rec Programs		
Does Not Apply	4	1.0
Strongly Disagree	49	12.8
Disagree	159	41.4
Neutral	82	21.4
Agree	79	20.6
Strongly Agree	11	2.9
Total	<u>384</u>	<u>100.0</u>

Security Environment. Students overwhelmingly responded that they felt safe in residence halls. Over seventy-eight percent agreed with this item. Respondents also indicated that if they were robbed in their residence hall, they would report the incident to their resident assistant. Ninety-five percent responded affirmatively to this item. As a result, most (seventy-four percent) disagreed with the need for locking the outside entrances to their buildings at night and most (fifty-nine percent) disagreed with the need to have their floor locked at night with only floor residents having keys. Table 7 reveals the frequency distribution of selected items from the Overall Analysis of responses.

TABLE 7

FREQUENCY DISTRIBUTION OF SELECTED
ITEMS FROM THE OVERALL ANALYSIS OF
RESPONSES - SECURITY ENVIRONMENT

Category	Frequency	Percent
ITEM #4 - Safe in Residence Halls		
Does Not Apply	-	--
Strongly Disagree	7	1.8
Disagree	30	7.8
Neutral	45	11.7
Agree	200	52.1
Strongly Agree	102	26.6
Total	384	100.0
ITEM #9 - Report Robbery to RA		
Does Not Apply	2	0.5
Strongly Disagree	4	1.0
Disagree	10	2.6
Neutral	3	0.8
Agree	90	23.4
Strongly Agree	275	71.6
Total	384	100.0
ITEM #38 - Lock Outside En- trances at Night		
Does Not Apply	5	1.3
Strongly Disagree	167	43.5
Disagree	119	31.0
Neutral	35	9.1
Agree	34	8.9
Strongly Agree	24	6.3
Total	384	100.0
ITEM #45 - Lock Floor at Night		
Does Not Apply	10	2.6
Strongly Disagree	127	33.1
Disagree	98	25.5
Neutral	51	13.3
Agree	55	14.3
Strongly Agree	43	11.2
Total	384	100.0

Food Environment. The overall impression of the Food Service was favorable to over forty-five percent of the respondents, while thirty percent disagreed with this perception. Although opinions were split on this item more than seventy percent of those responding indicated that they were 1) satisfied with the serving hours, 2) confident that the Food Service employees were not discourteous, 3) satisfied with the selection of salads at lunch and dinner, and 4) satisfied with the selection of desserts at lunch and dinner. Three-fourths of all respondents disagreed that the dining atmosphere is uncomfortable. When asked if they would pay more for larger entrees at dinner, most (seventy-four percent) disagreed. Also, fifty-five percent responded that they would not like to have more meatless entrees at lunch and dinner. Table 8 shows the frequency distribution of selected items from the Overall Analysis of responses.

TABLE 8

FREQUENCY DISTRIBUTION OF SELECTED
ITEMS FROM THE OVERALL ANALYSIS OF
RESPONSES - FOOD ENVIRONMENT

Category	Frequency	Percent
ITEM #10 - Satisfactory Selection of Entrees		
Does Not Apply	-	--
Strongly Disagree	41	10.7
Disagree	70	18.2
Neutral	76	19.8
Agree	155	40.4
Strongly Agree	42	10.9
Total	384	100.0
ITEM #16 - Satisfactory Serving Hours		
Does Not Apply	2	0.5
Strongly Disagree	18	4.7
Disagree	42	10.9
Neutral	33	8.6
Agree	205	53.4
Strongly Agree	84	21.9
Total	384	100.0
ITEM #21 - Food Service Discourteous		
Does Not Apply	2	0.5
Strongly Disagree	82	21.4
Disagree	196	51.0
Neutral	58	15.1
Agree	37	9.6
Strongly Agree	9	2.3
Total	384	100.0
ITEM #27 - Adequate Selection of Salads		
Does Not Apply	4	1.0
Strongly Disagree	10	2.6
Disagree	50	13.0
Neutral	34	8.9
Agree	206	53.6
Strongly Agree	80	20.8
Total	384	100.0

Table 8 (cont'd)

Category	Frequency	Percent
ITEM #33 - Dining Atmosphere Not Comfortable		
Does Not Apply	3	0.8
Strongly Disagree	69	18.0
Disagree	214	55.7
Neutral	64	16.7
Agree	27	7.0
Strongly Agree	7	1.8
Total	<u>384</u>	<u>100.0</u>
ITEM #39 - Adequate Selection of Desserts		
Does Not Apply	7	1.8
Strongly Disagree	15	3.9
Disagree	57	14.8
Neutral	54	14.1
Agree	201	52.3
Strongly Agree	50	13.0
Total	<u>384</u>	<u>100.0</u>
ITEM #46 - Pay More for Larger Entrees		
Does Not Apply	5	1.3
Strongly Disagree	136	35.4
Disagree	148	38.5
Neutral	50	13.0
Agree	32	8.3
Strongly Agree	13	3.4
Total	<u>384</u>	<u>100.0</u>
ITEM #66 - More Meatless Entrees		
Does Not Apply	8	2.1
Strongly Disagree	94	24.5
Disagree	118	30.7
Neutral	106	27.6
Agree	38	9.9
Strongly Agree	20	5.2
Total	<u>384</u>	<u>100.0</u>

Intellectual/Academic Environment. Although residents were split in terms of their perceptions regarding the existence of an intellectual climate in residence halls, over sixty-three percent responded that there should be. However, over seventy-two percent agreed that as a student in residence halls, they felt as if they were a member of the academic community. But, respondents were split in terms of having faculty members visit their place of residence for informal presentations or social events. Also, there were as many residents who felt as if they were able to study in their rooms as not. However, most (fifty-four percent) agreed that there are adequate facilities in which to study, other than their rooms. Table 9 displays the frequency distribution of selected items from the Overall Analysis of responses.

TABLE 9

FREQUENCY DISTRIBUTION OF SELECTED
ITEMS FROM THE OVERALL ANALYSIS OF
RESPONSES - INTELLECTUAL/ACADEMIC ENVIRONMENT

Category	Frequency	Percent
ITEM #15 - Should be an Intellectual Climate		
Does Not Apply	5	1.3
Strongly Disagree	8	2.1
Disagree	42	10.9
Neutral	87	22.7
Agree	162	42.2
Strongly Agree	80	20.8
Total	<u>384</u>	<u>100.0</u>
ITEM #37 - Member of Academic Community		
Does Not Apply	20	5.2
Strongly Disagree	4	1.0
Disagree	20	5.2
Neutral	81	21.1
Agree	196	51.0
Strongly Agree	63	16.4
Total	<u>384</u>	<u>100.0</u>
ITEM #51 - Cult and Educ Programs are Integral		
Does Not Apply	55	14.3
Strongly Disagree	62	16.1
Disagree	125	32.6
Neutral	98	25.5
Agree	40	10.4
Strongly Agree	4	1.0
Total	<u>384</u>	<u>100.0</u>
ITEM #58 - Intellectual Curiosity Stimulated		
Does Not Apply	15	3.9
Strongly Disagree	54	14.1
Disagree	128	33.3
Neutral	113	29.4
Agree	66	17.2
Strongly Agree	8	2.1
Total	<u>384</u>	<u>100.0</u>

Table 9 (cont'd)

Category	Frequency	Percent
ITEM #78 - Adequate Study Facilities		
Does Not Apply	4	1.0
Strongly Disagree	42	10.9
Disagree	78	20.3
Neutral	53	13.8
Agree	190	49.5
Strongly Agree	17	4.4
Total	384	100.0

Interpersonal Relations and Responsibility Environment. Over ninety-six percent of the respondents agreed that individuals must compromise when living in a group situation. Yet, most (over seventy-five percent) disagreed that residents should share equally the cost for vandalism that occurs on their floor, or that vending service should be stopped after midnight in order to decrease the incidence of vandalism. However, the majority of those responding (fifty-seven percent) agreed that residents should be charged a refundable damage deposit in order to keep the cost of the room contract down due to vandalism. Although most (fifty-seven percent) disagreed that the environment in their residence hall encourages anti-social acts, over seventy-nine percent agreed that some people living in their hall deliberately damage or deface the building. Noise in the hallway appeared to be a greater problem than noise from neighboring rooms, according to sixty percent of the respondents. However, most (eighty-two percent) felt as if it was part of their responsibility as a resident of the building to ask students to be quiet if they were bothering them. Also, over ninety percent responded that when asked to quiet down, they did. For the most part (over seventy percent) residents agreed that it was easy to adjust to group living on their respective floors and that the experience

was what they had expected. Table 10 reveals the frequency distribution of selected items from the Overall Analysis of responses.

TABLE 10

FREQUENCY DISTRIBUTION OF SELECTED ITEMS FROM
THE OVERALL ANALYSIS OF RESPONSES - INTERPERSONAL
RELATIONS AND RESPONSIBILITY ENVIRONMENT

Category	Frequency	Percent
ITEM #17 - Must Compromise in Group Situation		
Does Not Apply	1	0.3
Strongly Disagree	-	--
Disagree	2	0.5
Neutral	10	2.6
Agree	136	35.4
Strongly Agree	235	61.2
Total	384	100.0
ITEM #34 - Report False Alarms		
Does Not Apply	3	0.8
Strongly Disagree	27	7.0
Disagree	56	14.6
Neutral	99	25.8
Agree	98	25.5
Strongly Agree	101	26.3
Total	384	100.0
ITEM #40 - Deliberate Damage to Bldg by Residents		
Does Not Apply	11	2.9
Strongly Disagree	6	1.6
Disagree	24	6.3
Neutral	37	9.6
Agree	176	45.8
Strongly Agree	130	33.9
Total	384	100.0
ITEM #52 - Environment Encourages Anti-Social Acts		
Does Not Apply	16	4.2
Strongly Disagree	62	16.1
Disagree	158	41.1
Neutral	89	23.2
Agree	51	13.3
Strongly Agree	8	2.1
Total	384	100.0

Table 10 (cont'd)

Category	Frequency	Percent
ITEM #54 - Share Cost of Vandalism on Floors		
Does Not Apply	4	1.0
Strongly Disagree	218	56.8
Disagree	115	29.9
Neutral	27	7.0
Agree	18	4.7
Strongly Agree	2	0.5
Total	<u>384</u>	<u>100.0</u>
ITEM #60 - Stop Vending After Midnight		
Does Not Apply	7	1.8
Strongly Disagree	157	40.9
Disagree	138	35.9
Neutral	30	7.8
Agree	40	10.4
Strongly Agree	12	3.1
Total	<u>384</u>	<u>100.0</u>
ITEM #61 - Refundable Damage Deposit		
Does Not Apply	6	1.6
Strongly Disagree	27	7.0
Disagree	53	13.8
Neutral	80	20.8
Agree	170	44.3
Strongly Agree	48	12.5
Total	<u>384</u>	<u>100.0</u>
ITEM #73 - Noise in Hall- way a Problem		
Does Not Apply	3	0.8
Strongly Disagree	18	4.7
Disagree	65	16.9
Neutral	68	17.7
Agree	143	37.2
Strongly Agree	87	22.7
Total	<u>384</u>	<u>100.0</u>

Table 10 (cont'd)

Category	Frequency	Percent
ITEM #79 - Ask Students to be Quiet		
Does Not Apply	2	0.5
Strongly Disagree	7	1.8
Disagree	17	4.4
Neutral	41	10.7
Agree	216	56.3
Strongly Agree	101	26.3
Total	384	100.0
ITEM #83 - I Quiet Down When Asked		
Does Not Apply	27	7.0
Strongly Disagree	-	--
Disagree	2	0.5
Neutral	8	2.1
Agree	171	44.5
Strongly Agree	176	45.8
Total	384	100.0

Within Group Results

Although it was not the purpose of this study to develop extensive amounts of data, an analysis of highly selected results by building, class, sex, ethnic group, and length of stay provides the reader with a more in depth perspective of the various residence hall environments. The cross tabulations in this section reveal significant differences between groups, within each category at the chi square level of .01 (differences between groups is subject to chance one time in one hundred). Based on a frequency count of responses and percentage scores from Part I of the survey, some specific observations can be made about these differences. A summary of the significant differences is presented in Appendix H; they are not directly germane to this thesis. However, information from this section was instrumental in the decision-making regarding specific environmental interventions.

OVERALL RESULTS OF THE UNIVERSITY OF IOWA RESIDENCE HALLS ENVIRONMENTAL ASSESSMENT SURVEY, PART II - ER ANALYSIS

Several items were selected from Part II of the Residence Halls Environmental Assessment Survey for descriptive analysis. Table 11 shows the ER response rate to all items in order of frequency with item forty-one - "Adequate laundry facilities" - having the highest response rate - one hundred eleven; and four items - numbers two,

twenty-six, fifty-two, and eighty-eight - "Familiar with Guidebook", "Comfortable pursuing intellectual and cultural activities", "Environment encourages anti-social acts", and "Opportunity to provide input for policy change" respectively - with no responses. Based on a frequency count of ERs and the need to have a sufficient number of ER responses within each category for analysis (twenty or more ERs) approximately one-third (thirty-one) of the items were chosen for further study. All items are grouped by environmental scale in Table 12. From these selected ERs some general observations can be made about why students had certain opinions about the various residence hall environments and what they recommended to improve them. The following sections provide a descriptive analysis of selected items within each environmental scale.

TABLE 11
FREQUENCY RESPONSE OF ERs FROM
PART II OF THE UIRHEAS

Item Number	Number of Responses
41 - Not Enough Laundry Facilities	111
38 - Lock Outside Entrances at Night	82
68 - Temperature Not Well Regulated	80
54 - Share Cost of Vandalism on Floors	70
45 - Lock Floor at Night	57
80 - Rooms Not Used for Parties	52
60 - Stop Vending After Midnight	47
36 - I Do Not Support Alcohol Policy	44
23 - Floor Lounges Well Furnished	43
56 - Adequate Levels of Quiet	42
5 - Food Service Favorable	41
72 - Students Do Not Watch Food	39
46 - Pay More for Larger Entrees	36
48 - Pay 50 cents for Wash	35
76 - Stricter Quiet Hours	33
29 - Floor Not Clean & Neat by Custodians	32
17 - Must Compromise in Group Situation	28
40 - Deliberate Damage to Bldg by Residents	28
73 - Noise in Hallway a Problem	27
34 - Report False Alarms	24
10 - Satisfactory Selection of Entrees	23
66 - More Meatless Entrees	23
67 - Dismiss for False Fire Alarms	23
78 - Adequate Study Facilities	23
6 - Satisfactory Recreational Facilities	22
13 - Pay \$2 for Additional Programs	22
24 - RA Consistent Enforcer	22
87 - Bicycles Should be Prohibited	22
16 - Satisfactory Serving Hours	20
53 - Give Up Unlimited Food Servings	20
59 - Able to be Alone	20
9 - Report Robbery to RA	19
49 - Drug Policy Satisfactory	19
35 - Building Kept Clean and Neat	18
75 - Pay for Larger Refrigerator	18
14 - Is an Intellectual Climate	17
21 - Food Service Discourteous	16
89 - Strong Sense of Identity	16
1 - Room Attractive and Comfortable	15
19 - Effective Discipline System	15
61 - Refundable Damage Deposit	15
4 - Safe in Residence Halls	14
22 - No Respect for Others Property	13

Table 11 (cont'd)

Item Number	Number of Responses
27 - Adequate Selection of Salads	13
43 - Spirit on Floor Encourages Activities	13
50 - Staff Helps New Students	13
55 - Prompt Room Repairs	13
71 - Choose to Study in Hall	12
11 - Adequate Outdoor Recreation	11
15 - Should be an Intellectual Climate	11
65 - Able to Study in My Room	11
18 - Room Not Adequately Furnished	10
33 - Dining Atmosphere Not Comfortable	10
79 - Ask Students to be Quiet	10
25 - Participate in Alcohol Education Program	9
64 - Social & Recreational Needs Satisfied	9
30 - Students Keep Floor Clean and Neat	8
47 - Students Have Not Learned Respect	8
69 - Discipline for Removal of Screens	8
84 - Difficulty Finding Storage Space	8
28 - Person Not Concerned is Not Welcome	7
39 - Adequate Selection of Desserts	7
81 - Need for Alcohol Education	7
83 - I Quiet Down When Asked	7
91 - Easy to Adjust to Group Living	7
57 - New Students Not Helped	6
31 - I Know Alcohol Policy	5
42 - I Abide by Alcohol Policy	5
62 - Not Enough Bicycle Racks	5
74 - Refrigerators are Adequate	5
85 - Atmosphere in Disorder	5
90 - Work for Development of Policies	5
8 - More Cultural Programs	4
51 - Cult and Educ Programs are Integral	4
58 - Intellectual Curiosity Stimulated	4
82 - I Contribute to Noise	4
20 - Little Attempt for Social Events	3
32 - Important Discussions Frequent	3
44 - Faculty Visits Valuable	3
63 - Window Screens in Place	3
86 - Sense of Responsibility	3
92 - Experience Not Expected	3
37 - Member of Academic Community	2
3 - Allocate Programming Funds Effectively	1
7 - Familiar with Policy Handbook	1
12 - Aware of Standards of Behavior	1
70 - No Participation in Soc-Rec Programs	1
77 - Help Organize Social Activities	1

Table 11 (cont'd)

Item Number	Number of Responses
2 - Familiar with Guidebook	0
26 - Pursue Intell and Cultural Activities . . .	0
52 - Environment Encourages Anti-Social Acts . .	0
88 - Input to Modify Policy	0

TABLE 12
ER RESPONSE RATE
BY ENVIRONMENTAL SUBSCALE

Item Number	Number of Responses
<u>Physical Environment</u>	
1 - Room Attractive and Comfortable	15
6 - Satisfactory Recreational Facilities	22
11 - Adequate Outdoor Recreation	11
18 - Room Not Adequately Furnished	10
23 - Floor Lounges Well Furnished	43
29 - Floor Not Clean & Neat by Custodians	32
35 - Building Kept Clean and Neat	18
41 - Not Enough Laundry Facilities	111
48 - Pay 50 cents for Wash	35
55 - Prompt Room Repairs	13
59 - Able to be Alone	20
62 - Enough Bicycle Racks	5
68 - Temperature Not Well Regulated	80
74 - Refrigerators are Adequate	5
75 - Pay for Larger Refrigerator	18
84 - Difficulty Finding Storage Space	8
Total - Physical Environment	446
<u>Regulatory Environment</u>	
2 - Familiar with Guidebook	0
7 - Familiar with Policy Handbook	1
12 - Aware of Standards of Behavior	1
19 - Effective Discipline System	15
24 - RA Consistent Enforcer	22
31 - I Know Alcohol Policy	5
36 - I Do Not Support Alcohol Policy	44
42 - I Abide by Alcohol Policy	5
49 - Drug Policy Satisfactory	19
56 - Adequate Levels of Quiet	42
63 - Window Screens in Place	3
69 - Discipline for Removal of Screens	8
76 - Stricter Quiet Hours	33
80 - Rooms Not Used for Parties	52
85 - Atmosphere is Disorder	5
87 - Bicycles Should be Prohibited	22
88 - Input to Modify Policy	0
90 - Work for Development of Policies	5
Total - Regulatory Environment	282

Table 12 (cont'd)

Item Number	Number of Responses
<u>Programming Environment</u>	
3 - Allocate Programming Funds Effectively . . .	1
8 - More Cultural Programs	4
13 - Pay \$2 for Additional Programs	22
20 - Little Attempt for Social Events	3
25 - Participate in Alcohol Education Program . .	9
43 - Spirit on Floor Encourages Activities . . .	13
50 - Staff Helps New Students	13
57 - New Students Not Helped	6
64 - Social and Recreational Needs Satisfied . .	9
70 - No Participation in Soc-Rec Programs . . .	1
77 - Help Organize Social Activities	1
81 - Need for Alcohol Education	7
Total - Programming Environment	89
<u>Security Environment</u>	
4 - Safe in Residence Halls	14
9 - Report Robbery to RA	19
38 - Lock Outside Entrances at Night	82
45 - Lock Floor at Night	57
Total - Security Environment	172
<u>Food Environment</u>	
5 - Food Service Favorable	41
10 - Satisfactory Selection of Entrees	23
16 - Satisfactory Serving Hours	20
21 - Food Service Discourteous	16
27 - Adequate Selection of Salads	13
33 - Dining Atmosphere Not Comfortable	10
39 - Adequate Selection of Desserts	7
46 - Pay More for Larger Entrees	36
53 - Give Up Unlimited Food Servings	20
66 - More Meatless Entrees	23
72 - Students Do Not Watch Food	39
Total - Food Environment	248

Table 12 (cont'd)

Item Number	Number of Responses
<u>Intellectual/Academic Environment</u>	
14 - Is an Intellectual Climate	17
15 - Should be an Intellectual Climate	11
26 - Pursue Intell and Cultural Activities	0
32 - Important Discussions Frequent	3
37 - Member of Academic Community	2
44 - Faculty Visits Valuable	3
51 - Cult and Educ Programs are Integral	4
58 - Intellectual Curiosity Stimulated	4
65 - Able to Study in my Room	11
71 - Choose to Study in Hall	12
78 - Adequate Study Facilities	23
Total - Intellectual/Academic Env.	90
<u>Interpersonal Relations and Responsibility Environment</u>	
17 - Must Compromise in Group Situation	28
22 - No Respect for Others Property	13
28 - Person Not Concerned is Not Welcome	7
30 - Students Keep Floor Clean and Neat	8
34 - Report False Alarms	24
40 - Deliberate Damage to Bldg by Residents	28
47 - Students Have Not Learned Respect	8
52 - Environment Encourages Anti-Social Acts	0
54 - Share Cost of Vandalism on Floors	70
60 - Stop Vending After Midnight	47
61 - Refundable Damage Deposit	15
67 - Dismiss for False Fire Alarms	23
73 - Noise in Hallway a Problem	27
79 - Ask Students to be Quiet	10
82 - I Contribute to Noise	4
83 - I Quiet Down When Asked	7
86 - Sense of Responsibility	3
89 - Strong Sense of Identity	16
91 - Easy to Adjust to Group Living	7
92 - Experience Not Expected	3
Total - Interper. Rel. & Resp. Env.	348

Physical Environment

Forty-four percent of the items on the Physical Environment Scale had an ER count of twenty or more. Table 13 shows an analysis of these environmental referents. Item twenty-three - "Floor lounges in my building are furnished well enough to meet my needs" - shows that most residents who responded disagreed with this item. When asked why they disagreed, eighteen indicated a need for better lighting, eighteen indicated that the lounges were unattractive and not well furnished, eight responded that their floors did not have lounges, six indicated a need for more desks and tables, and four said it was too cold in the lounges. When asked how to improve this situation, eighteen suggested improved lighting, eight asked for more desks and tables, seven saw a need for better furniture, five suggested a need for more lounge space, and four indicated a need to regulate the temperature in the lounge better.

Three residents agreed that the lounges were furnished well enough. One indicated that the lounge space is adequate, one indicated that the ovens and couches in the lounges are nice, and one indicated that there were many places to sit and study. No suggestions were made regarding how to improve the situation.

Most residents agreed with item forty-one - "Not enough laundry facilities". Eighty-six responded that

there were not enough washers and dryers and subsequently they had to wait too long, twenty-one indicated that there were not enough dryers, and twenty-two suggested a need to repair laundry machines. When asked how to improve this situation, seventy-six suggested that the Housing Department provide more laundry facilities, twenty-five indicated a need for more dryers, twenty-two responded that the machines should be fixed, and five suggested a higher charge to do laundry.

Three respondents indicated that laundry facilities were sufficient. However, one suggested that peak hours should be announced, and one suggested that dryers should be fixed.

Almost all residents who responded to item sixty-eight agreed that "Temperature control is not well regulated in their rooms". Forty-five indicated that the temperature is too hot, eighteen responded that the temperature is either too hot or too cold, and ten residents said they could not regulate the room temperature. When asked how to improve the situation, eighteen suggested turning down the heat, thirty recommended individual room temperature control, and twenty-six said fix the heating system.

Only one person disagreed with item sixty-eight, indicating that his/her room is regulated well. No suggestions were made on how to improve the situation.

The majority of residents disagreed with item twenty-nine - "The floor I live on is not generally kept clean and neat by custodians". All twenty-seven respondents who disagreed indicated that the custodians did a good job. In order to improve the situation, eight residents said keep it up, three suggested providing more rewards for custodians, and one indicated a need for more custodial training. A few residents, however, agreed with this item. Four responded that the floors were usually dirty, especially the showers, and one said that floors were dirty on weekends. Two residents suggested cleaning the showers better in order to improve this situation, two suggested hiring more staff, and two indicated a need for better custodial supervision.

Item six - "There are satisfactory recreational facilities within my residence hall" - revealed that most respondents disagreed. Ten indicated that there were not enough recreational facilities, and nine said there were no facilities at all. Ten residents suggested adding more equipment to improve the situation, eight preferred to add more game rooms, while five suggested building more recreation rooms.

Only one resident said that there were satisfactory recreational facilities, however, this person recommended opening the gameroom at 12:00 noon. One person was neutral on this item.

TABLE 13

ER ANALYSIS OF THE
PHYSICAL ENVIRONMENT SUBSCALE

1. Item #6 - There are satisfactory recreational facilities within my residence hall.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 Satisfactory recreational facilities	1
What Category	1 Open game room at 12:00 noon	1
<u>Disagree</u>		
Why Category	1 Not enough recreational facilities	10
	2 No facilities	9
What Category	1 Add more equipment	10
	2 Add game room	8
	3 Build more rec rooms	5

2. Item #23 - Floor lounges in my building are furnished well enough to meet my needs.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 Lounge space adequate	1
	2 Ovens and couches nice	1
	3 Many places to sit & study	1
What Category	No responses	
<u>Disagree</u>		
Why Category	1 Need better lighting	18
	2 Lounge unattractive and not enough furniture	18
	3 My floor doesn't have a lounge	8
	4 Need more desks/tables	6
	5 Too cold	4
What Category	1 Improve lighting	18
	2 More desks/tables for study	8
	3 Get better furniture	7
	4 Develop more lounge space	5
	5 Regulate temperature better	4

Table 13 (cont'd)

3. Item #29 - The floor I live on is not generally kept clean and neat by the custodians.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 Floor usually dirty - showers dirty	4
	2 Custodians are lazy	1
	3 Floor dirty on weekends	1
What Category	1 Clean showers better	2
	2 More staff	2
	3 Better supervision of custodians	2
<u>Disagree</u>		
Why Category	1 Does good job	27
What Category	1 Keep it up	8
	2 Provide more rewards	1
	3 Provide more training	1
	4 Students are responsible	1
	5 Clean showers more	1
	6 More weekend help	1

4. Item #41 - There are not enough laundry facilities to meet my needs in my residence hall.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 Not enough washers & dryers - have to wait too long	86
	2 Not enough dryers	22
	3 Machines need repairs	22
What Category	1 Provide more facilities	76
	2 Provide more dryers	25
	3 Fix machines	22
	4 Charge more	5
<u>Disagree</u>		
Why Category	1 Facilities are sufficient	3
What Category	1 Announce peak hours	1
	2 Fix dryers	1
	3 Be flexible	1

Table 13 (cont'd)

5. Item #48 - I would be willing to pay 50 cents per wash to increase the number of washing machines in my building.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 Provide more machines	1
What Category	No responses	
<u>Disagree</u>		
Why Category	1 More machines/same cost	12
	2 Rather wait than pay	11
	3 Need dryers	7
	4 Temperature adjustment on machines	1
What Category	1 More dryers & more efficient	10
	2 Repair machines	5
	3 Increase to 30 or 40 cents	2

6. Item #59 - I am able to find space in my building to be alone when I want to be.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 Able to find space	1
What Category	No responses	
<u>Disagree</u>		
Why Category	1 No place to be alone	14
	2 No lounge space	2
	3 No place to study alone	2
	4 No place to greet visitors alone	1
What Category	1 More small private rooms	6
	2 More lounges	4
	3 Private rooms - key checkout	

Table 13 (cont'd)

7. Item #68 - Temperature control is not well regulated in my room.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 Temperature too hot	45
	2 Temperature either too hot or too cold	18
	3 Can't regulate temperature	10
	4 Temperature too cold	2
What Category	1 Individual room temperature control	30
	2 Fix heating system	26
	3 Turn down heat	18
<u>Disagree</u>		
Why Category	1 Room temperature is regulated well	1
What Category	No responses	

Regulatory Environment

One-third of the items on the Regulatory Environment Scale had an ER count of twenty or more. Table 14 shows an analysis of these environmental referents.

Most residents who responded to item seventy-six - "I would support a more strict enforcement of quiet hours" - agreed. When asked why they agreed, six indicated that they have been kept up by noise, five said that quiet hours were not enforced, three indicated that it was hard to study in their rooms, and three suggested that there were no quiet hours. Eleven respondents suggested enforcing quiet hours in order to improve the situation, and six indicated a desire for more severe penalties for noise offenders. A few residents disagreed with this item. Two indicated that it was just a matter of being considerate and two suggested that students should study in the library and that rooms should be a more social place. Three residents indicated that the situation could improve if people were understanding.

Most residents who responded to item twenty-four - "My RA consistently enforces rules and regulations on my floor" - disagreed. Twelve responded that the RA did not enforce quiet hours, three said that the RA played favorites, and three indicated that the RA was not around very much. Eight residents suggested making the RA enforce

quiet hours as a means of improving this situation. Four residents said get new RAs and two indicated that staff should be more strict in the selection of RAs.

Nine residents, however, agreed that their RA was a consistent enforcer of rules and regulations. Three indicated that the RA was too strict. In order to improve this situation, three residents suggested that the RAs loosen up, and two felt that the RAs should work more closely with students.

The majority of those responding to item eighty - "Rooms should not be used for parties because of their potential for disruption" - disagreed. When asked why they disagreed, thirty-two responded that your room was your home, ten said it was ok to have parties if they were not disruptive, and nine said there was no place else to go. Several suggestions were made to improve this situation. Eighteen said leave it as it is, ten suggested punishing offenders, six indicated a need for less restrictions, and five felt that there should be more of an emphasis on respect for others. Five persons, however, agreed that the rooms should not be used for parties because they were loud and disruptive. Three suggested that parties should only be held in the party rooms, and two felt a need for more strict enforcement as a means of improving this situation.

Most residents agreed with item thirty-six - "I do not support the alcohol policy". When asked why, twenty-four

indicated that the reason was because kegs were prohibited in student rooms, ten said the designated areas were too restrictive, four suggested that the policy was too paternalistic, and one said that it prevented minors from participating in social events where alcohol was served. Most (twenty-five) felt this situation could be improved if kegs were allowed. Eleven suggested opening up more party areas and one suggested that staff should allow under-age participation at social events where alcohol is served.

Five residents disagreed with item thirty-six, indicating that alcohol consumption was an imposition on others. Two of these respondents suggested keeping alcohol in the recreation rooms and two felt a need to keep enforcing the current policy.

Item fifty-six - "Appropriate levels of quiet are maintained on my floor" - revealed that most residents disagreed. Twelve residents indicated that there was too much hallway noise, nine said that it was generally too noisy, nine suggested a need for better staff enforcement, and six felt that stereos were too loud. When asked what to do to improve the situation, thirty indicated a need for better staff enforcement and four suggested providing more quiet hours.

Three residents agreed with item fifty-six because they felt that their floor was quiet. One of these

residents recommended the elimination of stereos, and one recommended better enforcement as ways of improving this situation.

Most students disagreed with item eighty-seven - "Bicycles should be prohibited in student rooms". Thirteen respondents said that it was necessary to keep their bikes in their rooms in order to keep them safe and dry, four said that there was nothing wrong because it was his/her room, and three indicated that it was ok if your roommate agreed. Seven residents suggested that this situation should be left alone, however, four felt that more storage space should be provided.

Two residents said that bicycles should be prohibited in student rooms because they clutter the room. They both felt that safe storage would improve this situation.

TABLE 14

ER ANALYSIS OF
THE REGULATORY ENVIRONMENT SUBSCALE

1. Item #24 - My resident assistant (RA) consistently enforces rules and regulations on my floor.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 RA enforces well	6
	2 RA too strict	3
What Category	1 Have RAs loosen up	3
	2 Have RAs work more closely with residents	2
	3 Give RAs a raise	1
<u>Disagree</u>		
Why Category	1 RA does not enforce quiet hours	12
	2 RA plays favorites	3
	3 RA not around very much	3
What Category	1 Make RAs enforce quiet hours	8
	2 Get new RA	4
	3 More strict in selection of RAs	2
	4 Change quiet hours	1

2. Item #36 - I do not support the alcohol policy in residence halls.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 Kegs are prohibited in rooms	24
	2 Designated areas too restrictive	10
	3 Policy is paternalistic	4
	4 Precludes minors from social participation	2
What Category	1 Allow kegs	25
	2 Open up more areas	11
	3 Better enforcement	1
	4 Allow underage participation	1

Table 14 (cont'd)

2. Item #36 (cont'd)

		<u># responses</u>
<u>Disagree</u>		
Why Category	1 Imposition on others	5
What Category	1 Keep in rec rooms	2
	2 Keep enforcing it	2
	3 Lock hallways	1

3. Item #56 - As a rule, appropriate levels of quiet are maintained on my floor such that I can study and/or sleep without interruption.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 Floor is quiet	3
What Category	1 Eliminate stereos	1
	2 Better enforcement	1
<u>Disagree</u>		
Why Category	1 Too much hallway noise	12
	2 Generally too noisy	9
	3 Better staff enforcement	9
	4 Stereos too loud	6
	5 Neighbors too loud	3
What Category	1 Better staff enforcement	30
	2 Provide quiet hours	4
	4 Educate	1

4. Item #76 - I would support a more strict enforcement of quiet hours on my floor.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 I've been kept up by noise	6
	2 Quiet hours not enforced	5
	3 Hard to study in room	3
	4 There are no quiet hours	3
	5 We are here for education - not to party	3
What Category	1 Enforce quiet hours	11
	2 Make penalty harsher for noise offenders	6
	3 Stricter enforcement by RAs	4

Table 14 (cont'd)

4. Item #76 (cont'd)

		<u># responses</u>
<u>Disagree</u>		
Why Category	1 Study in library - room should be a more social place as long as it doesn't get out of hand	2
	2 It's just a matter of being considerate	2
	3 People need "loud times"	1
	4 We're old enough to be responsible	1
What Category	1 People should be understanding	3
	2 Leave as is	1

5. Item #80 - Student rooms should not be used for parties because of their potential for disruption.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 Parties loud and disruptive	5
What Category	1 Party rooms only	3
	2 More strict enforcement	2
<u>Disagree</u>		
Why Category	1 Room is your home	32
	2 Ok if not disruptive	10
	3 No place else to go	9
What Category	1 Leave as is	18
	2 Punish offenders	10
	3 Less restrictions	6
	4 Emphasize respect for others	5

6. Item #87 - Bicycles should be prohibited in student rooms.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 Clutters room	2
What Category	1 Provide safe storage	2
<u>Disagree</u>		
Why Category	1 Keep them safe and dry	13
	2 Nothing wrong - it's my room	4
	3 Ok if roommate agrees	3
What Category	1 Leave rule alone	7
	2 Provide secure storage space	4

Programming Environment

Only one percent of the items on the Programming Environment Scale had an ER count of twenty or more. Table 15 shows an analysis of this environmental referent. Most respondents agreed with item thirteen - "I would be willing to pay two dollars per semester for additional programs in my residence hall". When asked why, seven students responded it would make residence hall living more enjoyable, five said that it would keep students from having to depend on downtown and the bars, three suggested that there was not enough programming, and three indicated that it was too expensive downtown. Fourteen residents suggested having more programs to improve this situation, four specifically recommended more field trips, and two felt there should be a group that sponsors programs.

A few students, however, disagreed with paying more for programs. Four indicated that they pay enough already, and two suggested that there are currently enough programs. These respondents felt that if some students wanted more programs, they should pay for them.

TABLE 15
ER ANALYSIS OF
THE PROGRAMMING ENVIRONMENT SUBSCALE

1. Item #13 - I would be willing to pay an additional \$2.00 per semester for additional programs in my building, such as movies, field trips, entertainment, etc.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 It would make residence hall living more enjoyable	7
	2 It would keep students from having to depend on downtown and the bars	5
	3 There is not enough programming	3
	4 Too expensive downtown	3
What Category	1 Provide more programs	14
	2 Provide more field trips	4
	3 Do better publicity	1
	4 Survey more students for their support	1
<u>Disagree</u>		
Why Category	1 I pay enough already	4
	2 There are enough programs	2
	3 Improve building association first	1
What Category	1 Let those who want more pay	2
	2 Don't add on more costs	1
	3 Provide incentive programs for associations first	1

Security Environment

Fifty percent of the items on the Security Environment Scale had an ER count of twenty or more. Table 16 shows an analysis of these environmental referents. Twenty-eight residents disagreed with item thirty-eight - "I would be willing to support locking the outside entrances to my building at night". These students indicated that it would be an inconvenience - too much of a hassle. Thirteen respondents said that things were fine and that they felt safe now, eleven suggested that friends would not visit if the doors were locked, and seven felt that it would be too much of a restriction on their freedom. When asked how to improve the situation, forty-one persons said leave things as they were, five indicated a need to unlock more doors under the present system, four suggested a need for more security personnel at the doors, and three suggested leaving the front doors unlocked and encouraging people to lock doors to their rooms.

Seven residents who agreed with this item felt that anyone could walk in at present, two said that it would cut down on vandalism, and two indicated that the current system creates fear. Five of those who agreed with this item suggested locking the doors at night, two felt that only the hallway doors should be locked, two residents said that a night watch system should be implemented, and two recommended issuing residents keys to the front door.

The response to item forty-five - "I would support having my floor locked at night" - was more evenly divided compared to other items. Of those who disagreed, thirteen said it was inconvenient, eight indicated that there was no need to lock the floor, and seven suggested that it would restrict visiting among friends. In order to improve this situation, twenty-six of these residents suggested not locking the doors and leaving things the way they were.

Although fewer residents agreed with item forty-five, eight felt it would provide more security, eight indicated that it would help regulate traffic, three suggested that it would cut down on vandalism, and two said it would cut down on noise. When asked how to improve this situation, eleven recommended locking the doors at night and eight recommended locking the doors day and night.

TABLE 16

ER ANALYSIS OF
THE SECURITY ENVIRONMENT SUBSCALE

1. Item #38 - I would support locking the outside entrances to my building at night, even if it necessitates meeting my visitors at the front door.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 "Anyone" can walk in at present	7
	2 Cut down on vandalism	2
	3 Creates fear (safety)	2
What Category	1 Lock the doors at night	5
	2 Lock hallway doors	2
	3 Night watch	2
	4 Issue residents keys to front door	2
<u>Disagree</u>		
Why Category	1 Inconvenient - hassle	28
	2 Fine as is - I feel safe now	13
	3 Friends wouldn't visit	11
	4 Restricts freedom	7
What Category	1 Leave them as is	41
	2 Unlock more doors with present system	5
	3 Have more security - night watch or RAs at door	4
	4 Leave front doors unlocked - encourage people to lock room doors	3

2. Item #45 - I would support having my floor locked at night with only floor residents having keys.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 Provide more security	8
	2 Regulate traffic from outsiders on floor	8
	3 Cut down on vandalism	3
	4 Cut down on noise	2

Table 16 (cont'd)

2. Item #45 (cont'd)

		<u># responses</u>
<u>Agree</u> (cont'd)		
What Category	1 Lock doors at night	11
	2 Lock doors day and night	8
	3 Lock building	1
	4 Lock showers	1
<u>Disagree</u>		
Why Category	1 It's inconvenient	13
	2 No need to lock floor	8
	3 Restricts visiting among friends	7
	4 Against our rights	2
What Category	1 Don't lock doors - leave as is	26
	2 Let people come and go freely	1
	3 Use this method on restricted floor only	1

Food Environment

Sixty-four percent of the items on the Food Environment Scale had an ER count of twenty or more. Table 17 shows an analysis of these environmental referents. Item five - "My overall impression of the Food Service is favorable" - showed that most respondents disagreed. Nineteen felt that the food tasted bad, eight indicated that there was not enough variety, and seven said that the food was too cold. In order to improve this problem, nine recommended better food selection, seven suggested better food preparation, four indicated a need for better quality food, and two said maintain proper food temperature.

Some students agreed that they had a favorable impression of Food Service. Five of these students indicated food variety as their reason, others indicated that they enjoyed the salad bar or that they could eat all they wanted. These respondents also recommended keeping the food at proper temperatures as a way of improving the Food Service.

Most residents disagreed with item forty-six - "I would be willing to pay more for larger entree portions at dinner". Fourteen indicated that portions were large enough already, ten suggested that they paid enough already, two said it would contribute to food waste, and two responded why pay more for bad food. When asked what could be done to improve the situation, eight said leave it as

it was, two suggested surveying student opinion, three recommended serving larger portions and cutting back on desserts, and two felt there was a need for better quality food.

Five of those residents who agreed with item forty-six indicated that they needed more food and two suggested a need for more protein. All of these respondents recommended more meat at dinner as a way of improving this problem.

More residents disagreed with item ten - "There is a satisfactory selection of entrees at each meal" - than agreed. Eight respondents indicated that there was not enough variety in the menu, two felt that sometimes they had two bad entrees or two good entrees, and two suggested that there were not enough vegetarian meals. In order to improve this situation, seven recommended greater variety in the menu, two said have one popular and one less popular entree at each meal, and two felt a need for more vegetarian entrees.

All six residents who agreed with this item indicated that there was plenty to choose from. Two felt that things were fine the way they were, and one recommended cutting down on salads. Three respondents were neutral on this item.

Student opinion is divided on item seventy-two - "Food waste occurs because students don't watch how much food

they take". Most disagreed with eighteen suggesting that bad tasing food was the reason, six said the reason was poor preparation, and one indicated that portion sizes were too large. Thirteen residents suggested better food preparation as a way to improve this situation, four indicated a need for better quality food, three suggested greater variety, and two recommended smaller portions.

Respondents were equally divided on item sixty-six - "I would like to have more meatless entrees at lunch and dinner". All ten residents who agreed with this item indicated that they did not eat meat. Most recommended serving more vegetarian entrees to improve this situation.

Those who disagreed with item sixty-six strongly suggested that there was not enough meat at lunch and dinner. Four recommended serving more meat, two indicated that things should remain the same, and one felt a need for more diversified entrees.

Sixteen residents agreed with item fifty-three - "In order to keep board rates to a minimum, I would be willing to give up unlimited servings of some food items". Five of these respondents agreed because there was too much food waste, five said it was too expensive, and four indicated a need to limit desserts. In order to improve this situation, five recommended limiting desserts, three suggested limiting servings, and three wanted portion sizes limited.

Three of those respondents who disagreed with item fifty-three suggested that unlimited desserts were a strong point and one respondent indicated that he/she liked to eat. Four of these residents recommended keeping things the same.

Most residents disagreed with item sixteen - "The present serving hours for meals are satisfactory." When asked why, nine indicated that breakfast hours ended too early, two said they missed dinner, and two felt the lines were too long. Nine suggested extending the meal hours to improve this situation, and five specifically recommended extending breakfast hours.

All four residents who agreed with this item indicated that serving hours are satisfactory. Most recommended keeping the hours the same.

TABLE 17

ER ANALYSIS OF
THE FOOD ENVIRONMENT SUBSCALE

1. Item #5 - My overall impression of the Food Service is favorable.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 They provide good variety	5
	2 I really enjoy the salad bar	1
	3 Food is good and nutritious	1
	4 I get all I want	1
What Category	1 Less starchy food	1
	2 Maintain Proper temperature of food	1
	3 Use larger glasses	1
<u>Disagree</u>		
Why Category	1 Food tastes bad	19
	2 Not enough variety	8
	3 Food too cold	7
	4 Food not sanitary - hair	2
What Category	1 Provide better selection	9
	2 Prepare food better	7
	3 Get better quality food	4
	4 Maintain proper temperature of food	2

2. Item #10 - There is satisfactory selection of entrees at each meal.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 There is plenty to choose from	6
What Category	1 It's fine the way it is	2
	2 Cut down on salads	1
<u>Disagree</u>		
Why Category	1 Not enough variety - all the same	8
	2 Sometimes we have 2 bad entrees & 2 good entrees	3
	3 Not enough vegetarian meals	2

Table 17 (cont'd)

2. Item #10 (cont'd)

		<u># responses</u>
<u>Disagree</u> (cont'd)		
What Category	1 Provide greater variety	7
	2 Have 1 popular and 1 less popular entree at each meal	2
	3 Provide more vegetarian entrees	2

3. Item #16 - The present serving hours for meals are satisfactory.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 Serving hours are satisfactory	4
What Category	1 Keep hours the same	3
	2 Serve breakfast earlier	1

Disagree

Why Category	1 Breakfast hours end too early	9
	2 Miss dinner	2
	3 Lines too long	2
	4 Classes don't coincide	1
What Category	1 Extend meal hours	9
	2 Extend breakfast hours	5
	3 Extend hours on weekends	2

4. Item #46 - I would be willing to pay more for larger entree portions at dinner.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 Need more food	5
	2 Need more protein	2
What Category	1 More meat at dinner	7

Disagree

Why Category	1 Portions are large enough	14
	2 We pay enough already	10
	3 Would contribute to food waste	2
	4 Why pay more for bad food	2

Table 17 (cont'd)

4. Item #46 (cont'd)

		<u># responses</u>
<u>Disagree</u> (cont'd)		
What Category	1 Leave as is	8
	2 Provide larger portions - cut back on desserts	3
	3 Survey student opinion	2
	4 Better quality - hire real cooks	2

5. Item #53 - In order to keep board rate increases at a minimum I would be willing to give up unlimited servings of some food items (i.e., lunch entrees and desserts).

		<u># responses</u>
<u>Agree</u>		
Why Category	1 Too much waste	5
	2 Too expensive	5
	3 Limit desserts	4
What Category	1 Limit desserts	5
	2 Limit servings	3
	3 Limit portion sizes	3
<u>Disagree</u>		
Why Category	1 Unlimited desserts strong point	3
	2 I like to eat	2
	3 All don't eat same amount	1
What Category	1 Keep it the same	4
	2 Extend policy to include dinner	1

6. Item #66 - I would like to have more meatless entrees offered at lunch and dinner.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 I don't eat meat	10
What Category	1 More vegetarian entrees	6
	2 Offer one vegetarian entree each meal	1
	3 Improve vegetarian entrees	1

Table 17 (cont'd)

6. Item #66 (cont'd)

		<u># responses</u>
	<u>Disagree</u>	
Why Category	1 Not enough meat	11
	2 Dislike meatless entrees	1
What Category	1 More meat	4
	2 Don't change	2
	3 More diversified entrees	1

7. Item #72 - Food waste occurs in the dining rooms because students do not watch how much food they take.

		<u># responses</u>
	<u>Agree</u>	
Why Category	1 Too much waste	9
	2 Food waste is expensive	6
	3 Bad food	2
What Category	1 Educate - signs, posters, etc.	7
	2 Stricter policy on serving numbers	3
	3 Smaller portions	3
	<u>Disagree</u>	
Why Category	1 Food tastes bad	18
	2 Poor food preparation	6
	3 Portions too large	1
What Category	1 Better food preparation	13
	2 Better quality food	4
	3 Greater variety	3
	4 Smaller portions	2

Intellectual/Academic Environment

One percent of the items on the Intellectual/Academic Environment Scale had an ER count of twenty or more. Table 18 shows an analysis of this environmental referent. Almost all respondents disagreed with item seventy-eight - "In my residence hall there are adequate facilities in which to study other than my room". Fifteen indicated that there were not enough places to study, three said that the lounges were too noisy, and three indicated that the lounges were locked after midnight. In order to improve this situation, seven recommended providing more study rooms, three expressed a need for better lighting in the lounges, and three felt there was a need to enforce quiet.

Only two respondents agreed with item seventy-eight. One of these persons indicated that the tenth floor of Stanley was an excellent place to study and one resident said there were numerous study facilities in Daum. One person recommended providing better lighting in the lounges to improve this situation.

TABLE 18

ER ANALYSIS OF
THE INTELLECTUAL/ACADEMIC
ENVIRONMENT SUBSCALE

1. Item #78 - In my residence hall there are adequate facilities in which to study, other than my room.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 Tenth floor is an excellent place to study (Stanley)	1
	2 Numerous study facilities in Daum	1
What Category	1 Provide better lighting	1
<u>Disagree</u>		
Why Category	1 Not enough places to study	15
	2 Lounges are too noisy	3
	3 Don't lock lounges after midnight	3
	4 Poor lighting in lounges	2
What Category	1 Provide more study rooms	7
	2 Provide better lighting	3
	3 Enforce quiet	3
	4 Leave lounges open	2

Interpersonal Relations and Responsibility Environment

Thirty-five percent of the items on the Interpersonal Relations and Responsibility Environment Scale had an ER count of twenty or more. Table 19 shows an analysis of these environmental referents. The great majority of residents disagreed with item fifty-four - "Residents should share equally the cost of vandalism that occurs on their floor". When asked why, fifty-one indicated that they would not pay for damage done by others, nine said that the vandals were not from their floor, and five suggested that it was just unfair. In order to improve this situation, twenty-one recommended making the vandals pay, fourteen suggested tighter security, six felt that staff should encourage students to report vandalism done by others, five indicated a need for more strict punishment for vandals, and two recommended refundable damage deposits.

Only two residents agreed with item fifty-four, one because vandals make costs go up, and one to repair damages. One of these respondents recommended refundable damage deposits to improve the situation and the other suggested making the vandals pay or do the repair.

Most residents disagreed with item sixty - "In order to decrease vandalism to vending machines, we should stop vending service at 12:00 midnight". Twenty-eight indicated that vending service was needed after midnight, four

suggested that vandalism may have taken place before midnight, three felt that stopping vending service after midnight would cause more vandalism, and three said fix the machines. When asked how to improve the situation, eleven recommended maintaining the machines better, eleven said leave things as they were, nine wanted the vending machines monitored, and five recommended moving the vending machines to more visible locations.

Only three residents agreed with this item. One indicated that the vending machines were broken in the morning, one said people should keep food in their rooms, and one suggested that eating after midnight was weird. These respondents recommended either getting machines that work or keep food in rooms to improve this situation.

All but one resident who responded to item seventeen - "Individuals must compromise when living in a group situation" - agreed. Nine indicated that compromise was the only way, six said that when people did not compromise, conflict between roommates existed, and four felt that without compromise residence halls would be crazy. When asked how to improve the situation, four said it was up to the individual to change, and four recommended that the RAs should emphasize compromise.

Only one resident disagreed with item seventeen. This person suggested that one should not always have to compromise. No recommendations for improvement were made.

All of those who responded to item forty - "Some people living here deliberately damage or deface this building" - agreed. Nineteen indicated that they had seen the vandalism and six said it was because of no respect. When asked how to improve the situation, ten recommended more severe punishment, seven said make them pay, three felt a need for tighter security, and two recommended charging damage deposits.

Most residents who responded to item seventy-three - "I feel that noise in the hallway is more of a problem than noise from neighboring rooms" - agreed. Nineteen indicated that corridor talk was disturbing. Eight residents suggested more strict enforcement of quiet hours, three felt a need to educate students about noise, two suggested keeping room doors shut, and two recommended no loitering as ways of improving the problem of corridor noise.

Four residents disagreed with item seventy-three. Three of these residents indicated that noise from rooms was more of a problem, and one felt that noise from other floors was more of a problem. In order to improve this situation, one recommended enforcing the quiet hour policy, and one recommended separating the restricted and unrestricted floors.

All but one of the respondents agreed with item thirty-four - "If I saw someone pulling a false fire alarm I would be willing to report him/her to the

residence hall staff". When asked why, fifteen responded that false alarms disturbed them, and seven indicated that false alarms were a serious offense. Thirteen of these residents recommended increased punishment for offenders, and three suggested it was the staff's obligation to educate students about the seriousness of false alarms.

One resident disagreed with item thirty-four, indicating that it was not his job to turn in students. This person recommended making the alarms less visible.

Most residents agreed with item sixty-seven - "Residents who are found guilty of pulling false fire alarms should be dismissed from residence halls". Ten indicated their reason for agreement was because false alarms were annoying, four responded that there were too many false alarms, three said kick them out, and two indicated that it was against the law. When asked what to do to improve this situation, eleven recommended kicking them out, six suggested more strict punishment, two recommended offering rewards for reporting offenders, and two suggested publicizing those who were kicked out.

Two residents disagreed with item sixty-seven. One indicated that students should not be dismissed for the first offense, and one suggested that kicking a person out may violate their personal freedom. In order to improve this situation, one of these students recommended a warning on the first offense, and the other resident cautioned about creating a police state.

TABLE 19

ER ANALYSIS OF
THE INTERPERSONAL RELATIONS
AND RESPONSIBILITY ENVIRONMENT

1. Item #17 - Individuals must compromise when living in a group situation.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 Compromise is the only way	9
	2 When people don't conflict between roommates exists	6
	3 Without compromise, residence halls would be crazy	4
	4 Not everyone is willing to compromise	3
What Category	1 It's up to the individual to change	4
	2 Compromise should be emphasized by RAs	4
	3 Students can live with whom they want	2
	4 Explain the rules and enforce them	2
<u>Disagree</u>		
Why Category	1 One should not <u>always</u> have to compromise	1
What Category	No responses	

2. Item #34 - If I saw someone pulling a false fire alarm I would be willing to report him/her to the residence hall staff.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 False alarms disturb me	15
	2 False alarms are serious offenses	7
	3 It's my obligation	2
	4 False alarms cost money	2
What Category	1 Increase punishment for offenders	13
	2 Try to educate - obligation	3
	3 Not a big problem	2
	4 Use smoke detectors - not pull stations	1

Table 19 (cont'd)

2. Item #34 (cont'd)

		<u># responses</u>
<u>Disagree</u>		
Why Category	1 Not my job	1
What Category	1 Alarms less visible	1

3. Item #40 - Some people living here deliberately damage or deface the building.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 Because I have seen the vandalism	19
	2 No respect	6
	3 Some think it's cool	1
	4 Some people are drunk or high	1
What Category	1 More severe punishment	10
	2 Make them pay	7
	3 Tighter security	3
	4 Damage deposits	2

Disagree No responses

4. Item #54 - Residents should share equally the cost for vandalism that occurs on their floor.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 Vandals make costs go up	1
	2 To repair damage	1
What Category	1 Refundable damage deposit	1
	2 Make vandals pay or do repair	1

Disagree

Why Category	1 Won't pay for damage done by others	51
	2 Vandals are not from their floor	9
	3 It's unfair	5
What Category	1 Make vandals pay	21
	2 Tighter security	14
	3 Encourage students to report vandalism	6
	4 More strict punishment for vandals	5
	5 Provide for refundable damage deposits	2

Table 19 (cont'd)

5. Item #60 - In order to decrease the incidence of vandalism to vending machines we should stop vending service after midnight.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 In the morning, the machines are broken	1
	2 People should keep food in their rooms	1
	3 After midnight eating is weird	1
What Category	1 Keep food in rooms	1
	2 Get machines that work	2

Disagree

Why Category	1 Needed after midnight	28
	2 Very convenient	4
	3 Vandalism may take place before midnight	4
	4 Fix machines	3
	5 Would cause <u>more</u> vandalism	3
What Category	1 Maintain machines better (repair)	11
	2 Leave as is	11
	3 Monitor (security checks)	9
	4 Move the machines - more visible	5

6. Item #67 - Residents who are found guilty of pulling false fire alarms should be dismissed from residence halls.

		<u># responses</u>
<u>Agree</u>		
Why Category	1 False alarms are annoying	10
	2 There are too many false alarms	4
	3 Kick them out	3
	4 Because it's against the law	2
What Category	1 Kick them out	11
	2 More strict punishment	6
	3 Publicize those who are kicked out	2
	4 Offer reward for reporting offenders	2

Table 19 (cont'd)

6. Item #67 (cont'd)

		<u># responses</u>
	<u>Disagree</u>	
Why Category	1 Don't dismiss for first offense	1
	2 May violate personal freedom	1
What Category	1 Warning first offense - dismissal second offense	1
	2 Don't create a police state	1

7. Item #73 - I feel that noise in the hallway is more of a problem than noise from neighboring rooms.

		<u># responses</u>
	<u>Agree</u>	
Why Category	1 Corridor talk is disturbing	19
	2 Noise carries from other rooms	1
	3 Loud walking	1
What Category	1 More strict enforcement of quiet hours	8
	2 Educate them about noise	3
	3 Make residents keep their doors shut	2
	4 No loitering	2
	<u>Disagree</u>	
Why Category	1 Noise from rooms more of problem	3
	2 Noise from other floors	1
What Category	1 Enforce policy	1
	2 Separate restricted and unrestricted floors	1

INTEGRATION OF PART I
AND PART II DATA ANALYSIS

Given that almost half the items in the Residence Halls Environmental Assessment Survey showed a clear tendency for residents to either agree or disagree in Part I, and given that respondents showed a tendency to select items as significant that they felt negatively about in Part II of the survey, there were some focal items that provide direction for subsequent environmental changes. Sixty-eight percent of all items that had an ER response rate of twenty or more in Part II of the survey were also items that most residents either agreed with or disagreed with in Part I. Therefore, by combining these two criteria (i.e., ER response rate of twenty or more in Part II and a fifty percent or better response rate to items in Part I) one is able to focus on specific areas for environmental change that appear to be most significant to residents - a "match".

Forty-three percent of the items on the Physical Environment Scale showed a "match". These items included 1) "There are not enough laundry facilities to meet my needs", 2) "I would be willing to pay 50 cents per wash to increase the number of washing machines in my building", and 3) "The floor I live on is generally kept clean and neat by the custodians".

Fifty percent of the items on the Regulatory Environment Scale revealed a "match" that included 1) "My RA is a consistent enforcer of rules and regulations on my floor", 2) "Student rooms should not be used for parties because of their potential for disruption", and 3) "Bicycles should be prohibited in student rooms".

The only item on the Programming Environment Scale that showed a "match" was where residents indicated a willingness to pay an additional two dollars per semester for additional programs in their respective buildings.

Both of the items on the Security Environment Scale showed a "match". These two items included 1) "I would support locking the outside entrances at night", and 2) "I would support having my floor locked at night".

Fifty-seven percent of the items on the Food Environment Scale indicated a "match". The items in this category included 1) "I would be willing to pay more for larger entree portions at dinner", 2) "There is a satisfactory selection of entrees at each meal", 3) "I would like to have more meatless entrees offered at lunch and dinner", and 4) "The present serving hours for meals are satisfactory".

Only one item on the Intellectual/Academic Environment Scale showed a "match". Here, residents indicated that there were adequate places in their residence hall to study, other than rooms.

On the Interpersonal Relations and Responsibility Environment Scale one hundred percent of the items revealed a "match". These items included 1) "Residents should share equally the cost for vandalism that occurs on their floor", 2) "In order to decrease the incidence of vandalism to vending machines we should stop service after midnight", 3) "Individuals must compromise when living in a group situation", 4) "Some people living here deliberately damage or deface the building", 5) "I feel that noise in the hallway is more of a problem than noise from neighboring rooms", 6) "If I saw someone pulling a false fire alarm, I would be willing to report them", and 7) "Residents who are found guilty of pulling false fire alarms should be removed from residence halls".

Several items did not reveal a "match", however, residents indicated strong feelings about them by either recording a response rate in excess of fifty percent in Part I or by recording a response rate of twenty or greater in Part II, but not a combination of the two. Even though, according to the above criteria for a "match" these items are not as focal as others, they still deserve serious consideration in terms of developing recommendations for environmental change.

ENVIRONMENTAL REDESIGN

One of the major objectives of ecosystem methodology is to make intentional environmental improvements within a reasonably short time period (usually one academic year). As such, some of the redesign activity must begin immediately. However, some recommended environmental changes require more time and/or money, and therefore must be scheduled into medium or long range planning.

After the Part I data was scored and analyzed at the beginning of the second semester, some very clear problems emerged. Two of these problem areas included the lack of adequate laundry facilities and the noise level in residence halls. Because the Part II data analysis required almost two months to complete (i.e., having to train raters before data could be scored and analyzed) the chairperson of the planning team, with the concurrence of the team, immediately implemented changes in these two areas. A thank you letter was sent to all residents who received the survey, thanking them for their participation, and informing them that two redesign projects were being immediately implemented (see Appendix I). These changes included the purchase and installation of more, and better, laundry facilities in each living area, and the development of "Quiet Lifestyle" floors as a housing option for residents who experienced problems with noise. This immediate response kept the momentum of the

environmental assessment moving while the Part II data was being analyzed by two teams of raters. Also, some of the preliminary results were shared with the media, who by this time had a high interest in the project. The remaining environmental redesign projects were determined through a procedure that is discussed below.

The redesign function was initiated by distributing the analysis of data from both Parts I and II of the survey to the planning team. Instructions were given to each subgroup leader that they were to analyze only those items within the environmental scales that were assigned to them during the first semester (see Appendix J). The subgroup leaders were also instructed to share the results with their respective staffs and to develop a list of recommended environmental improvements in order of priority. The combination of subgroup and staff input provided a broad base of decision-making for these recommendations.

The planning team was reconvened after the recommendations were formulated by each subgroup for the purpose of sharing results and establishing a master list in order of priority. Information was shared with the planning team by the director of Housing to help guide their decision-making efforts that included 1) goal and objective statements, 2) financial data, 3) current program improvement documents, and 4) documents regarding significant accomplishments and problem areas in residence halls.

Through a process of consensual decision-making, the following recommendations were developed in order of priority within each environmental subscale:

Physical Environment

Item #41 - There are not enough laundry facilities to meet my needs in my residence hall.

Recommendation 1 - Phase in new laundry facilities that do not require coins for operation.

Item #23 - Floor lounges in my building are furnished well enough to meet my needs.

Recommendation 2 - Provide better lighting in all of the floor lounges.
3 - Evaluate the type of furniture needed for floor lounges and phase in accordingly.

Item #48 - I would be willing to pay 50 cents per wash to increase the number of washing machines in my building.

Recommendation 4 - Charge 50 cents per wash with the new laundry machines and provide free drying.

Item #68 - Temperature control is not well regulated in my room.

Recommendation 5 - Rework temperature zone controls in order to prevent overheating.

Item # 6 - There are satisfactory recreational facilities within my residence hall.

Recommendation 6 - Expand game room hours (selected times of day and night)
7 - Provide more recreation equipment.
8 - Develop an exercise room in the Clinton Street residence halls.

Item #59 - I am able to find space in my building to be alone when I want to be.

Recommendation 9 - Develop small private rooms with key check-out from the main desk or stores.

Item #29 - The floor I live on is not generally kept clean and neat by the custodians.

Recommendation None

Regulatory Environment

Item #56 - As a rule, appropriate levels of quiet are maintained on my floor such that I can study and/or sleep without interruption.

Recommendation 10 - Develop quiet lifestyle housing option as a contract provision.

Item #76 - I would support more strict enforcement of quiet hours on my floor.

Recommendation 11 - Provide more strict and consistent enforcement of quiet hours.

Item #80 - Student rooms should not be used for parties because of their potential for disruption.

Recommendation 12 - Do not change current policy - allow parties.
 13 - Emphasize responsibility for guests.
 14 - Develop more recreation space for smaller size groups.
 15 - Provide better advertisement of available recreation space.

Item #36 - I do not support the alcohol policy in residence halls.

Recommendation 16 - Clarify the language in the existing alcohol policy.
 17 - Open up more designated areas where alcohol can be consumed.

Item #24 - My resident assistant (RA) consistently enforces rules and regulations on my floor.

Recommendation 18 - Place greater emphasis on enforcement of rules and regulations during RA training.

Item #87 - Bicycles should be prohibited in student rooms.

Recommendation 19 - Leave as is.

Programming Environment

Item #13 - I would be willing to pay an additional \$2.00 per semester for additional programs in my building, such as movies, field trips, entertainment, etc.

Recommendation 20 - Charge an additional mandatory fee of \$2.00 per semester to go to the building associations for floor and building programming.

Security Environment

Item #38 - I would support locking the outside entrances to my building at night, even if it necessitates meeting my visitors at the front door.

Recommendation 21 - Set up a night watch station at a designated entrance to limit admission to building residents and their guests.

(or)

Recore the front doors to each building such that student room keys must be used for entrance at night.

Item #45 - I would support having my floor locked at night with only floor residents having keys.

Recommendation 22 - Develop a contract housing option where selected corridors are locked at night and floor residents are issued keys.

Food Environment

Item #72 - Food waste occurs in the dining rooms because students do not watch how much food they take.

Recommendation 23 - Develop a food waste program that will demonstrate cost saving to students as well as emphasizing good eating habits.

Item #53 - In order to keep board rate increases at a minimum, I would be willing to give up unlimited servings of some food items (i.e., lunch entrees and desserts).

Recommendation 24 - Limit some dessert items rather than entrees.

Item #50 - My overall impression of Food Service is favorable.

Recommendation 25 - Have the manager from each food service complex develop newsletters to increase communications with residents.

Item #10 - There is a satisfactory selection of entrees at each meal.

Recommendation 26 - Inform residents about menu rotation, new products, standards, policies and evaluation of satisfaction levels.

Item #16 - The present serving hours for meals are satisfactory.

Recommendation 27 - Conduct a review of current serving hours with implications for modification, especially breakfast hours.

Item #66 - I would like to have more meatless entrees offered at lunch and dinner.

Recommendation 28 - Leave as is. Provide more information through the food service newsletters about salad bars, meatless entrees, and menu rotation.

Item #46 - I would be willing to pay more for larger entree portions at dinner.

Recommendation 29 - Leave as is.

Intellectual/Academic Environment

Item #78 - In my residence hall there are adequate facilities in which to study other than my room.

Recommendation 30 - Provide better lighting in the floor lounges.

31 - Install study carrels in the floor lounges.

32 - Develop a brochure on the educational aspects of residence halls including information about study areas in each of the buildings.

Interpersonal Relations and Responsibility Environment

Item #40 - Some people living here deliberately damage or deface the building.

Recommendation 33 - Include a \$50.00 refundable damage deposit as a part of the residence hall contract.

Item #54 - Residents should share equally the cost for vandalism that occurs on their floor.

Recommendation 34 - Include a \$50.00 refundable damage deposit as a part of the residence hall contract.

Item #67 - Residents who are found guilty of pulling false fire alarms should be dismissed from the residence halls.

Recommendation 35 - Suspend offenders.

36 - Develop an educational program emphasizing the seriousness of false alarms.

Item #60 - In order to decrease the incidence of vandalism to vending machines we should stop vending service after midnight.

Recommendation 37 - Do not stop vending service after midnight. However, vending machines that take constant abuse should be considered for removal.

38 - Post information about how and where to get refunds on each vending machine. Also, state that the revenue from the vending machines go to offset the costs for students who live in residence halls.

Item #73 - I feel that noise in the hallway is more of a problem than noise from neighboring rooms.

Recommendation 39 - Set up a night watch station at a designated entrance to limit admission to building residents and their guests.

(or)

Recore the front doors to each building such that student room keys must be used for entrance at night.

Item #17 - Individuals must compromise when living in a group situation.

Recommendation 40 - Develop educational programs, and staff training programs on the implications of group living.

Item #34 - If I saw someone pulling a false fire alarm, I would be willing to report him/her to the residence hall staff.

Recommendation 41 - Develop a system of notification regarding what happens to offenders, coupled with more strict enforcement.

From the above list, recommendation numbers one, two, three, four, ten, sixteen, twenty-five, twenty-seven and thirty-one were implemented immediately. The remaining recommendations were incorporated into the departmental Management by Objective Program for staged implementation beginning summer session 1980. The results of this study were also shared with the media in order to maximize the visibility of the process and the results for those who participated in the study, as well as for those who may be impacted by resultant environmental changes.

The next chapter will provide a summary of findings, discussion of results, recommendations for future research, and a critique of this study, utilizing the ecosystem model.

CHAPTER FIVE
SUMMARY, FINDINGS,
CONCLUSIONS AND IMPLICATIONS

SUMMARY

The Need

There are environmental conditions in residence halls which cause stress for students. A Western Interstate Commission for Higher Education publication entitled "Quality of Educational Life, Priorities for Today" (WICHE, 1973) warns: "There are numerable mismatches between campus environments and structural organization and needs and desires of campus members".¹⁸⁹ In order to enhance the quality of life in residence halls, the environment must be designed in such a way that unproductive stress is minimized. By matching student needs and desires with environments, matches would replace mismatches. Thus, the residence hall environment would become more congruent with its inhabitants, and subsequently, casualties would decrease.

Traditionally, residence halls administrators have responded to students who were not adjusting to their residence hall environment by easing them out through disciplinary channels or by referring them to advisors who

would aid them in making an adjustment. Relatively little attention has been given to the systematic adjustment of residence halls environments to the needs of residents. In short, students were adjusted, but rarely were their environments.

The ecosystem method was developed in response to the need to provide a mechanism for the reciprocal accommodation between the individual and his/her environment. The emphasis of this methodology is on shaping properties of the environment. Dysfunctional features are eliminated and features that facilitate student growth and development are enhanced.

For better or for worse, residence halls administrators are stuck with many existing environments because of diminishing financial support, decreasing occupancies, and limited new construction. The problem then is to develop environmental assessment mechanisms that are sensitive to the needs of a changing student population.

This study assessed student perceptions of the residence halls environment, determined why residents said they had these perceptions, determined what recommendations residents had for improving their living environment, utilized student input making environmental improvements and determined the effectiveness of the ecosystem model for planned interventions in residence halls.

The Study

The target population for the study was students (approximately 5,500) who lived in residence halls at The University of Iowa during the 1979-80 academic year. A ten percent random sample of residents was drawn by computer from the ten different residence halls on campus.

A planning team composed of residence halls students and staff, faculty and student services representatives developed The University of Iowa Residence Halls Environmental Assessment Survey (UIRHEAS) to operationalize the study. The UIRHEAS is a two-part instrument. Part I contains ninety-two items arranged on a five-point Likert Scale ranging from "strongly agree" to "strongly disagree". Each item belongs within one of seven environmental subscales that included Physical, Regulatory, Programming, Security, Food, Intellectual/Academic and Interpersonal Relations and Responsibility.

In Part II of the survey residents were asked to identify five items from Part I that were significant from their experiences. Respondents were also asked to explain why they had certain perceptions and what they recommended to improve the situation. Part II responses are called environmental referents (ERs) because they refer either quantitatively or qualitatively to items in Part I.

The surveys were personally delivered to each student by their respective RAs. A self-addressed envelope

was enclosed so that each survey could be placed in the campus mail upon completion. Seventy percent of the sample population responded to the survey.

The Statistical Package for the Social Sciences (SPSS) was utilized to compute frequency distributions for Part I data. ERs from Part II of the survey were analyzed by a team of raters.

Background and Related Work

The review of literature showed little research in terms of fitting environments to student needs and interests. Much of the research focused on the individual in an attempt to adjust him/her to the environment. As a result, the causes of student dysfunction were perceived to come from within.

There is now growing interest within postsecondary education in the ecosystem approach that identifies adjustments institutions can make to facilitate student growth and development.¹⁹⁰ A few colleges and universities have conducted macro-level studies where attempts were made to improve the fit between students and the campus environment.

Schuh has been notably successful with four micro-level studies that he conducted in residence halls, two at Arizona State University (1976 and 1977) and two at Indiana University (1978 and 1979).

FINDINGS AND CONCLUSIONS

Effectiveness of the Model

In order to determine the effectiveness of the model, one must ask the question, how well were the purposes of the study achieved, and did the end-products (data generated from the study) significantly contribute to the development of recommendations by the planning team? A review of the seven stages of the model reveals that most desired outcomes were achieved and that the research questions posed in the first chapter were answered.

Beginning at Stage I, obtaining sanction for this study was accomplished both in terms of support from within the department of Residence Services as well as from the highest authority within the Student Services division - the vice president for Student Services. These two factors greatly facilitated the commitment time and resources (monetary as well as people) that were essential to the success of the study. Most significant, however, was the fact that the chairperson of the planning team was also the director of Residence Services.

Selecting a planning team in Stage II was complicated by the large amount of interest that was expressed by various individuals within the residence hall community. The chairperson of the planning team selected members from each functional area of the system, however many felt left out. This problem had the potential for jeopardizing the

integrity of this study had it not been for the time that was given to resolve these concerns. Future applications of the model should give careful attention to this problem. Individuals who are excluded from participation could represent a substantial barrier to the success of a study. Nevertheless, this hurdle was successfully overcome without diminishing the broad base of support for the study.

Stage III proved to be one of the most exciting parts of the study. Team members enjoyed the brainstorming sessions both in the subgroups and with the team as a whole. Since individuals were not challenged on their ideas, a large list of concern areas were identified. The various representatives on the planning team frequently polled their constituencies which contributed both to the size and the quality of the problem area pool. Many of the perennial problems such as quality of food service and noise were frequently identified; however, some areas, such as not being able to find a place to be alone or the sense of pride and identification with their floors, were significant discoveries. After the problem areas were grouped into categories (environmental subscales) and arranged in order of priority, seven areas with the highest priority were selected for study. The most difficult part of selecting what to assess was determining which areas to cut out.

In Stage IV the efforts of the planning team to develop the identified problem areas into a research

instrument required more direction from the chairperson and the research consultant from the Examination and Evaluation Services. Particularly painstaking were the efforts to group individual items within environmental subscales, as well as the actual language used for writing the items. However, team members quickly learned how to write items that were clear, concise and not leading. The format used for the instrument was developed after several examples of survey instruments were reviewed by the team. It was decided that a five-point Likert Scale would be more acceptable to residents than other rating scales, especially considering the length of the UIRHEAS. Final modification of the instrument was made after it was pilot tested by the RAs. The length of time that it took to validate the survey during the fall semester necessitated distributing it to residents the week before final exams.

The distribution and collection of the instrument in Stage V was greatly facilitated by the level of support and attention given to this area. The instrument could not have been administered at a worse time, other than during finals week. Recognizing this problem, an elaborate mechanism of letter writing, staff hand-delivery of the instrument, media coverage of the study and follow-up efforts all combined to facilitate a seventy percent response rate to the survey. This distribution and collection mechanism speaks well for its effectiveness considering the length of the survey and the fact that it was

administered the week before final exams. Although it would be difficult to predict, it is this researcher's opinion that a higher response could have been obtained if the instrument had been distributed a week earlier. It is also important to note that the response rate may have been further restricted because of the length of the survey; additionally, students were asked to go back and choose five items that were significant to their experiences, and to indicate why and what they recommended to improve the situation. It is also this researcher's opinion that the relevance of the instrument contributed significantly to the response rate.

In Stage VI the data in Part I were scored and analyzed by computer, utilizing the Statistical Package for the Social Sciences. Questions about how residents perceive the residence halls environments were answered by an analysis of frequency counts and percentage scores to items within each environmental subscale. Part I data provided a "quantitative" analysis of how residents perceived the environment, however Part II of the survey provided a "qualitative" descriptive analysis of why residents said they had their perceptions and what they recommended to improve the situation through the use of environmental referents. It is through the blend of these quantitative and qualitative measures that one does not lose sight of the whole problem. This frequently occurs in research where dependent and independent variables are refined to a

point that, once causal relationships are established, it is difficult to generalize the results to broader problem situations. As such, the data is often useless. Gibbs (1979) asserts that "empirical researchers have become so enamored of laboratory precision that they have lost their sense of the human problem, that generalizations to the authentic significance of the person in the real environment has been sacrificed to the quest for certainty in our knowledge".¹⁹¹ The data derived from both parts of the survey answered the first three questions posed in Chapter One and they also provided the foundation upon which decisions were made regarding the fourth research question.

Stage VII is incomplete in that all environmental redesign efforts supported by this study required six to twelve months to implement. However, some recommendations from the planning team were implemented immediately. Those recommendations that required more time to implement were incorporated into the departmental Management by Objective (MBO) program. This action assured that, even though there were delays in the redesign process, the recommendations were assigned to specific individuals to be accomplished within a given time frame. An evaluation of the environmental redesign efforts is scheduled for the next year (1980-81) when the study is replicated. This year's results will serve as the basis for comparative analysis.

The final research question posed in this study (i.e., is the ecosystem methodology an effective means of making environmental improvements in residence halls) cannot be completely answered until the results have been evaluated next year. However, the outcomes from the seven stages of the model discussed above clearly demonstrate that the purposes of the study were accomplished. Also, the following observations provided by members of the planning team, in response to a critique of the model, help to answer the above question:

Strengths of the Study

1. diversity of the planning team
2. team decision-making process
3. explored a broad range of issues
4. the study provided an accurate assessment of what the majority of residents feel about the residence halls
5. ERs allow students to answer more directly in their own language
6. the model produces very good usable data
7. inexpensive
8. action oriented process
9. the results had integrity - could stand on their own
10. the model is a good tool for future planning

Weaknesses of the Study

1. length of time to develop the instrument
2. length of survey
3. number of meetings
4. selection process for team members
5. assistance required for data analysis

Overall Assessment

1. excellent - I am proud to be a part of this study
2. the results were encouraging
3. exciting and productive
4. pleased that changes can be made so quickly
5. the study did what it set out to do
6. terrific the way the whole thing worked out
7. wonderful experience
8. repeat the study in the future

From the above observations one can conclude that the ecosystem model, as modified for this study, is an effective means of assessing student perceptions of the residence hall environment, and that these perceptions could be used to develop recommendations for specific environmental changes.

IMPLICATIONS

Implications of the study

The ecological perspective is based on the belief that a transactional relationship exists between the person and his/her environment. A basic tenant of this belief is that the environment has an effect on people and their behavior and that people also have an effect on their environment. This perspective also presumes that people respond differently in different types of environments, and that an optimum fit between people and their environment can be intentionally planned.

The technology utilized in the study is but a beginning to "map" student environments in residence halls which can lead to their intentional growth and development. The profound impact of residence halls on students was discussed thoroughly in Chapter One. Given that the residence experience does have a significant impact the implications of this study take on even greater

meaning in terms of developing technology that facilitates the assessment of student living environments and the transactional relationship that exists between them.

The study also has broad implications for the profession of student affairs. The application of the ecosystem model had its beginning on the college campus. The model was developed out of a need to mitigate incongruencies between students and their college environment. It is presumed that minimizing these differences will greatly facilitate the adjustment of the student to his/her campus by reducing stress and strain due to lack of congruence. Student affairs administrators must manage their existing campus environments. Current trends in higher education and in the economy strongly suggest that the immediate future requires the reshaping of these environments to meet the needs of a changing study body. Hurst and Ragel (1980) have declared the ecosystem approach to be the "new frontier" of the student affairs profession.¹⁹² However, the conceptualization of ecosystem methodology far exceeds the technology and meaningful research in this area.

Apart from other ecosystem studies, this study emphasized 1) person x environment theory, 2) different assessment approaches to the residence halls environments, 3) a review of ecosystem studies from the past five years, and 4) the integration of the quantitative analysis of data from Part I of the survey and the qualitative-

descriptive analysis of environmental referents from Part II. The latter emphasis was developed by the use of dual criteria for ER analysis - fifty percent or more response rate from Part I coupled with an ER response rate of twenty or more. Although these criteria are somewhat arbitrary, they do represent one of the few attempts to integrate the analysis of data from both parts of the survey.

Implications for future research

While it may be presumed that behavior is a function of the person and his/her environment, and that positive behaviors are encouraged when incongruencies between the individual and his/her environment are diminished, one cannot generalize that these assumptions are always valid. However, Moos and Insel (1974) assert that future research in this area must be guided by the assumption that:

Human behavior cannot be understood apart from the environment in which it finds its expression. The implications of this frequently stated assumption have rarely been rigorously pursued. Accurate predictions about behavior simply cannot be made only from information about the individual; information about the environment is essential . . . Physical and social environments must be studied together since neither can be fully understood without the other.¹⁹³

Some individuals actually prosper in environments that are presumed to be incongruent. As such, further research into the nature of the individual, the environment and their transactional relationships are needed before fully developed, data-based theories are possible. Until such

time, most assessment-intervention efforts such as this study will seldom follow any one theoretical model. But, they will probably build on an eclectic approach - borrowing parts of theories, models, common sense, methodologies, known assessment instruments and politics. Research is also needed to discover whether environmental design really does prevent human dysfunction from occurring.

Compared to research into the nature of the individual, little research has been conducted regarding the nature of the environment and its shaping properties on individual behavior. What little is known about the influence of the environment on behavior is so general in nature that it cannot be meaningfully translated into specific strategies for a specific problem. Too many assumptions must be made about the influence of the environment on behavior for researchers to make any claim to valid preventive interventions. Research utilizing the ecosystem methodology should contribute significantly to the development of theories and technologies for redesigning campus environments. However, Blocher (1974) warns us that "we can no longer afford our academic tribalism, with its almost mystical commitment to theories that claim much and prove little".¹⁹⁴

Most environmental assessment instruments provide data that describe certain environments, but they do not provide data that is sufficient to redesign them. There

is a need for research into the development of new instruments that go beyond individual perceptions. As in this study, more efforts are needed to integrate data regarding why individuals have certain perceptions about different environments, and what they recommend to improve them. Until the technology is developed to validate the connection between individual perceptions and redesign efforts, environmental redesign cannot be made with certainty.

Future research of this kind must be streamlined so that studies can be completed within a limited time frame (preferably four to six months). Efforts in this direction will require 1) reducing the number of meetings of the planning team, 2) increasing the expertise of the planning team, 3) the development of model assessment instruments that are easily adaptable to different situations, 4) more effective statistical measures, especially for ER analysis, 5) more efficient methods for validating survey items and environmental subscales, and 6) broader participation from the planning team in terms of data analysis.

From a student development perspective, future research in this area should emphasize the development of methodologies that will enable students themselves to assess subenvironments. Students will then be better equipped to reduce dysfunctional conflict caused by incongruencies between them and their environments.

Limitations of the Model

Many strengths have been identified regarding the use of the ecosystem model for environmental design. However, there are some significant limitations that have not been resolved, that should not go unnoticed.

There are no complete theories of person x environment interaction used to provide direction for the research, implementation and intervention efforts. Most ecosystem studies that purport a theoretical foundation actually refer to a number of partial theories and common sense methodologies for direction.

Another limitation of the model is the amount of time required to carry out a valid evaluation of a program. A significant amount of time is required to develop a survey instrument and its subsequent implementation. In addition, the instrument generates an enormity of data that is both complex and time-consuming to analyze. This is particularly true for the analysis of environmental referents. Another problem arises because of the time it takes to analyze the data and feed it back to those responsible for developing recommendations and subsequent interventions. Also, conditions in the environment could change during the course of the study, therefore it is imperative that the time frame for future applications is

significantly reduced. Schuh (1980) at Indiana University, for example, has conducted two successful studies that required only four months to complete.¹⁹⁵

The ecosystem model identifies different stages for the conduct of a study but it does not specify methodological guidelines. There is a great need at every stage of the model for further elaboration. Specifically, no guidance is provided for the selection of planning team members, how to assess the environment (real or perceived), and the distribution and collection of survey instruments. Most importantly, however, is the need to develop more sophisticated methodologies for validation. This is particularly important at the stage where an attempt is made to integrate the different types of data, as well as when one attempts to develop recommendations for environmental redesign based on the data.

Generalizations to other settings are limited because of the "tailoring to specifics" within a given environment. Much information can be derived about a given setting, but generalizations should not be made beyond the subject population.

Another limitation of the model that requires serious attention is that there are some conflicting studies that question whether changing environments actually prevent human dysfunction.

Finally, the model is limited because it does not make provisions for how environmental changes should be implemented, nor does it provide specific measures for reassessment.

CONCLUDING STATEMENT

Like the Nations of medieval universities, citizenship is still the key to effective living in residence halls. Feedback from a responsible citizenry through ecosystem methodology can aid not only in securing the occupancy of residence hall programs into the future, it can also facilitate student growth and development through the living-learning experience. The Nations lost their power to the university because of their inability to provide continuity and security. It is now the responsibility of the housing professional to provide sensitive environmental assessment mechanisms that share decision-making power and, jointly with students, provide for their development by maximizing the educational potential of their living environments. As one student responded in this study, "Residence hall living is far more educational than any class, or many classes put together - especially for freshmen. The fusing of diverse ideas and experiences is unparalleled, possibly more than in any other situation".¹⁹⁶ The above statement, recorded from the results of this study, serves to motivate future research utilizing the ecosystem method.

Footnotes

Chapter Five

FOOTNOTES

CHAPTER FIVE

189. Corazzini and Wilson, pp. 68-72.
190. Aulepp and Delworth, p. vii.
191. John Gibbs, "The Meaning of Ecologically Oriented Inquiry in Contemporary Psychology," American Psychologist, 34 (1979), p. 127.
192. Paul and Morrill, in press.
193. Insel and Moos, Issues in Social Ecology, p. ix.
194. D. H. Blocher, Developmental Counseling, 2nd ed. (New York: Ronald Press, 1974).
195. Schuh, in press.
196. This quote was recorded from a student who responded to an environmental referent from Part II of the UIRHEAS.

Appendix A

The University of Iowa
Residence Halls Environmental
Assessment Survey

ENVIRONMENTAL ASSESSMENT SURVEY
Department of Residence Services, University of Iowa, 1979

Please complete the following items by circling the appropriate number:

1. In which residence hall do you live?

- | | | |
|-------------|---------------|-----------------------|
| (1) Burge | (5) Hillcrest | (9) Quadrangle |
| (2) Deam | (6) Pienow | (9) Westlawn |
| (3) Currier | (7) Slater | (10) South Quadrangle |
| (4) Stanley | | |

2. What is your current class standing?

- | | | |
|---------------|------------|--------------|
| (1) Freshman | (3) Junior | (5) Graduate |
| (2) Sophomore | (4) Senior | (6) Other |

3. What is your sex?

- (1) Male (2) Female

4. Of what ethnic group would you consider yourself a member?

- | | | |
|-------------------|-------------------------|-----------|
| (1) Caucasian | (3) Hispanic Background | (5) Other |
| (2) Afro-American | (4) Native American | |

5. How many semesters have you lived in a residence hall, including fall, 1979?

- | | | |
|---------|-----------|-----------------|
| (1) One | (3) Three | (5) Five |
| (2) Two | (4) Four | (6) Six or more |

Part II:

Instructions:

For each of the items listed below, circle the number which most closely represents how you feel, based on your experiences living in residence halls.

Please read each item carefully and decide if you strongly agree (5), agree (4), neutral (3), disagree (2), or strongly disagree (1). If the item does not apply to your experience, circle the number 0.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Does Not Apply
1. I feel that I have sufficient opportunity to make my room attractive and comfortable	5	4	3	2	1	0
2. I am familiar with the contents of the student Guidebook to the University of Iowa Residence Halls	5	4	3	2	1	0
3. My Building Association allocates its programming funds effectively	5	4	3	2	1	0
4. I feel safe in my residence hall	5	4	3	2	1	0
5. My overall impression of the Food Service is favorable	5	4	3	2	1	0
6. There are satisfactory recreational facilities within my residence hall	5	4	3	2	1	0
7. I am familiar with the contents of the student Policy Handbook for the University of Iowa Residence Halls	5	4	3	2	1	0
8. I would like to see more cultural programs in my building, such as concerts, plays, talent shows, and so forth	5	4	3	2	1	0
9. If I were robbed in my residence hall, I would report it to my Resident Assistant (RA)	5	4	3	2	1	0
10. There is a satisfactory selection of entrees at each meal	5	4	3	2	1	0

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Does Not Apply
11. There are adequate outdoor recreational facilities in my living area	5	4	3	2	1	0
12. I am aware of the published Standards Of Behavior that are expected of all residence hall students	5	4	3	2	1	0
13. I would be willing to pay an additional \$2.00 per semester for additional programs in my building, such as movies, field trips, entertainment, etc.	5	4	3	2	1	0
14. Residence hall living is an important means of introducing me to an intellectual climate	5	4	3	2	1	0
15. Residence hall living should be an important means of introducing me to an intellectual climate	5	4	3	2	1	0
16. The present serving hours for meals are satisfactory	5	4	3	2	1	0
17. Individuals must compromise when living in a group situation	5	4	3	2	1	0
18. My room is not adequately furnished by Residence Services to meet my housing needs	5	4	3	2	1	0
19. The discipline system in residence halls has been an effective means of handling student misconduct	5	4	3	2	1	0
20. There is little attempt made in my residence hall to arrange social events by my Building Association	5	4	3	2	1	0
21. The Food Service employees are not courteous when I go through the line	5	4	3	2	1	0
22. Students living in this residence hall do not respect the property of others	5	4	3	2	1	0
23. Floor lounges in my building are furnished well enough to meet my needs	5	4	3	2	1	0
24. My Resident Assistant (RA) consistently enforces rules and regulations on my floor	5	4	3	2	1	0
25. I would participate in an alcohol education program in my residence hall	5	4	3	2	1	0
26. I feel comfortable pursuing the intellectual and cultural activities available in my residence hall	5	4	3	2	1	0
27. There is an adequate selection of salads at lunch and dinner	5	4	3	2	1	0
28. A person who is not concerned about other students will not be welcomed on my floor	5	4	3	2	1	0
29. The floor I live on is not generally kept clean and neat by the custodians	5	4	3	2	1	0
30. The students on my floor generally help to keep it clean and neat	5	4	3	2	1	0
31. I know what the alcohol policy is in residence halls	5	4	3	2	1	0
32. Discussions about important topics are a frequent occurrence on my floor	5	4	3	2	1	0
33. The atmosphere in the dining rooms is not comfortable	5	4	3	2	1	0
34. If I saw someone pulling a false fire alarm I would be willing to report him/her to the residence hall staff	5	4	3	2	1	0

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Does Not Apply
35. The building I live in is generally kept clean and neat (include all areas of the building - lounges, shower rooms, recreation space, etc.)	5	4	3	2	1	0
36. I do <u>not</u> support the alcohol policy in residence halls	5	4	3	2	1	0
37. As a student in residence halls, I am a member of the academic community	5	4	3	2	1	0
38. I would support locking the outside entrances to my building at night, even if it necessitates meeting my visitors at the front door	5	4	3	2	1	0
39. There is an adequate selection of desserts at lunch and dinner	5	4	3	2	1	0
40. Some people living here deliberately damage or deface the building	5	4	3	2	1	0
41. There are not enough laundry facilities to meet my needs in my residence hall	5	4	3	2	1	0
42. I abide by the current alcohol policy	5	4	3	2	1	0
43. The spirit on my floor encourages me to become involved with building and campus activities	5	4	3	2	1	0
44. Having faculty members visit my residence hall for informal presentations or social events is valuable to me	5	4	3	2	1	0
45. I would support having my floor locked at night with only floor residents having keys	5	4	3	2	1	0
46. I would be willing to pay more for larger entree portions at dinner	5	4	3	2	1	0
47. Students living in my residence hall act as if they have not learned about respecting other people's property	5	4	3	2	1	0
48. I would be willing to pay 50 cents per wash to increase the number of washing machines in my building	5	4	3	2	1	0
49. I feel that the current policy regulating the use of drugs in residence halls is satisfactory	5	4	3	2	1	0
50. The residence halls staff does a good job of helping new students feel at home	5	4	3	2	1	0
51. Cultural and educational programs offered in residence halls are an integral part of my residence hall experience	5	4	3	2	1	0
52. The environment in my residence hall encourages students to commit anti-social acts	5	4	3	2	1	0
53. In order to keep board rate increases at a minimum I would be willing to give up unlimited servings of some food items (i.e. lunch entrees and desserts)	5	4	3	2	1	0
54. Residents should share equally the cost for vandalism that occurs on their floor	5	4	3	2	1	0
55. I have received a prompt response to my request(s) for room repairs	5	4	3	2	1	0
56. As a rule, appropriate levels of quiet are maintained on my floor such that I can study and/or sleep without interruption	5	4	3	2	1	0

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Does Not Apply
57.	New students are not helped to become aware of the services and programs available to them through the residence halls . . .	5	4	3	2	1	0
58.	Living in residence halls stimulates my intellectual curiosity	5	4	3	2	1	0
59.	I am able to find space in my building to be alone when I want to be	5	4	3	2	1	0
60.	In order to decrease the incidence of vandalism to vending machines we should stop vending service after midnight	5	4	3	2	1	0
61.	Residents should be charged a refundable damage deposit in order to keep the cost of the room contract down	5	4	3	2	1	0
62.	There are enough bicycle parking racks near my building	5	4	3	2	1	0
63.	I am aware that all window screens are to remain in place at all times	5	4	3	2	1	0
64.	My social/recreational needs are satisfied by programs and activities in the residence halls	5	4	3	2	1	0
65.	I am able to study satisfactorily in my room	5	4	3	2	1	0
66.	I would like to have more meatless entrees offered at lunch and dinner	5	4	3	2	1	0
67.	Residents who are found guilty of pulling false fire alarms should be dismissed from the Residence Halls	5	4	3	2	1	0
68.	Temperature control is <u>not</u> well regulated in my room	5	4	3	2	1	0
69.	Residents who remove screens from their room windows should not be subject to disciplinary action	5	4	3	2	1	0
70.	I do not participate in social/recreational programs and activities in residence halls	5	4	3	2	1	0
71.	If I had to decide between studying in the library and studying in my residence hall, I would choose the residence hall	5	4	3	2	1	0
72.	Food waste occurs in the dining rooms because students do <u>not</u> watch how much food they take	5	4	3	2	1	0
73.	I feel that noise in the hallway is more of a problem than noise from neighboring rooms	5	4	3	2	1	0
74.	The two cubic-foot refrigerators that are rented to students by Residence Services are adequate for my needs	5	4	3	2	1	0
75.	I would be willing to pay a higher rental rate to get a four to five cubic-foot refrigerator	5	4	3	2	1	0
76.	I would support a more strict enforcement of quiet hours on my floor	5	4	3	2	1	0
77.	I would be willing to provide one or two hours of my time per week to help organize social programs and activities in my building	5	4	3	2	1	0
78.	In my residence hall there are adequate facilities in which to study, other than my room	5	4	3	2	1	0
79.	I feel that it is part of my responsibility as a resident of the building to ask students to be quiet if they are bothering me	5	4	3	2	1	0

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Does Not Apply
80.	Student rooms should not be used for parties because of their potential for disruption	5	4	3	2	1	0
81.	I feel that there is a need for alcohol education programs in residence halls	5	4	3	2	1	0
82.	I feel that I contribute my fair share to the noise that exists in my residence hall	5	4	3	2	1	0
83.	If asked to quiet down, I do	5	4	3	2	1	0
84.	I have had difficulty finding storage space for my personal belongings outside of my room	5	4	3	2	1	0
85.	The atmosphere in my residence hall is one of disorder	5	4	3	2	1	0
86.	I feel a sense of responsibility for what goes on in my residence hall	5	4	3	2	1	0
87.	Bicycles should be prohibited in student rooms	5	4	3	2	1	0
88.	I feel that I have the opportunity to provide input to modify policy in Residence Halls	5	4	3	2	1	0
89.	I feel a strong sense of identity with the residents on my floor	5	4	3	2	1	0
90.	I would be willing to spend one or two hours a week working to assist in development of Residence Hall policies	5	4	3	2	1	0
91.	For the most part, I have found it easy to adjust to group living on my floor	5	4	3	2	1	0
92.	My experience of living with a large group of people was not what I expected	5	4	3	2	1	0

Part II:

Instructions:

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In Part I you were asked to respond to items concerning your experience living in residence halls. In this section more detailed information is needed about certain items. Please respond to the following instructions:

1. Go back and review the items you answered in part I and IDENTIFY FIVE (5) ITEMS you feel very strongly about, in either a positive or negative sense.
2. Write the numbers of those items in Step 1.
3. Write your rating of the items in Step 2 (i.e. 5, 4, 3, 2, or 1).
4. Next to each item, write in the appropriate space why you feel strongly about the item in Step 3, and what you would recommend to improve or strengthen the situation in Step 4. PLEASE BE AS SPECIFIC AS POSSIBLE.

Sample Item:

25. There are enough bicycle racks near my building.

Step 1	Step 2	Step 3	Step 4
Item #	Your Rating	<u>Why</u> do you feel strongly about this item?	What do you recommend to improve or strengthen it?
25	1	I can't find a place to park my bicycle	Provide more bicycle racks

Part III:

Instructions:

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Part A: Please identify not more than three (3) items or areas concerning residence hall life that are of great importance to you which are not covered in this survey. In the space next to these items please give your recommendations on how to improve them.

Item or Area	Your Recommendation

Part B: If you plan to return to the University of Iowa next year please answer by placing an X next to the appropriate item.

- ☐ I plan to live in residence halls.
☐ I plan to live in a fraternity or sorority.
☐ I plan to live off campus.

Part C: If you plan to continue living in residence halls at the University of Iowa next year, please list your reasons why.

1. _____
2. _____
3. _____
4. _____

If you plan to live off campus next year, please list your reasons for this decision.

1. _____
2. _____
3. _____
4. _____

END OF SURVEY -- THANK YOU

Appendix B

Thirty-six Problem Areas - Original List

THIRTY-SIX PROBLEM AREAS
ORIGINAL LIST

1. Noise
2. Detripling
3. Discipline
4. Security
5. Laundry facilities
6. Housekeeping
7. Temperature control
8. Availability of student newspaper (D.I.)
9. Response rate - repairs
10. Stores - longer hours
11. Staff image - reception areas
12. Alcohol policy
13. Window policy
14. Decor modification policy
15. Furnishings - public and private areas
16. Shortage of space
17. Recreation facilities
18. Live-in staff/student ratio
19. Assignment mix
20. Vandalism
21. Building funds - programming
22. Lack of information
23. Food service - quality
24. Special interest housing/housing options
25. Contract and assignment procedures
26. Mutual respect
27. Educational/cultural/academic activities
28. Responsible student behavior
29. Greek relations
30. Energy
31. Waste
32. Drugs
33. False alarms
34. Student government
35. Privacy
36. Role of Resident Assistant

Appendix C

Forty-seven Problem Areas - Expanded List

FORTY-SEVEN PROBLEM AREAS
EXPANDED LIST

1. Noise/hall/room/quiet hours
2. Detripling
3. Discipline
4. Security
5. Laundry facilities
6. Housekeeping
7. Temperature control
8. Availability of student newspaper (D.I.)
9. Response rate - repairs
10. Stores - longer hours
11. Staff image - overall
12. Alcohol policy
13. Window policy
14. Decor modification policy
15. Furnishings - public and private areas
16. Shortage of space
17. Recreation facilities
18. Live-in staff/student ratio
19. Assignment mix
20. Vandalism
21. Building funds - programming
22. Lack of information/information sources
23. Food service - quality
24. Special interest housing/housing options
25. Contract and assignment procedures
26. Mutual respect
27. Educational/cultural/academic programs/integration
28. Responsible student behavior
29. Greek relations
30. Energy
31. Waste
32. Drugs
33. False alarms
34. Student government
35. Privacy
36. Role of Resident Assistant
37. Input into decision making
38. Personnel
39. Bureaucracy/structure/red tape
40. Bus stops
41. Parking
42. Bicycle parking
43. Signage
44. Adequate study facilities
45. Restrict access to private areas
46. Costs/programs and services
47. Orientation new students

Appendix D

Request for RA Participation in the Study

Office of Residence Services
Burge Hall

(319) 353-5210



November 28, 1979

Dear Resident Assistant:

The enclosed survey has been developed by the Residence Hall Environmental Assessment Planning Team (composed of students, staff and faculty) to gather information about how students perceive the residence hall environment (i.e., facilities, services, programs, lifestyles, etc.). This survey has been specifically designed for our use to accomplish the following objectives.

1. Assess student perceptions of their living environment.
2. Solicit recommendations for improving that environment.
3. Redesign the environment to meet student needs beginning next semester, where possible.

Before we administer the survey to residents we would like for you to fill out the complete survey and provide us with a critique on the back page. Please feel free to make any comments and/or changes regarding any of the items on the instrument. Based on your feedback we will make final modifications of the survey.

In order to keep this study within manageable limits, some important items are not included on the survey. Also, questions are not asked about things we cannot change at this time (i.e., detripling, building another residence hall, etc.).

When the instrument is completed we will select a ten percent random sample of students from each floor to respond to the survey. These students will receive a letter in advance indicating that their RA will personally deliver the survey to them in a few days. Students will also be instructed to mail the survey back to the department of Residence Services in order to keep their responses confidential.

Resident
Assistant

11-28-79

The support you provide by taking the pilot test, critiquing it, and distributing the final instrument to your residents will greatly assist the improvement of the residence hall environment.

Sincerely,

Mitchel D. Livingston
Director of Residence Services

Office of Residence Services
Burge Hall

(319) 353-5210



1847

December 28, 1979

MEMORANDUM

To: Resident Assistants

From: Mitchel D. Livingston

Re: Residence Halls Environmental Assessment Survey

Thank you very much for your enthusiastic support of the Residence Halls Environmental Assessment Project. Your efforts helped the planning team accomplish an unbelievable goal. Over seventy (70) percent of all surveys have been filled out and returned to this office. What makes this feat remarkable is that the response rate to most surveys is somewhere between thirty-five (35) and forty-five (45) percent.

It was unfortunate that the survey was not complete until we were on the threshold of finals week. Please accept my apologies for poor timing.

Nevertheless, I feel confident that I can count on you for important matters such as improving the residence hall environment.

You were wonderful. Thanks again and have a happy holiday and a joyous new year.

kst

Appendix E

Request for Student Participation in the Study

Office of Residence Services
Burge Hall

(319) 353-5210



1847

Dear Resident:

You have been selected to receive a survey regarding your perceptions of the residence hall living environment. This survey will be distributed by random selection to ten percent of all students currently living in a residence hall. Please take this opportunity to provide direct input into the decision-making process for improving the various aspects of residence halls (i.e., facilities, services, programs, lifestyles, etc.).

This survey has been designed by the Residence Hall Environmental Assessment Planning Team (composed of students, staff and faculty) to accomplish the following objectives:

1. Assess student perceptions of their living environment.
2. Solicit recommendations for improving that environment.
3. Redesign the environment to meet student needs beginning next semester, where possible.

If we are to accomplish the above objectives it is imperative that we have your personal opinions, as expressed through the survey. Since you are a part of a selective group of all residence hall students, it is even more important that you complete the survey and return it in the enclosed envelope that will be provided.

Your Resident Assistant (RA) will personally deliver the survey to you in a few days.

Thank you for your cooperation in helping to improve your residence hall living environment.

Sincerely,

Mitchel D. Livingston, Chairperson
Environmental Assessment Planning Team
Residence Halls

MDL/kst

Office of Residence Services
Burge Hall

(319) 353-5210



1847

Dear Resident:

You have been selected to receive a survey regarding your perceptions of the residence hall living environment. This survey will be distributed by random selection of Special Support students currently living in a residence hall. Please take this opportunity to provide direct input into the decision making process for improving the various aspects of residence halls (i.e., facilities, services, programs, lifestyles, etc.).

This survey has been designed by the Residence Hall Environmental Assessment Planning Team (composed of students, staff and faculty) to accomplish the following objectives:

1. Assess student perceptions of their living environment.
2. Solicit recommendations for improving that environment.
3. Redesign the environment to meet student needs beginning next semester, where possible.

If we are to accomplish the above objectives it is imperative that we have your personal opinions, as expressed through the survey. Since you are a part of a select group of all residence hall students, it is even more important that you complete the survey and return it in the enclosed envelope to Leo Fields, Associate Director of Special Support Services.

If you have any questions, please seek help from your Resident Assistant (RA) or Head Resident. They have been asked to help where problems may occur.

The survey must be returned by Friday, December 21, 1979, in order to make desired changes second semester.

Thank you for your cooperation in helping to improve your residence hall living environment.

Sincerely,

Mitchel D. Livingston
Chairperson, Environmental
Assessment Planning Team,
Residence Halls

Leo Fields
Associate Director
Special Support Services

kst

The University of Iowa

Iowa City, Iowa 52242

269

Office of Residence Services
Burge Hall

(319) 353-5210



1847

Dear Student:

Once again I would like to thank you for your willingness to fill out the enclosed survey. Your personal responses will greatly facilitate our ability to improve the residence hall environment from your perspective.

Please carefully read the instructions on the survey before responding to each item. When you complete the survey, please return it through campus mail in the enclosed envelope to the Housing Assignment Office (as indicated below*).

If you have any questions, please seek help from your Resident Assistant or Head Resident. They have been asked to help where problems may occur with the survey.

The survey must be returned by Friday, December 14, 1979, in order to begin making changes as early as next semester.

Thank you for your consideration.

Sincerely,

Mitchel D. Livingston, Chairperson
Environmental Assessment Planning Team
Residence Halls

MDL/kst

enclosure

continued

- * Residents who live in Westlawn should return their completed surveys to the Hillcrest store.

Residents who live in Burge, Currier, Hillcrest, and Quadrangle should return their completed surveys to their building store.

Residents who live in Stanley, Rienow, and Slater should return their completed surveys to the front desk of their respective buildings.

Residents who live in South Quad should return their completed surveys to the Slater front desk.

Residents who live in Daum should return their completed surveys in the campus mail slot next to the mailboxes in Daum.

Office of Residence Services
Burge Hall

(319) 353-5210



Dear Student:

A significant number of residents have already responded to the Residence Hall Environmental Assessment Survey. However, since we only surveyed a ten percent random sample of all residents, we must increase the number of responses in order to have a valid data base for making changes next semester.

If you have not responded to the survey, please take this opportunity to do so. Your perceptions are the key to improving the quality of life in residence halls.

Your Resident Assistant (RA) should be contacted if you need another copy of the survey.

Thank you for your cooperation; it is greatly appreciated, especially considering the current demands on your time.

Sincerely,

Mitchel D. Livingston, Chairperson
Environmental Assessment Planning Team
Residence Halls

MDL/kst

Appendix F

Guidelines
for ER Analysis

GUIDELINES FOR PART II ANALYSIS

After all of the items in Part II have been cut apart and placed in their respective groups, they are then ready for analysis. The following guidelines apply:

1. The first step for those who analyze ER responses is to sort each item's ER forms according to the "agree", "disagree", and "neutral" responses. This is done by looking at the student's numerical rating (i.e., 1 & 2 are disagree, 3 is neutral and 4 & 5 are agree) of each item.
2. Next, take all the "agree" responses and read the respondents' "why" comments several times until it is possible to group similar "why" comments into a few categories. In some instances, a single response may have to constitute a category, but the fewer the categories, the better.
3. Then, develop a heading or name for each of the categories and briefly describe it if necessary.
4. Tally the number of "why" comments in each category.
5. Finally, record information on "agree/why" on the Environmental Referent Content Analysis Sheet.
6. Once the "agree/why" comments have been categorized, tallied, and recorded, the "what" comments for all items are read, categorized, tallied, and recorded on the Environmental Referent Content Analysis Sheet (it is not necessary to categorize "what" responses for each "why" response).
7. When it is impossible to group a comment, it should be listed as a category.
8. The same process of reading, grouping, categorizing, tallying, and recording comments is applied to the "disagree" and "neutral" responses on the item.
9. Having read some items, it may be clear that they have been rated improperly. Therefore, if you come across an "agree" response that is clearly a "disagree", this item should be placed in the "disagree" category.
10. If you experience difficulty categorizing a "why" item, you should read the "what" response to gain more information for your decision. The same applies for "what" responses.

11. Write down the "gems" that seem to say it all.
12. Items should be counted separately that have more than one "why" or one "what" response.

Appendix G

Tabular Data on Overall Results

TABLE 20
 TABULAR DATA
 ON OVERALL RESULTS
 Physical Environment

Category	Frequency	Percent
ITEM #1 - Room Attractive and Comfortable		
Does Not Apply	1	0.3
Strongly Disagree	4	1.0
Disagree	25	6.5
Neutral	34	8.9
Agree	213	55.5
Strongly Agree	107	27.9
Total	384	100.0
ITEM #6 - Satisfactory Re- creational Facilities		
Does Not Apply	11	2.9
Strongly Disagree	68	17.7
Disagree	111	28.9
Neutral	74	19.3
Agree	95	24.7
Strongly Agree	25	6.5
Total	384	100.0
ITEM #11 - Adequate Outdoor Recreation		
Does Not Apply	5	1.3
Strongly Disagree	23	6.0
Disagree	80	20.8
Neutral	67	17.4
Agree	160	41.7
Strongly Agree	49	12.8
Total	384	100.0
ITEM #18 - Room Not Ade- quately Furnished		
Does Not Apply	-	--
Strongly Disagree	61	15.9
Disagree	194	50.5
Neutral	56	14.6
Agree	57	14.8
Strongly Agree	16	4.2
Total	384	100.0

Table 20 (cont'd)

Category	Frequency	Percent
ITEM #23 - Floor Lounges Well Furnished		
Does Not Apply	19	4.9
Strongly Disagree	52	13.5
Disagree	86	22.4
Neutral	34	8.9
Agree	156	40.6
Strongly Agree	37	9.6
Total	<u>384</u>	<u>100.0</u>
ITEM #29 - Floor Not Clean and Neat by Custodians		
Does Not Apply	1	0.3
Strongly Disagree	185	48.2
Disagree	159	41.4
Neutral	16	4.2
Agree	14	3.6
Strongly Agree	9	2.3
Total	<u>384</u>	<u>100.0</u>
ITEM #35 - Building Kept Clean and Neat		
Does Not Apply	2	0.5
Strongly Disagree	14	3.6
Disagree	41	10.7
Neutral	56	14.6
Agree	204	53.1
Strongly Agree	67	17.4
Total	<u>384</u>	<u>100.0</u>
ITEM #41 - Not Enough Laundry Facilities		
Does Not Apply	7	1.8
Strongly Disagree	10	2.6
Disagree	50	13.0
Neutral	29	7.6
Agree	106	27.6
Strongly Agree	182	47.4
Total	<u>384</u>	<u>100.0</u>

Table 20 (cont'd)

Category	Frequency	Percent
ITEM #48 - Pay 50 cents for Wash		
Does Not Apply	8	2.1
Strongly Disagree	147	38.3
Disagree	134	34.9
Neutral	41	10.7
Agree	42	10.9
Strongly Agree	12	3.1
Total	<u>384</u>	<u>100.0</u>
ITEM #55 - Prompt Room Repairs		
Does Not Apply	86	22.4
Strongly Disagree	35	9.1
Disagree	46	12.0
Neutral	42	10.9
Agree	131	34.1
Strongly Agree	44	11.5
Total	<u>384</u>	<u>100.0</u>
ITEM #59 - Able to be Alone		
Does Not Apply	4	1.0
Strongly Disagree	80	20.8
Disagree	109	28.4
Neutral	41	10.7
Agree	137	35.7
Strongly Agree	13	3.4
Total	<u>384</u>	<u>100.0</u>
ITEM #62 - Enough Bicycle Racks		
Does Not Apply	134	34.9
Strongly Disagree	20	5.2
Disagree	48	12.5
Neutral	45	11.7
Agree	117	30.5
Strongly Agree	20	5.2
Total	<u>384</u>	<u>100.0</u>

Table 20 (cont'd)

Category	Frequency	Percent
ITEM #68 - Temperature Not Well Regulated		
Does Not Apply	2	0.5
Strongly Disagree	21	5.5
Disagree	80	20.8
Neutral	38	9.9
Agree	116	30.2
Strongly Agree	127	33.1
Total	384	100.0
ITEM #74 - Refrigerators are Adequate		
Does Not Apply	47	12.2
Strongly Disagree	25	6.5
Disagree	48	12.5
Neutral	30	7.8
Agree	171	44.5
Strongly Agree	63	16.4
Total	384	100.0
ITEM #75 - Pay for Larger Refrigerator		
Does Not Apply	47	12.2
Strongly Disagree	79	20.6
Disagree	102	26.6
Neutral	55	14.3
Agree	75	19.5
Strongly Agree	26	6.8
Total	384	100.0
ITEM #84 - Difficulty Finding Storage Space		
Does Not Apply	163	42.4
Strongly Disagree	13	3.4
Disagree	68	17.7
Neutral	89	23.2
Agree	37	9.6
Strongly Agree	14	3.6
Total	384	100.0

Table 20 (cont'd)
Regulatory Environment

Category	Frequency	Percent
ITEM #2 - Familiar with Guidebook		
Does Not Apply	2	0.5
Strongly Disagree	21	5.5
Disagree	50	13.0
Neutral	102	26.6
Agree	168	43.8
Strongly Agree	41	10.7
Total	<u>384</u>	<u>100.0</u>
ITEM #7 - Familiar with Policy Handbook		
Does Not Apply	2	0.5
Strongly Disagree	26	6.8
Disagree	70	18.2
Neutral	111	28.9
Agree	143	37.2
Strongly Agree	32	8.3
Total	<u>384</u>	<u>100.0</u>
ITEM #12 - Aware of Standards of Behavior		
Does not Apply	8	2.1
Strongly Disagree	19	4.9
Disagree	69	18.0
Neutral	64	16.7
Agree	181	47.1
Strongly Agree	43	11.2
Total	<u>384</u>	<u>100.0</u>
ITEM #19 - Effective Discipline System		
Does Not Apply	20	5.2
Strongly Disagree	48	12.5
Disagree	82	21.4
Neutral	119	31.0
Agree	99	25.8
Strongly Agree	16	4.2
Total	<u>384</u>	<u>100.0</u>

Table 20 (cont'd)

Category	Frequency	Percent
ITEM #24 - RA Consistent Enforcer		
Does Not Apply	3	0.8
Strongly Disagree	30	7.8
Disagree	61	15.9
Neutral	87	22.7
Agree	153	39.8
Strongly Agree	50	13.0
Total	384	100.0
ITEM #31 - I Know Alcohol Policy		
Does Not Apply	6	1.6
Strongly Disagree	7	1.8
Disagree	18	4.7
Neutral	20	5.2
Agree	223	58.1
Strongly Agree	110	28.6
Total	384	100.0
ITEM #36 - I Do Not Support Alcohol Policy		
Does Not Apply	18	4.7
Strongly Disagree	46	12.0
Disagree	118	30.7
Neutral	97	25.3
Agree	56	14.6
Strongly Agree	49	12.8
Total	384	100.0
ITEM #42 - I Abide by Alcohol Policy		
Does Not Apply	16	4.2
Strongly Disagree	7	1.8
Disagree	27	7.0
Neutral	45	11.7
Agree	193	50.3
Strongly Agree	96	25.0
Total	384	100.0

Table 20 (cont'd)

Category	Frequency	Percent
ITEM #49 - Drug Policy		
Satisfactory		
Does Not Apply	28	7.3
Strongly Disagree	33	8.6
Disagree	49	12.8
Neutral	82	21.4
Agree	139	36.2
Strongly Agree	53	13.8
Total	384	100.0
ITEM #56 - Adequate Levels		
of Quiet		
Does Not Apply	2	0.5
Strongly Disagree	86	22.4
Disagree	88	22.9
Neutral	43	11.2
Agree	140	36.5
Strongly Agree	25	6.5
Total	384	100.0
ITEM #63 - Window Screens		
in Place		
Does Not Apply	7	1.8
Strongly Disagree	7	1.8
Disagree	30	7.8
Neutral	22	5.7
Agree	212	55.2
Strongly Agree	106	27.6
Total	384	100.0
ITEM #69 - Discipline for		
Removal of Screens		
Does Not Apply	11	2.9
Strongly Disagree	23	6.0
Disagree	83	21.6
Neutral	137	35.7
Agree	99	25.8
Strongly Agree	31	8.1
Total	384	100.0

Table 20 (cont'd)

Category	Frequency	Percent
ITEM #76 - Stricter Quiet Hours		
Does Not Apply	7	1.8
Strongly Disagree	33	8.6
Disagree	81	21.1
Neutral	77	20.1
Agree	105	27.3
Strongly Agree	81	21.1
Total	<u>384</u>	<u>100.0</u>
ITEM #80 - Rooms Not Used for Parties		
Does Not Apply	3	0.8
Strongly Disagree	115	29.9
Disagree	152	39.6
Neutral	66	17.2
Agree	31	8.1
Strongly Agree	17	4.4
Total	<u>384</u>	<u>100.0</u>
ITEM #85 - Atmosphere is Disorder		
Does Not Apply	5	1.3
Strongly Disagree	48	12.5
Disagree	211	54.9
Neutral	70	18.2
Agree	41	10.7
Strongly Agree	9	2.3
Total	<u>384</u>	<u>100.0</u>
ITEM #87 - Bicycles Should be Prohibited		
Does Not Apply	39	10.2
Strongly Disagree	115	29.9
Disagree	127	33.1
Neutral	63	16.4
Agree	27	7.0
Strongly Agree	13	3.4
Total	<u>384</u>	<u>100.0</u>

Table 20 (cont'd)

Category	Frequency	Percent
ITEM #88 - Input to Modify Policy		
Does Not Apply	13	3.4
Strongly Disagree	23	6.0
Disagree	100	26.0
Neutral	109	28.4
Agree	116	30.2
Strongly Agree	23	6.0
Total	384	100.0
ITEM #90 - Work for Develop- ment of Policies		
Does Not Apply	5	1.3
Strongly Disagree	32	8.3
Disagree	135	35.2
Neutral	134	34.9
Agree	63	16.4
Strongly Agree	15	3.9
Total	384	100.0
Programming Environment		
ITEM #3 - Allocate Programming Funds Effectively		
Does Not Apply	72	18.8
Strongly Disagree	10	2.6
Disagree	27	7.0
Neutral	203	52.9
Agree	64	16.7
Strongly Agree	8	2.1
Total	384	100.0
ITEM #8 - More Cultural Programs		
Does Not Apply	10	2.6
Strongly Disagree	14	3.6
Disagree	48	12.5
Neutral	147	38.3
Agree	108	28.1
Strongly Agree	57	14.8
Total	384	100.0

Table 20 (cont'd)

Category	Frequency	Percent
ITEM #13 - Pay \$2 for Additional Programs		
Does Not Apply	2	0.5
Strongly Disagree	27	7.0
Disagree	70	18.2
Neutral	75	19.5
Agree	126	32.8
Strongly Agree	84	21.9
Total	<u>384</u>	<u>100.0</u>
ITEM #20 - Little Attempt for Social Events		
Does Not Apply	34	8.9
Strongly Disagree	34	8.9
Disagree	139	36.2
Neutral	125	32.6
Agree	43	11.2
Strongly Agree	9	2.3
Total	<u>384</u>	<u>100.0</u>
ITEM #25 - Participate in Alcohol Education Program		
Does Not Apply	26	6.8
Strongly Disagree	86	22.4
Disagree	116	30.2
Neutral	107	27.9
Agree	41	10.7
Strongly Agree	8	2.1
Total	<u>384</u>	<u>100.0</u>
ITEM #43 - Spirit on Floor Encourages Activities		
Does Not Apply	4	1.0
Strongly Disagree	54	14.1
Disagree	89	23.2
Neutral	107	27.9
Agree	105	27.3
Strongly Agree	25	6.5
Total	<u>384</u>	<u>100.0</u>

Table 20 (cont'd)

Category	Frequency	Percent
ITEM #50 - Staff Helps New Students		
Does Not Apply	17	4.4
Strongly Disagree	13	3.4
Disagree	38	9.9
Neutral	108	28.1
Agree	162	42.2
Strongly Agree	46	12.0
Total	<u>384</u>	<u>100.0</u>
ITEM #57 - New Students Not Helped		
Does Not Apply	25	6.5
Strongly Disagree	24	6.3
Disagree	139	36.2
Neutral	114	29.7
Agree	71	18.5
Strongly Agree	11	2.9
Total	<u>384</u>	<u>100.0</u>
ITEM #64 - Social and Recrea- tional Needs Satisfied		
Does Not Apply	10	2.6
Strongly Disagree	36	9.4
Disagree	121	31.5
Neutral	119	31.0
Agree	89	23.2
Strongly Agree	9	2.3
Total	<u>384</u>	<u>100.0</u>
ITEM #70 - No Participation in Soc-Rec Programs		
Does Not Apply	4	1.0
Strongly Disagree	49	12.8
Disagree	159	41.4
Neutral	82	21.4
Agree	79	20.6
Strongly Agree	11	2.9
Total	<u>384</u>	<u>100.0</u>

Table 20 (cont'd)

Category	Frequency	Percent
ITEM #77 - Help Organize Social Activities		
Does Not Apply	4	1.0
Strongly Disagree	36	9.4
Disagree	129	33.6
Neutral	119	31.0
Agree	81	21.1
Strongly Agree	15	3.9
Total	<u>384</u>	<u>100.0</u>
ITEM #81 - Need for Alcohol Education		
Does Not Apply	19	4.9
Strongly Disagree	41	10.7
Disagree	106	27.6
Neutral	154	40.1
Agree	50	13.0
Strongly Agree	14	3.6
Total	<u>384</u>	<u>100.0</u>
Security Environment		
ITEM #4 - Safe in Residence Halls		
Does Not Rply	-	--
Strongly Disagree	7	1.8
Disagree	30	7.8
Neutral	45	11.7
Agree	200	52.1
Strongly Agree	102	26.6
Total	<u>384</u>	<u>100.0</u>
ITEM #9 - Report Robbery to RA		
Does Not Apply	2	0.5
Strongly Disagree	4	1.0
Disagree	10	2.6
Neutral	3	0.8
Agree	90	23.4
Strongly Agree	275	71.6
Total	<u>384</u>	<u>100.0</u>

Table 20 (cont'd)

Category	Frequency	Percent
ITEM #38 - Lock Outside Entrances at Night		
Does Not Apply	5	1.3
Strongly Disagree	167	43.5
Disagree	119	31.0
Neutral	35	9.1
Agree	34	8.9
Strongly Agree	24	6.3
Total	384	100.0
ITEM #45 - Lock Floor at Night		
Does Not Apply	10	2.6
Strongly Disagree	127	33.1
Disagree	98	25.5
Neutral	51	13.3
Agree	55	14.3
Strongly Agree	43	11.2
Total	384	100.0

Food Environment

ITEM #5 - Food Service Favorable		
Does Not Apply	2	0.5
Strongly Disagree	53	13.8
Disagree	73	19.0
Neutral	84	21.9
Agree	146	38.0
Strongly Agree	26	6.8
Total	384	100.0
ITEM #10 - Satisfactory Selec- tion of Entrees		
Does Not Apply	-	--
Strongly Disagree	41	10.7
Disagree	70	18.2
Neutral	76	19.8
Agree	155	40.4
Strongly Agree	42	10.9
Total	384	100.0

Table 20 (cont'd)

Category	Frequency	Percent
ITEM #16 - Satisfactory Serving Hours		
Does Not Apply	2	0.5
Strongly Disagree	18	4.7
Disagree	42	10.9
Neutral	33	8.6
Agree	205	53.4
Strongly Agree	84	21.9
Total	384	100.0
ITEM #21 - Food Service Discourteous		
Does Not Apply	2	0.5
Strongly Disagree	82	21.4
Disagree	196	51.0
Neutral	58	15.1
Agree	37	9.6
Strongly Agree	9	2.3
Total	384	100.0
ITEM #27 - Adequate Selec- tion of Salads		
Does Not Apply	4	1.0
Strongly Disagree	10	2.6
Disagree	50	13.0
Neutral	34	8.9
Agree	206	53.6
Strongly Agree	80	20.8
Total	384	100.0
ITEM #33 - Dining Atmosphere Not Comfortable		
Does Not Apply	3	0.8
Strongly Disagree	69	18.0
Disagree	214	55.7
Neutral	64	16.7
Agree	27	7.0
Strongly Agree	7	1.8
Total	384	100.0

Table 20 (cont'd)

Category	Frequency	Percent
ITEM #39 - Adequate Selection of Desserts		
Does Not Apply	7	1.8
Strongly Disagree	15	3.9
Disagree	57	14.8
Neutral	54	14.1
Agree	201	52.3
Strongly Agree	50	13.0
Total	<u>384</u>	<u>100.0</u>
ITEM #46 - Pay More for Larger Entrees		
Does Not Apply	5	1.3
Strongly Disagree	136	35.4
Disagree	148	38.5
Neutral	50	13.0
Agree	32	8.3
Strongly Agree	13	3.4
Total	<u>384</u>	<u>100.0</u>
ITEM #53 - Give Up Unlimited Food Servings		
Does Not Apply	4	1.0
Strongly Disagree	54	14.1
Disagree	105	27.3
Neutral	57	14.8
Agree	119	31.0
Strongly Agree	45	11.4
Total	<u>384</u>	<u>100.0</u>
ITEM #66 - More Meatless Entrees		
Does Not Apply	8	2.1
Strongly Disagree	94	24.5
Disagree	118	30.7
Neutral	106	27.6
Agree	38	9.9
Strongly Agree	20	5.2
Total	<u>384</u>	<u>100.0</u>

Table 20 (cont'd)

Category	Frequency	Percent
ITEM #72 - Students Do Not Watch Food		
Does Not Apply	5	1.3
Strongly Disagree	48	12.5
Disagree	95	24.7
Neutral	49	12.8
Agree	126	32.8
Strongly Agree	61	15.9
Total	384	100.0
Intellectual/Academic Environment		
ITEM #14 - Is an Intellectual Climate		
Does Not Apply	1	0.3
Strongly Disagree	53	13.8
Disagree	100	26.0
Neutral	86	22.4
Agree	110	28.6
Strongly Agree	34	8.9
Total	384	100.0
ITEM #15 - Should be an Intel- lectual Climate		
Does Not Apply	5	1.3
Strongly Disagree	8	2.1
Disagree	42	10.9
Neutral	87	22.7
Agree	162	42.2
Strongly Agree	80	20.8
Total	384	100.0
ITEM #26 - Pursue Intell and Cultural Activities		
Does Not Apply	36	9.4
Strongly Disagree	19	4.9
Disagree	51	13.3
Neutral	148	38.5
Agree	118	30.7
Strongly Agree	12	3.1
Total	384	100.0

Table 20 (cont'd)

Category	Frequency	Percent
ITEM #32 - Important Dis-		
cussions Frequent		
Does Not Apply	12	3.1
Strongly Disagree	49	12.8
Disagree	86	22.4
Neutral	119	31.0
Agree	93	24.2
Strongly Agree	25	6.5
Total	384	100.0
ITEM #37 - Member of		
Academic Community		
Does Not Apply	20	5.2
Strongly Disagree	4	1.0
Disagree	20	5.2
Neutral	81	21.1
Agree	196	51.0
Strongly Agree	63	16.4
Total	384	100.0
ITEM #44 - Faculty Visits		
Valuable		
Does Not Apply	82	21.4
Strongly Disagree	25	6.5
Disagree	73	19.0
Neutral	135	35.2
Agree	53	13.8
Strongly Agree	16	4.2
Total	384	100.0
ITEM #51 - Cult and Educ		
Programs are Integral		
Does Not Apply	55	14.3
Strongly Disagree	62	16.1
Disagree	125	32.6
Neutral	98	25.5
Agree	40	10.4
Strongly Agree	4	1.0
Total	384	100.0

Table 20 (cont'd)

Category	Frequency	Percent
ITEM #58 - Intellectual Curiosity Stimulated		
Does Not Apply	15	3.9
Strongly Disagree	54	14.1
Disagree	128	33.3
Neutral	113	29.4
Agree	66	17.2
Strongly Agree	8	2.1
Total	<u>384</u>	<u>100.0</u>
ITEM #65 - Able to Study in My Room		
Does Not Apply	4	1.0
Strongly Disagree	57	14.8
Disagree	95	24.7
Neutral	63	16.4
Agree	148	38.5
Strongly Agree	17	4.4
Total	<u>384</u>	<u>100.0</u>
ITEM #71 - Choose to Study in Hall		
Does Not Apply	2	0.5
Strongly Disagree	96	25.0
Disagree	78	20.3
Neutral	55	14.3
Agree	107	27.9
Strongly Agree	46	12.0
Total	<u>384</u>	<u>100.0</u>
ITEM #78 - Adequate Study Facilities		
Does Not Apply	4	1.0
Strongly Disagree	42	10.9
Disagree	78	20.3
Neutral	53	13.8
Agree	190	49.5
Strongly Agree	17	4.4
Total	<u>384</u>	<u>100.0</u>

Table 20 (cont'd)

Interpersonal Relations
and Responsibility Environment

Category	Frequency	Percent
ITEM #17 - Must Compromise in Group Situation		
Does Not Apply	1	0.3
Strongly Disagree	-	--
Disagree	2	0.5
Neutral	10	2.6
Agree	136	35.4
Strongly Agree	235	61.2
Total	<u>384</u>	<u>100.0</u>
ITEM #22 - No Respect for Others Property		
Does Not Apply	3	0.8
Strongly Disagree	31	8.1
Disagree	117	30.5
Neutral	108	28.1
Agree	95	24.7
Strongly Agree	30	7.8
Total	<u>384</u>	<u>100.0</u>
ITEM #28 - Person Not Con- cerned is Not Welcome		
Does Not Apply	26	6.8
Strongly Disagree	20	5.2
Disagree	77	20.1
Neutral	115	29.9
Agree	105	27.3
Strongly Agree	41	10.7
Total	<u>384</u>	<u>100.0</u>
ITEM #30 - Students Keep Floor Clean and Neat		
Does Not Apply	3	0.8
Strongly Disagree	47	12.2
Disagree	91	23.7
Neutral	66	17.2
Agree	152	39.6
Strongly Agree	25	6.5
Total	<u>384</u>	<u>100.0</u>

Table 20 (cont'd)

Category	Frequency	Percent
ITEM #34 - Report False Alarms		
Does Not Apply	3	0.8
Strongly Disagree	27	7.0
Disagree	56	14.6
Neutral	99	25.8
Agree	98	25.5
Strongly Agree	<u>101</u>	<u>26.3</u>
Total	<u>384</u>	<u>100.0</u>
ITEM #40 - Deliberate Damage to Building by Residents		
Does Not Apply	11	2.9
Strongly Disagree	6	1.6
Disagree	24	6.3
Neutral	37	9.6
Agree	176	45.8
Strongly Agree	<u>130</u>	<u>33.9</u>
Total	<u>384</u>	<u>100.0</u>
ITEM #47 - Students Have Not Learned Respect		
Does Not Apply	6	1.6
Strongly Disagree	21	5.5
Disagree	117	30.5
Neutral	101	26.3
Agree	94	24.5
Strongly Agree	<u>45</u>	<u>11.7</u>
Total	<u>384</u>	<u>100.0</u>
ITEM #52 - Environment Encourages Anti-Social Acts		
Does Not Apply	16	4.2
Strongly Disagree	62	16.1
Disagree	158	41.1
Neutral	89	23.2
Agree	51	13.3
Strongly Agree	<u>8</u>	<u>2.1</u>
Total	<u>384</u>	<u>100.0</u>

Table 20 (cont'd)

Category	Frequency	Percent
ITEM #54 - Share Cost of Vandalism on Floors		
Does Not Apply	4	1.0
Strongly Disagree	218	56.8
Disagree	115	29.9
Neutral	27	7.0
Agree	18	4.7
Strongly Agree	2	0.5
Total	<u>384</u>	<u>100.0</u>
ITEM #60 - Stop Vending After Midnight		
Does Not Apply	7	1.8
Strongly Disagree	157	40.9
Disagree	138	35.9
Neutral	30	7.8
Agree	40	10.4
Strongly Agree	12	3.1
Total	<u>384</u>	<u>100.0</u>
ITEM #61 - Refundable Damage Deposit		
Does Not Apply	6	1.6
Strongly Disagree	27	7.0
Disagree	53	13.8
Neutral	80	20.8
Agree	170	44.3
Strongly Agree	48	12.5
Total	<u>384</u>	<u>100.0</u>
ITEM #67 - Dismiss for False Fire Alarms		
Does Not Apply	8	2.1
Strongly Disagree	16	4.2
Disagree	100	26.0
Neutral	72	18.8
Agree	102	26.6
Strongly Agree	86	22.4
Total	<u>384</u>	<u>100.0</u>

Table 20 (cont'd)

Category	Frequency	Percent
ITEM #73 - Noise in Hallway a Problem		
Does Not Apply	3	0.8
Strongly Disagree	18	4.7
Disagree	65	16.9
Neutral	68	17.7
Agree	143	37.2
Strongly Agree	87	22.7
Total	<u>384</u>	<u>100.0</u>
ITEM #79 - Ask Students to be Quiet		
Does Not Apply	2	0.5
Strongly Disagree	7	1.8
Disagree	17	4.4
Neutral	41	10.7
Agree	216	56.3
Strongly Agree	101	26.3
Total	<u>384</u>	<u>100.0</u>
ITEM #82 - I Contribute to Noise		
Does Not Apply	3	0.8
Strongly Disagree	62	16.1
Disagree	123	32.0
Neutral	62	16.1
Agree	117	30.5
Strongly Agree	17	4.4
Total	<u>384</u>	<u>100.0</u>
ITEM #83 - I Quiet Down When Asked		
Does Not Apply	27	7.0
Strongly Disagree	-	--
Disagree	2	0.5
Neutral	8	2.1
Agree	171	44.5
Strongly Agree	176	45.8
Total	<u>384</u>	<u>100.0</u>

Table 20 (cont'd)

Category	Frequency	Percent
ITEM #86 - Sense of Responsibility		
Does Not Apply	5	1.3
Strongly Disagree	12	3.1
Disagree	77	20.1
Neutral	127	33.1
Agree	141	36.7
Strongly Agree	22	5.7
Total	384	100.0
ITEM #89 - Strong Sense of Identity		
Does Not Apply	3	0.8
Strongly Disagree	41	10.7
Disagree	72	18.8
Neutral	86	22.4
Agree	133	34.6
Strongly Agree	49	12.8
Total	384	100.0
ITEM #91 - Easy to Adjust to Group Living		
Does Not Apply	5	1.3
Strongly Disagree	11	2.9
Disagree	31	8.1
Neutral	43	11.2
Agree	224	58.3
Strongly Agree	70	18.2
Total	384	100.0
ITEM #92 - Experience Not Expected		
Does Not Apply	11	2.9
Strongly Disagree	31	8.1
Disagree	183	47.7
Neutral	88	22.9
Agree	61	15.9
Strongly Agree	10	2.6
Total	384	100.0

Appendix H

Analysis of Results by Demographic Category

RESULTS BY BUILDING

Seventeen items showed significant differences between buildings in the residence hall system.

Physical Environment

Respondents from Burge and Hillcrest agreed that there are satisfactory recreational facilities in their buildings (fifty-four and sixty-six percent respectively) while no respondents from Westlawn and South Quadrangle agreed with this item. Over sixty percent of those responding from South Quadrangle, Slater, Stanley, and Daum perceived their floor lounges as being furnished well enough to meet their needs, compared to Currier and Quadrangle residents who disagreed with this item (sixty-three and fifty-four percent respectively). One hundred percent of the respondents from Westlawn and South Quadrangle disagreed that their floors are not kept clean and neat by custodians, while seventeen percent of the respondents from Quadrangle and nine percent of the residents from Currier agreed with this item. When asked if their buildings are kept clean and neat by custodians, forty-three percent of the respondents from Quadrangle and twenty-eight percent from Burge disagreed. Few respondents from the other buildings disagreed with this item.

Regulatory Environment

Significant differences existed between buildings in terms of those who were familiar with the Policy Handbook. Seventy-five percent of those responding from South Quadrangle agreed with this item while only thirty-four percent of the respondents from Slater agreed. Over fifty-four percent of the respondents from South Quadrangle and Daum agreed that they did not support the alcohol policy, compared to seven percent of the Stanley respondents who had a similar opinion.

Programming Environment

Sixty percent or more of the respondents from Hillcrest, Slater, and Westlawn believed the residence hall staff did a good job of helping new students feel at home. However, only thirty-three percent of the Rienow respondents and twenty-five percent of the South Quadrangle respondents agreed with this item. Also, three-fourths of the respondents from South Quadrangle disagreed that their social and recreational needs were satisfied by programs and activities in the residence halls. None of the respondents from Westlawn disagreed with this item.

Food Environment

One hundred percent of those responding from Westlawn agreed that there was an adequate selection of salads at lunch and dinner, compared to fifty-seven percent from

Daum. Quadrangle recorded the largest percent of responses that disagreed with this item - thirty-five percent. Differences also existed regarding the atmosphere in the dining room. One hundred percent of the Westlawn residents disagreed that the dining atmosphere was not comfortable. However, thirty percent of the respondents from Quadrangle agreed.

Intellectual/Academic Environment

Eighty percent of the respondents from Westlawn agreed that cultural and educational programs offered in residence halls were an integral part of their residence hall experience. However, none of the respondents from South Quadrangle agreed with this item. When asked about the adequacy of study facilities in their respective buildings, over sixty-seven percent of the respondents from Daum and Slater agreed. Only twenty-five percent of the South Quadrangle respondents agreed.

Interpersonal Relations and Responsibility Environment

Eighty percent of the respondents from Westlawn disagreed that residents in their building had no respect for the property of others, compared to fifty-four percent of the respondents from Burge who agreed with this item. Most of those responding from each of the buildings agreed that some people living in their hall deliberately damaged or defaced the building. Over ninety-one percent

from Burge, Rienow and Quadrangle agreed with this item, while only forty percent of those responding from Westlawn agreed. Sixty percent of the respondents from Rienow agreed that the students on their respective floors generally helped to keep it clean and neat, where only twenty-two percent from Quadrangle agreed. South Quadrangle had the highest percent of responses indicating that the environment in their hall encouraged students to commit anti-social acts. The lowest building response (two percent) rate to this item was Currier Hall. Eighty percent of the respondents from Westlawn agreed that they had a strong sense of identity with the residents on their floor, while only nineteen percent of those responding from Currier agreed with this item.

RESULTS BY CLASS STANDING

Over fifty percent of those who responded to the survey were freshmen. For comparative purposes, all other responses (sophomore, junior, senior, graduate, and other) were combined because of the diminishing number of respondents in each class. Nevertheless, response rates to thirteen items on the survey revealed significant differences between freshmen and all others.

Physical Environment

Only one item on this environmental scale showed significant differences between freshmen and others. Twice as many freshmen responded that there were satisfactory recreational facilities within their residence hall (forty-two percent compared to twenty-two percent).

Regulatory Environment

Over sixty-two percent of the freshmen responded that their RA consistently enforced rules and regulations on their floors, compared to forty-four percent of all other respondents. Only twenty-three percent of the freshmen responded that they did not support the alcohol policy, while thirty-five percent of all others agreed.

Programming Environment

Most freshmen (sixty-eight percent) agreed that the residence hall staff did a good job of helping new students feel at home, while forty-four percent of all others agreed.

Food Environment

More freshmen responded that there was an adequate selection of entrees and desserts at lunch and dinner than all others. Although all classes disagreed that the atmosphere in the dining rooms was not comfortable, twice as many others, compared to freshmen, agreed with this item (twelve percent, compared to six percent).

Intellectual/Academic Environment

Thirty-one percent of the freshmen disagreed that residence hall living was an important means of introducing them to an intellectual climate. Forty-eight percent of all others disagreed that their intellectual curiosity was stimulated by residence hall living compared to fifty-seven percent of all others who disagreed. However, sixty-seven percent of freshmen responded that there were adequate facilities (other than their room) in their residence hall in which to study. Forty-one percent of all others agreed with this item.

Interpersonal Relations and Responsibility Environment

Over sixty-three percent of all other respondents indicated that if they saw someone pulling a false alarm, they would be willing to report him/her to the residence hall staff. Only forty-two percent of the freshmen agreed with this item. Most freshmen (fifty-five percent) agreed that they felt a sense of identity with the residents on their floor while forty percent of all others agreed. Freshmen also responded that, for the most part, it had been easy to adjust to group living on their floor (eighty-two percent). Seventy-two percent of all others agreed with this item.

RESULTS BY SEX

Men (forty-one percent) and women (fifty-eight percent) in this study perceived certain aspects of the residence hall environment differently. Eighteen such items in this section are presented for analysis.

Physical Environment

Eighty-six percent of the women agreed that there were not enough laundry facilities in their buildings where sixty-three percent of the men agreed. More women (seventy-seven percent) than men (fifty-nine percent) agreed that the two cubic foot refrigerators that were rented to students were adequate for their needs. More men (thirty-seven percent) than women (twenty-six percent) agreed that they were willing to pay a higher rental rate to get a four or five cubic foot refrigerator.

Regulatory Environment

Thirty-eight percent of the men agreed that they did not support the alcohol policy in residence halls. Twenty-two percent of the women agreed with this item. Forty-five percent of the men agreed that residents should be disciplined for removing screens from their windows while twenty-seven percent of the women agreed.

Programming Environment

Slightly more women than men indicated that they did not participate in social and recreational programs in residence halls. However, over one-half of the women expressed a desire for more cultural programs in the halls while only one-third of the men expressed the same desire.

Security Environment

Most men (ninety percent) and women (seventy-one percent) agreed that they felt safe in residence halls. As a result, only six percent of the men and twenty-two percent of the women agreed that the entrances to their buildings should be locked at night. Also, only fifteen percent of the men agreed with locking the floor at night. However, more women (thirty-four percent) agreed with locking the floors.

Food Environment

When asked if they would pay more for larger entrees, seventeen percent of the men agreed while only eight percent of the women agreed. Over one-half of the women agreed that they would be willing to give up unlimited food servings to keep board rate increases to a minimum. However, less than one-third of the men agreed with this item. Also, fewer men (nine percent) than women (twenty percent) indicated a desire for more meatless entrees.

Intellectual/Academic Environment

One-half of the women disagreed that cultural and educational programs were an integral part of their residence hall experience, while sixty-six percent of the men disagreed.

Interpersonal Relations and Responsibility Environment

Both men and women agreed that they must compromise in a group living situation, however, more women (seventy percent) than men (fifty percent) felt strongly about this item. Over one-half of the women agreed that the students on their floor generally kept it clean and neat, while one-third of the men agreed. More men (sixty percent) than women (forty-three percent) agreed that students found guilty of pulling false fire alarms should be dismissed from residence halls. When asked if they contributed to the noise in their hall, approximately one-third of the men and women agreed. However, sixty-seven percent of the men disagreed with this item and fifty percent of the women disagreed.

RESULTS BY ETHNIC GROUP

The only ethnic group large enough for comparison with Caucasians was the Afro-Americans. However, the size of this group was so small, when compared to the Caucasian

group, the statistical significance between them was lost. Nevertheless, with this caution, nine items were found to show significant differences.

Programming Environment

Thirty-six percent of the Caucasians agreed that the spirit on their floors encouraged them to become involved in building and campus activities, while twenty-seven percent of the Afro-Americans agreed. However, well over one-half (fifty-four percent) of the Afro-Americans strongly disagreed with this item compared to twelve percent of Caucasians. Although most Caucasians and Afro-Americans agreed that the residence hall staff did a good job of helping new students feel at home, twenty-two percent of the Afro-Americans strongly disagreed, compared to three percent of the Caucasians.

Food Environment

Almost one-half of the Caucasians felt that their overall impression of the Food Service was favorable, while only eighteen percent of the Afro-Americans agreed. Also, over one-half of the Afro-Americans strongly disagreed with this item compared to thirteen percent for Caucasians. Seventy-seven percent of the Caucasians agreed that there were an adequate selection of salads at lunch and dinner. Only forty-six percent of the Afro-Americans agreed with this item. Although both groups agreed that there were an adequate selection of desserts

at lunch and dinner thirty percent of the Afro-Americans strongly disagreed compared to three percent for Caucasians. Fifty-one percent of the Caucasians agreed that food waste occurred because students did not watch how much food they take, while only eleven percent of the Afro-Americans agreed. Over one-half of the Afro-Americans strongly disagreed with this item compared to eleven percent of the Caucasians.

Interpersonal Relations and Responsibility Environment

More Afro-Americans (forty percent) than Caucasians (sixteen percent) believed that the environment in their residence hall encouraged students to commit anti-social acts. Although both groups agreed that for the most part, they found it easy to adjust to group living on their floors, one-third of the Afro-Americans strongly disagreed. Only two percent of the Caucasians disagreed with this item. Eighteen percent of the Caucasians agreed that their experience of living with a large group of people was not what they expected. Almost one-half of the Afro-Americans agreed with this item.

RESULTS BY NUMBER OF LIVE-IN SEMESTERS

The category on the number of semesters lived in residence halls has been consolidated into three groups for analysis. The consolidation was done because 1) individual semesters were not likely to yield much difference

and 2) each semester category did not have enough individual responses for comparative analysis. Therefore, one semester students were put in group one, two and three semester students were put in group two, and four or more semester students were put in group three.

Physical Environment

Approximately one-third of all three groups agreed that there were adequate recreational facilities within their residence hall. However, sixty-three percent of group two disagreed with this item, while twenty-nine and forty percent of groups one and three disagreed. One-half of group one agreed that there were enough bicycle racks near their building, while fifty-seven and sixty-six percent respectively of groups two and three agreed.

Programming Environment

Sixty-six percent of group one agreed that the residence hall staff did a good job of helping new students feel at home, while forty-nine percent of group two and forty percent of group three agreed.

Food Environment

Only five percent of group one perceived the atmosphere in the dining rooms as uncomfortable, while twelve percent of group two and fifteen percent of group three agreed with this item.

Intellectual/Academic Environment

Forty-four percent of group one agreed that residence halls was an important means of introducing them to an intellectual climate, while thirty-three percent of group two and twenty-three percent of group three agreed. Although few (approximately twenty percent) of all three groups agreed that their intellectual curiosity was stimulated by living in residence halls, forty percent of group one, fifty-four percent of group two and sixty-seven percent of group three disagreed. Forty-six percent of group one indicated that they were able to study satisfactorily in their room while one-third of group two and fifty-nine percent of group three agreed. Also, sixty-six percent of group one agreed that there were adequate facilities in their residence hall other than their room to study. Forty-four percent of group two and thirty-five percent of group three agreed.

Interpersonal Relations and Responsibility Environment

Over seventy-six percent of group three agreed that if they saw someone pulling a false fire alarm they would be willing to report him/her to the residence hall staff. Fifty-seven percent of group two and forty-three percent of group one agreed with this item. Only forty-five percent of group one agreed that those found guilty of pulling false fire alarms should be dismissed from

residence halls, while one-half of group two and sixty-four percent of group three agreed that they should be dismissed. Finally, most (fifty-five percent) in group one agreed that they had a strong sense of identity with residents on their floor. Only forty percent of group two and thirty-eight percent of group three agreed with this item.

Appendix I

Thank you letter to Students
for Participating in the Study

The University of Iowa

Iowa City, Iowa 52242

311

Office of Residence Services
Burge Hall

(319) 353-5210



1847

March 6, 1980

Dear Student:

Thank you very much for your participation in the Residence Hall Environmental Assessment Study. We had a fantastic response rate to the survey that was in excess of seventy percent. It is understandable, considering the time constraints, that some residents who wanted to respond were unable to.

All of the data from the surveys has been scored and are currently in the hands of residence hall staff who now have the responsibility to develop a set of recommendations based on an analysis of the data. These recommendations will be collected in the next few weeks and arranged in order of priority. We will begin the implementation of these recommendations after Spring break. It is important for you to understand that these recommendations are based on what you said is important in your residence hall living environment.

The item with the highest frequency response in Part II of the survey was item number 41 - not enough laundry facilities. As a result, we are currently committed to improving and expanding laundry facilities, particularly in the areas of highest need. Also, item number 76 - stricter quiet hours - received a high level of response. We are offering quiet lifestyle floors next year in response to this need.

The complete results of the survey, as well as the specific actions to be taken, will appear in a number of publications that include the Synergist, Daily Iowan, University of Iowa Spectator, and others. Please look for these results after Spring break.

March 6, 1980

If you have any questions or concerns about the survey or resultant environmental changes, I would be happy to talk with you about them.

Thank you again for helping to improve the quality of life in our residence halls.

Sincerely,

Mitchel D. Livingston
Director, Residence Services
Chairperson, Environmental Assessment Planning Team

MDL/kst

Appendix J

Instructions to Subgroup Leaders Regarding Data Analysis

Office of Residence Services
Burge Hall

(319) 353-5210



1847

March 14, 1980

MEMORANDUM

To: Environmental Assessment Planning Team
From: Mitchel D. Livingston
Re: Environmental Assessment Survey Analysis - Part II

Enclosed is your copy of the Environmental Assessment Survey Analysis - Part II. Please review this information carefully before your subgroup meets. Your subgroup leader will call a meeting after spring break at which time each subgroup will be required to develop a set of recommendations in order of priority based on an analysis of both Part I (which you already have) and Part II data. You are only required to make recommendations for the environmental scales that were assigned to your subgroup. They are as follows:

Carol - Subgroup A

1. Programming Environment
2. Academic/Intellectual Environment
3. Security Environment

Fred - Subgroup B

1. Physical Environment
2. Regulatory Environment

Steve - Subgroup C

1. Food Environment
2. Interpersonal Relations & Responsibility Environment

The planning team will regroup for a dinner meeting in Burge on Thursday, April 3, 1980. At this time we will

Planning
Team

March 14, 1980

share recommendations and arrange them in order of priority. From this point we will be ready to begin the scheduling and implementation of selective recommendations.

I have also asked Fred, Steve, and Carol to review all of the data with their respective staffs in order to get their input prior to the meeting of their subgroups. Staff will receive copies of the data analysis at the same time you receive yours.

kst

cc: G. Droll, Associate Director
J. Davis, Coordinator of Information

Appendix K

Communications with Central Administration

Office of Residence Services
Burge Hall

(319) 353-5210



1847

October 19, 1979

MEMORANDUM

To: Philip Hubbard, Vice President Student Services
Phillip Jones, Associate Dean Student Services

From: Mitchel D. Livingston, Director

Re: Residence Hall Environmental
Assessment Project, 1979-80

I have mentioned on a couple of occasions that we are in the process of developing an assessment and change mechanism to compliment our existing procedures for improving the residence hall environment. We are using a planning team approach to identify, assess and redesign problem areas in residence halls. The team is composed of residence hall staff and students, ARH representatives, faculty and members from the Student Services staff.

Attached is a copy of the Planning Team Workbook that provides information about the technique we are using. I am pleased to say that after our first two meetings that the level of interest and commitment by team members is very high. We should complete the assessment phase of the process by Christmas break and begin the redesign process second semester.

Colleen Jones will be working with us to insure that our assessment technique is sensitive to the needs of minority students who live in residence halls.

I look forward to any comments and/or suggestions you might have.

kst

Office of Residence Services
Burge Hall

(319) 353-5210



1847

November 30, 1979

MEMORANDUM

To: Philip Hubbard, Vice President Student Services
May Brodbeck, Vice President Academic Affairs
Phillip Jones, Associate Dean Student Services
Ray Muston, Associate Dean Academic Affairs

From: Mitchel D. Livingston, Director

Re: Residence Hall Environmental Assessment Project

The environmental assessment planning team (see attached) composed of faculty, staff and students, has been working the past seven weeks to develop a methodology, and an instrument for improving residence hall living. We have recently completed our Environmental Assessment Survey (see attached) and plan to administer it before semester break. The survey is a three-part instrument that 1) tests students' perceptions of various residence halls environments; 2) asks why residents have these perceptions and what they would recommend to improve things; and 3) what their housing plans are for next year.

There are seven environmental scales on the instrument that include the following:

1. Physical Environment
2. Regulatory Environment
3. Programming Environment
4. Security Environment
5. Food Environment
6. Intellectual/Academic Environment
7. Interpersonal Relations & Responsibility Environment

Many environmental categories are not included in order to keep the study within manageable limits. However, the above represents the concerns most frequently mentioned as problem areas by staff and students.

Hubbard
Brodbeck
Jones
Muston

11-30-79

Environmental changes will be made beginning second semester, based on the analysis of survey results.

If you have any questions, concerns, or recommendations regarding the instrument and/or the planning team process, please notify me at your earliest convenience.

We are currently pilot testing the survey and plan to make final modifications by Friday, December 7, 1979.

kst

enclosures

Office of Residence Services
Burge Hall

(319) 353-5210



1847

February 4, 1980

MEMORANDUM

To: Philip Hubbard, Vice President Student Services
May Brodbeck, Vice President Academic Affairs
Phillip Jones, Associate Dean Student Services
Ray Muston, Associate Dean Academic Affairs

From: Mitchel D. Livingston, Director

Re: Part I Results from the Residence Hall
Environmental Assessment Survey

Enclosed for your review and comment are the Part I results from the Residence Hall Environmental Assessment Survey. Each one of the functional area heads in residence halls have received a copy of these results, and have been asked to share them with their respective staffs. The results from Part II and III will be disseminated in a similar fashion within the next two or three weeks.

Each area head will also be asked to thoroughly analyze the data from all three parts of the survey, and to submit specific recommendations in order of priority, back to the Environmental Assessment Planning Team. A master list of recommendations will then be compiled for action to be taken beginning this semester.

Many thanks are to go to the students, faculty, and staff who have given so unselfishly to make this project a success.

kst

enclosures

Office of Residence Services
Burge Hall

(319) 353-5210



1847

March 27, 1980

MEMORANDUM

To: Philip Hubbard, Vice President Student Services
May Brodbeck, Vice President Academic Affairs
Phillip Jones, Associate Dean Student Services
Ray Muston, Associate Dean Academic Affairs

From: Mitchel D. Livingston, Director

Re: Residence Halls Environmental Assessment Survey

Enclosed for your review and comment are the Part II results from the Residence Halls Environmental Assessment Survey. These results, along with Part I are currently being analyzed by staff, students, and the Environmental Assessment Planning Team. A list of recommended program changes will be developed, utilizing the input from these groups, and they should be complete in a couple of weeks. I will share the recommendations with you before we begin the process implementation.

Those who responded to the survey were asked in Part II to go back to Part I and identify five items (from the list of ninety-two) that they felt strongly about, based on their experience, and 1) state why they felt strongly about the item and 2) what they recommend to improve the situation. These are referred to as environmental referents (ERs) because they refer back either qualitatively or quantitatively to items in Part I of the survey. There was a tendency for respondents to choose significant items in Part II of the survey that they felt negatively about.

kst

enclosure

Office of Residence Services
Burge Hall

(319) 353-5210



1847

May 14, 1980

MEMORANDUM

To: Philip Hubbard, Vice President Student Services
May Brodbeck, Vice President Academic Affairs
Phillip Jones, Associate Dean Student Services
Ray Muston, Associate Dean Academic Affairs

From: Mitchel D. Livingston

Re: Recommendations from the Environmental Assessment Study

Enclosed for your review is a list of recommendations that were developed from the data generated through the University of Iowa Residence Hall Environmental Assessment Survey (UIRHEAS). Nine of these recommendations are being implemented immediately. The remaining recommendations require staged implementation, therefore they have been incorporated into the departmental MBO program and have been assigned to specific individuals for completion at a later date.

Once again the faculty, staff, and students expressed a great deal of support for this method of environmental improvement and they strongly recommend that it continue in the future.

Two of us from the planning team will present the model at an international conference in Canada this summer. One of the team members will present the model at a regional conference in the fall. Also the student government representatives on the team will present the model at the National Association of College and University Residence Halls (NACURH) in North Carolina this year.

I welcome any comments you might have about the process and/or the results of our ecosystem study of residence halls.

kst

Appendix L

ER Content Analysis Sheet

ENVIRONMENTAL REFERENT CONTENT ANALYSIS SHEET

Analysis Item Number _____

State Item Text _____

Analysis is for (circle one):

agree, neutral, or disagree responses

Please record your analysis information on this item in the proper space below. If you have more categories than provided for on the sheet, please follow this format in presenting the information on additional sheets. Staple all additional sheets on an item to the proper ER Content Analysis Sheet.

Description	<u>"Why" Category</u>	# of responses
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Description	<u>"What" Category</u>	# of responses
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Appendix M

Guidelines for Writing ER Recommendations

GUIDELINES FOR WRITING RECOMMENDATIONS

The subgroup leaders and I met to discuss questions and concerns regarding the writing of recommendations. The following should prove helpful in terms of your deliberations:

1. Each subgroup leader should utilize the following resources in the development of recommendations:
 - A. Part I analysis of data
 - B. Part II analysis of data
 - C. Staff input from each subgroup leader's respective areas
 - D. Subgroup from the planning team
 - E. Current planning documents (Five Year Plan, MBO, etc.)
2. Do not totally restrict your thinking because of financial constraints or other limitations at this time. As you identify problem areas write down a recommendation that might improve it. We will drop or defer those recommendations that cannot be implemented at a later date.
3. Be creative with the development of your recommendations. Sometimes a program change is not necessary when better communications will suffice. In this particular case, write a communication recommendation.
4. Make recommendations in the areas that were assigned to your subgroup. But also be prepared to assist others in the development of their recommendations when the whole planning team gets together. Don't worry about suggesting recommendations in someone else's area; that's a part of the rules - it's ok. This process should encourage support by limiting artificial boundaries such as positions, organizational relationships, etc.
5. If you need more statistical information about specific items, the computer printout sheets are available in the Housing Office.

Appendix N

Critique Form

CRITIQUE OF ECOSYSTEM STUDY

Please critique the environmental assessment study that we recently completed by providing your impression of the following:

1. Size and composition of the planning team
2. Use of subgroups
3. Frequency and length of meetings
4. Training and support during each stage of the project (i.e., I knew what was going on and why)
5. Method of instrument development and assessment
6. Part I data results (analysis of numerical ratings)

7. Part II data results (analysis of ERs)
8. Process used for team decision-making including recommendations for change
9. Length of time to complete study and implement results
10. Strengths
11. Weaknesses
12. Overall assessment

BIBLIOGRAPHY

BIBLIOGRAPHY

- Adelman, Howard. The Beds of Academe. Toronto: Praxis Books, 1969.
- Argyris, Chris. "The Incompleteness of Social-Psychological Theory: Examples from Small Group, Cognitive Consistency, and Attribution Research." American Psychologist, 24 (1969), 893-908.
- Astin, Alexander W. Four Critical Years. San Francisco: Jossey-Bass, 1977.
- Astin, Alexander W. Manual for the Inventory of College Activities. Minneapolis: National Computer Systems, 1971.
- Astin, Alexander W. "Observations on Higher Education: An Interview with Alexander Astin." NASPA Field Report, 3 (Fall, 1978), 1-4.
- Astin, Alexander W., and John L. Holland. "The Environmental Assessment Technique: A Way to Measure College Environments." Journal of Educational Psychology, 52 (1961), 308-316.
- Astin, Alexander W. "The Impact of Dormitory Living on Students." Educational Record, 54 (Summer, 1973), 204-210.
- Aulepp, LuAnne, and Ursula Delworth. Training Manual for an Ecosystem Model. Boulder, Colorado: Western Interstate Commission for Higher Education, 1976.
- Banning, James H., and Leland Kaiser. "An Ecological Perspective and Model for Campus Design." Personnel and Guidance Journal, 52 (1974), 372-374.
- Barker, Roger G. Ecological Psychology: Concepts and Methods for Studying the Environment of Human Behavior. Stanford: Stanford University Press, 1968.

- Barker, Roger G. "Ecology and Motivation." Nebraska Symposium on Motivation. Ed. M. R. Jones. Lincoln, Nebraska: University of Nebraska Press, 1960, 1-49.
- Barker, Roger G. "The Ecological Environment." Issues in Social Ecology: Human Milieus. Ed. R. Moos and P. Insel. Palo Alto, California: National Press Books, 1974, 255-266.
- Blocher, Donald H. Developmental Counseling. 2nd ed. New York: Ronald Press, 1974.
- Blocher, Donald H. "Toward an Ecology of Student Development." Personnel and Guidance Journal, 52 (1974), 360-365.
- Brown, Robert D. "Manipulation of the Environmental Press in a College Residence Hall." Personnel and Guidance Journal, 46 (1968), 555-560.
- Brown, Robert D. "Student Development and Residence Education: Should it be Social Engineering?." Student Development and Education in College Residence Halls. Ed. David A. DeCoster and Phyllis Mable. Washington, D.C.: American College Personnel Association, 1974, 41-54.
- Brown, Robert D. Student Development in Tomorrow's Higher Education: A Return to the Academy. Washington, D.C.: American College Personnel Association, 1972.
- Centra, John A. "Student Perceptions of Residence Hall Environment: Living Learning vs. Conventional Units." Journal of College Student Personnel, 9 (1968), 266-272.
- Centra, John A. "The College Environment Revisited: Current Descriptions and a Comparison of Three Methods of Assessment." College Entrance Examination Board Research and Development Reports, RDR-70-71, no. 1. Princeton, N.J.: Educational Testing Service, 1970.
- Chein, I. "The Environment as a Determinant of Behavior." Journal of Social Psychology, 39 (1954), 115-127.
- Chickering, Arthur W. Commuting Versus Resident Students. San Francisco: Jossey-Bass, 1974.
- Chickering, Arthur W. Education and Identity. San Francisco: Jossey-Bass, 1969.

- Clark, R. B., and M. Trow. "Determinants of College Student Subcultures." Berkeley, California: Center for the Study of Higher Education, 1960.
- Committee on the Student in Higher Education. The Student in Higher Education. New Haven: Hazen Foundation, 1968.
- Conyne, Robert. "An Analysis of Student-Environment Mismatches." Journal of College Student Personnel, 19 (1978), 461-465.
- Conyne, Robert. "Environmental Assessment: Mapping for Counselor Action." Personnel and Guidance Journal, 54 (1975), 150-155.
- Corazzini, John, and Susan Wilson. "Students, the Environment and Their Interaction: Assessing Student Needs and Planning for Change." Journal of the National Association for Women Deans, Administrators, and Counselors, 40 (1977), 68-72.
- Corazzini, John, Susan Wilson, and Lois Huebner. The Environmental Satisfaction Questionnaire. Fort Collins, Colorado: Rocky Mountain Behavioral Science Institute, 1976.
- Cowley, W. H. "Reflections of a Troublesome But Hopeful Rip Van Winkle." Journal of College Student Personnel, 6 (1964), 66-73.
- Daher, D. M., John Corazzini, and Richard C. McKinnon. "An Environmental Redesign Program for Residence Halls." Journal of College Student Personnel, 18 (1977), 11-15.
- DeCoster, David A., and Phyllis Mable. Student Development and Education in College Residence Halls. Washington, D.C.: American Personnel and Guidance Association, 1974.
- Delworth, Ursula. "Designing Campus Ecosystems." NASPA Journal, 13-14 (1975), 40-44.
- DeYoung, Alan, Rudolph Moos, Bernice Van Dort, and M. M. Penny Smail. "Expectations, Perceptions and Change in University Residence Climates: Two Case Studies." Journal of College and University Student Housing, 2 (1972), 4-11.

- Dressel, Paul L., and I. J. Lehmann. "The Impact of Higher Education on Student Values and Critical Thinking Abilities." Educational Record, 46 (1965), 248-257.
- Duvall, W. H. "Student-Staff Evaluations of Residence Hall Environment." Journal of College Student Personnel, 10 (1969), 52-58.
- Elliott, Odus V. "Assessing Student Needs." Programming and Activities in College and University Residence Halls. Ed. John Schuh. Princeton, N.J.: Association of College and University Housing Officers, 1977, 12-16.
- Faris, R., and H. Dunham. Mental Disorders in Urban Areas. Chicago: University of Chicago Press, 1939.
- Feldman, Kenneth A., and Theodore M. Newcomb. The Impact of College on Students. San Francisco: Jossey-Bass, 1969.
- Ford, Michael. The Social Ecology of Northern Colorado Residence Halls. Unpublished Doctoral Dissertation, University of Northern Colorado, 1975.
- Funkenstein, D. H. "Failure to Graduate from Medical School." Journal of Medical Education, 37 (1962), 585-603.
- Gibbs, John. "The Meaning of Ecologically Oriented Inquiry in Contemporary Psychology." American Psychologist, 34 (1979), 127-140.
- Griffitt, W., and R. Veitch. "Hot and Crowded: Influences of Population Density and Temperature on Interpersonal Behavior." Journal of Personality and Social Psychology, 17 (1971), 92-98.
- Harris, R., K. Hodgson, and R. Riley. Ecosystem Report A: Student Opinion Survey. Community College of Denver, Red Rock Campus, July, 1976.
- Heider, F. "On Perception, Event Structure and the Psychological Environment, Selected Papers." Psychological Issues, 1 (1959).
- Heist, P., and G. Yonge. Manual for the Omnibus Personality Inventory. New York: The Psychological Corporation, 1968.

- Holland, John L. Manual for the Vocational Preference Inventory. Palo Alto, California: Consulting Psychologists Press, 1965.
- Holland, John L. The Psychology of Vocational Choice: A Theory of Personality Types and Model Environments. Waltham, Massachusetts: Blaisdell, 1966.
- Huebner, Lois. "Emergent Issues of Theory and Practice." Applying the Ecosystem Model. Ed. Lois Huebner. San Francisco: Jossey-Bass, in press.
- Hyne, Sue. Institutional Assessment in Outreach Counseling: A Comparison of Two Techniques. Unpublished Masters Thesis, Colorado State University, 1973.
- Insel, Paul M., and Rudolph Moos. "Psychological Environments - Expanding the Scope of Human Ecology." American Psychologist, 29 (1974), 179-188.
- Kaiser, Leland R. "Designing Campus Environments." NASPA Journal, 13 (1975), 33-39.
- Kaiser, Leland R. The Ecological Perspective: Mapping and Designing the Student Educational Community. Unpublished Manuscript, Boulder, Colorado, 1972.
- Knefelkamp, Lee, Carole Widick, and Clyde A. Parker. Applying New Developmental Findings. San Francisco: Jossey-Bass, 1978.
- Lewin, Kurt. Field Theory and Social Science. New York: Harper and Brothers, 1951.
- Lewin, Kurt. Principles of Topological Psychology. New York: McGraw Hill, 1936.
- Linton, R. The Cultural Background of Personality. New York: Century, 1945.
- Maslow, Abraham H. "A Theory of Human Motivation." Readings in the Psychology of Adjustment. Eds. L. Gorlow and W. Walkowsky. New York: McGraw Hill, 1959.
- McFee, A. "The Relation of Students' Needs to Their Perception of a College Environment." Journal of Educational Psychology, 52 (1961), 25-29.
- Menne, John W. "Techniques for Evaluating the College Environment." Journal of Educational Measurement, 4 (1967), 219-222.

- Miller, William G., and James Moore. Measuring Student Perceptions of a Residence Hall Environment. Southern Illinois University, July, 1973.
- Moos, Rudolph. Evaluating Educational Environments. San Francisco: Jossey-Bass, 1979.
- Moos, Rudolph, and Paul M. Insel. Issues in Social Ecology: Human Milieus. Palo Alto, California: National Press Books, 1974.
- Moos, Rudolph. "Sources of Variance in Responses to Questionnaires and in Behavior." Journal of Abnormal Psychology, 74 (1969), 405-412.
- Munroe, R. L., and R. H. Munroe. "Population Density and Affective Relationships in Three East African Societies." Journal of Social Psychology, 88 (1972), 15-18.
- Murray, H. A. Explorations in Personality. New York: Oxford Press, 1938.
- Newcomb, Theodore M. "Student Peer-Group Influence and Intellectual Outcomes of College Experience." Personality Factors on the College Campus. Eds. Robert Southerland, Wayne Holtzman, Earl Koile and Bert Smith. Austin, Texas: Hogg Foundation, 1962, 69-92.
- Nie, Norman, C. Hadlai Hall, Jean G. Jenkins, Karin Steibrenner, and Dale H. Brent. Statistical Package for the Social Sciences. 2nd ed. New York: McGraw Hill, 1975.
- Oetting, E. R. "Evaluative Research and Orthodox Science: Part I." Personnel and Guidance Journal, 56 (September, 1976), 11-15.
- Pace, C. Robert. CUES: College and University Environment Scales. Princeton, N.J.: Educational Testing Service, 1963.
- Park, R. E., and E. W. Burgess. The City. Chicago: University of Chicago Press, 1925.
- Paul, Stephen, and Weston Morrill. "Applying the Ecosystems Perspective to the Ecosystems Perspective." Applying the Ecosystem Model. Ed. Lois Huebner. San Francisco: Jossey-Bass, in press.
- Pervin, Lawrence A. "Performance and Satisfaction as a Function of Individual-Environmental Fit." Psychological Bulletin, 69 (1968), 56-68.

- Pervin, Lawrence A., and D. B. Rubin. "Student Dissatisfaction with College and the College Dropout: A Transactional Approach." Journal of Social Psychology, 72 (1967), 285-295.
- Peterson, Richard E. Technical Manual: College Student Questionnaire. Princeton, N.J.: Educational Testing Service, Institutional Research Program for Higher Education, 1965.
- Piaget, Jean. "Cognitive Development in Children: Piaget Papers." Piaget Rediscovered: A Report of the Conference on Cognitive Studies and Curriculum Development. Eds. R. E. Ripple and D. W. Rockcastle. Ithaca, New York: Cornell University, 1964, 7-20.
- Powell, John R., Samuel A. Plyler, Barbara A. Dickson, and Stephen D. McClellan. The Personnel Assistant in College Residence Halls. Boston: Houghton Mifflin Company, 1969.
- Riker, Harold C. College Housing as Learning Centers. Washington, D.C.: American Personnel and Guidance Association, 1965.
- Schuh, John. "Assessment and Redesign in Residence Halls." Applying the Ecosystem Model. Ed. Lois Huebner. San Francisco: Jossey-Bass, in press.
- Schuh, John, and Melissa Allan. "Implementing the Ecosystem Model." Journal of College Student Personnel, 19 (March, 1979), 119-122.
- Schuh, John. "Implementing the Ecosystem Model: Phase II." Journal of College and University Student Housing, 8 (1978-79), 6-8.
- Sherif, M., and C. Sherif. Reference Groups. New York: Harper and Row, 1964.
- Sherif, M., and H. Cantril. The Psychology of Ego Involvement. New York: Wiley, 1947.
- Stern, George G. "Character of the Intellectual Climate in College Environments." Harvard Educational Review, 33 (1963), 5-41.
- Stern, George G. "Congruence and Dissonance in the Ecology of College Students." Student Medicine, 8 (1960), 304-339.

- Stern, George G. "Environments for Learning." The American College: A Psychological and Social Interpretation of the Higher Learning. Ed. R. N. Sanford. New York: Wiley, 1962, 690-730.
- Stern, George G. People in Context. New York: Wiley, 1970.
- Stern, George G. "Student Values and Their Relationship to the College Environment." Research on College Students. Ed. H. T. Sprague. Boulder, Colorado: Western Interstate Commission for Higher Education, 1960, 67-104.
- Svob, R. "Designing Campus Ecosystems." NASPA Journal, 13-14 (1975/1977), 40-45.
- Van der Ryn, Sim, and Murray Silverstein. Dorms at Berkeley. Berkeley, California: The Center for Planning and Development Research, 1967.
- Walsh, W. Bruce. Theories of Person-Environment Interaction: Implications for the College Student. The American College Testing Program, Number 10. Iowa City, Iowa: ACT Press, 1973.
- Wrenn, C. G. "Philosophical and Psychological Bases of Personnel Services in Education." Personnel Services in Education. Ed. N. B. Henry. Chicago: University of Chicago Press, 1959.
- Zlitnick, S., and I. Altman. "Crowding and Human Behavior." Environment and the Social Sciences: Perspectives and Applications. Eds. J. F. Wohlwill and D. H. Carson. Washington, D.C.: American Psychological Association, 1972.
- Zuckerman, Miron, Marie Schmitz, and Andrew Yosha. "Effects of Crowding in a Student Environment." Journal of Applied Psychology, 7 (1977), 67-72.