



Assessing peer influence in residence halls using the Cooperative Institutional Research Program
by Nancy Ann Krogh

A thesis submitted in partial fulfillment of the requirements for the degree of Doctor of Education
Montana State University

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Abstract:

The purpose of this study was to investigate the influence of peers within a residence hall floor community on selected student outcomes. These outcomes included measures of behaviors; university involvement; personality and self-concept; attitudes, beliefs, and values; academic and cognitive development; degree and life goals; and satisfaction with college. The influence of the resident advisor was also investigated.

The data for this study were collected using the Cooperative Institutional Research Program Freshmen Survey during orientation sessions before the fall semester of 1992, and a follow-up survey at the end of spring semester in 1993.

The data were examined using a five step process including descriptive analysis, paired sample t-tests, correlational analysis, factor analysis, and stepwise linear regression. The results of the regression analyses were compared with separate analyses for students according to the amount of time they had spent with other floor residents or in the residence hall.

A total of 125 variables were examined with t-tests. There were increases in the results of 60 of the variables, decreases in the results of 38, and no change from the pretest to the posttest in 27 of the variables. The floor community was a predictor of the student's score in every regression model.- The resident advisor's score entered the regression model in only one of the original analyses, Social Self-Concept.

This study concludes that peer influence within the residence hall floor community is clearly a factor in student development. The resident advisor's personal influence is limited. Colleges and universities should be intentional about studying smaller peer cultures on campus and in setting up positive environments. Further research on the effects of peer influence within the residence hall community should be conducted. How resident advisors influence their residents should also be further investigated.

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

of

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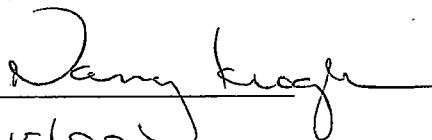
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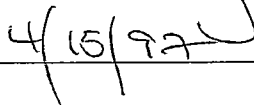


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ABSTRACT

The purpose of this study was to investigate the influence of peers within a residence hall floor community on selected student outcomes. These outcomes included measures of behaviors; university involvement; personality and self-concept; attitudes, beliefs, and values; academic and cognitive development; degree and life goals; and satisfaction with college. The influence of the resident advisor was also investigated.

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This study concludes that peer influence within the residence hall floor community is clearly a factor in student development. The resident advisor's personal influence is limited. Colleges and universities should be intentional about studying smaller peer cultures on campus and in setting up positive environments. Further research on the effects of peer influence within the residence hall community should be conducted. How resident advisors influence their residents should also be further investigated.

CHAPTER 1

INTRODUCTION

Framework

The study of college outcomes has been receiving increasing attention in higher education. Regional accrediting associations are requiring assessment programs in their member institutions, while state legislatures and the public are demanding greater accountability from colleges and universities. Although this impetus for assessment often looks at explicit signs of student achievement such as graduation rates or attrition, higher education research has increasingly focused on the factors that influence student development. The aim of assessment is to recommend practices which an institution can implement to enhance student growth. Amid concerns of academic achievement and real benefits in exchange for the continued investment in higher education and because of internal and external demands for greater accountability, colleges and universities are increasing their assessment activities.

Assessment of the college experience is not new. In 1936, Stephen Corey published one of the first summaries of research which reviewed twenty years of previous college

studies (Pascarella & Terenzini, 1991, p. xi). Since that time a cumulative base of knowledge has been built by researchers whose works have become standard texts and classics in the field (Astin, 1977, 1991a, 1991b, 1993; Feldman & Newcomb, 1969; Jacob, 1957; Lenning, Lee, Micek, & Service, 1977; Pascarella & Terenzini, 1991). Research on the impact of the college experience on students is extensive and has provided a fundamental framework for what is productive. How this information can be practically used to enhance student learning and development on college campuses is of interest to the faculty and to student development professionals as they strive for a greater understanding of their effectiveness.

Background of the Study

Important Factors

In reviewing the higher education research, a few factors consistently stand out as consequential for student development and success. Extensive research has pointed to peer influence as one of the most influential factors on student development (Astin, 1993, pp. 398-410) while on-campus living is consistently identified as one of the factors leading to involvement and integration into the institution (Pascarella & Terenzini, 1991 pp. 611-613). An earlier review of 50 years of research reveals that college

is a place where students are socialized and where they adopt attitude and value norms from other students and the faculty. Student interaction is especially influential in social and interpersonal development (Feldman & Newcomb, 1969). Other researchers have confirmed the impact of student peers on student development and learning (Astin, 1977; Pace, 1979; Pascarella & Terenzini, 1991). In his extensive study, What Matters in College, Astin (1993) concludes that "viewed as a whole, the many empirical findings from this study seem to warrant the following general conclusion: the student's peer group is the single most potent source of influence on growth and development during the undergraduate years" (p. 398).

Living in a residence hall is another factor that can have a beneficial impact on college outcomes. Living on campus has proved to have positive effects on college persistence, involvement, and integration with the institution (Alfert, 1966; Astin, 1975; Pascarella & Terenzini, 1991). In their meta-analysis of higher education research Pascarella and Terenzini (1991) concluded that "living on campus (versus commuting to college) is perhaps the single most consistent within-college determinant of impact" (p. 611). Residence hall living provides an environment where students can interact closely with their peers and also offers college administrators a

way to access students.

A less studied factor in the impact of residence hall life is the effect of the floor community on student development. Few other experiences in college offer as intense an interaction with peers as living within a residence hall floor community. Commonly, students in the residence halls are assigned to a room on a floor community, and these communities are managed as separate living units within the hall. Each floor community is assigned a resident advisor (RA), who is responsible for developing a healthy living environment that is conducive to successful college attendance. The resident advisors do this by offering activities and educational programming, by acting as a resource for the residents, and by enforcing residence hall regulations. The floor communities have their own student governments, which are part of the larger hall and inter-hall residence hall associations. These floor communities act as a home to the residents. Students often spend more time with their roommates and floormates than with anyone else during their college stay. The close association with the roommates and other floor residents can determine group formation, and student interactions are often concentrated with roommates and those living in close physical proximity in the hall (DeCoster & Mable, 1974, p. 30). The close living arrangements often naturally lead to

friendships and relationships that can last a lifetime. Although there has been much research on peer influence and benefits of on-campus living, little is known about specific influences of floor communities and how students change in this smaller and more personal environment.

Alexander Astin and the Cooperative Institutional Research Program

One of the most prominent researchers in the field of higher education is Alexander Astin. Astin, a professor of higher education at the University of California, Los Angeles (UCLA), is also the director of the Higher Education Research Institute (HERI), and is the founding director of the Cooperative Institutional Research Program (CIRP) (Astin, 1993, p. xxi). The author of 18 books and over 200 articles in the field of higher education, Astin's major fields of inquiry include "outcomes of higher education, institutional quality, equality of opportunity and access, assessment and research methodology, and the interface between research and policy" (Higher Education Research Institute [HERI], August 1996, p. 226). Identified as the most frequently cited author in the field of higher education, Astin's influence on current research has grown in the last ten years (Budd, 1990, pp. 92-94).

In 1966 Astin established the Cooperative Institutional

Research Program (CIRP) at the American Council of Education. Moved to the Graduate School of Education at UCLA in 1973, the CIRP is now the largest and longest empirical study of higher education in the United States. CIRP combines data from approximately 1,400 institutions, over 8 million students, and more than 200,000 faculty. The student data for the CIRP is obtained by administration of the Freshmen Survey of entering college students at approximately 1,400 different higher education institutions. The College Student Survey (CSS) is used as an exit survey of college seniors, and is linked to the Freshmen Survey. The annual CIRP Freshmen Survey and College Student Survey are now administered by HERI under the continuing sponsorship of the American Council of Education. (Sax, Astin, Korn, & Mahoney, 1996, pp. ii-1).

Statement of the Problem

The impact of residential life on new students is well documented (Astin, 1977; Chickering, 1974; Pascarella & Terenzini, 1991; Upcraft & Pilato, 1982). Typical first-year students spend more time in their residence hall than any other place on campus. Despite the studies on the impact of both peer influence and residence hall living on students, there has been little research about how residence hall communities influence students and what role the

resident advisor plays in this process. Gaining preliminary understanding of the smaller communities within the residence hall will be important for further research.

The CIRP Freshmen Survey is administered to over 550 colleges and universities annually (Terrell, 1992, p. 222). Despite its widespread use, Terrell reported that many institutions underutilized the Freshmen Survey as a source of research data for campus assessments, and she recommended that the institutions should take advantage of "this informational gold mine to affect academic and nonacademic strategies and policies" (p. 228). Montana State University-Bozeman (MSU-Bozeman) has administered the CIRP Freshmen Survey every other year since 1966. However, the university has not commonly used the data for further research. More extensively using the data for research at MSU-Bozeman can help the university in decision-making and planning. Understanding the students the university serves is also important to student affairs staff and the faculty as they design and implement programs to benefit student's academic and personal development. A description of the characteristics of students as they enter the university and the change in these characteristics after one year will be beneficial to both staff and faculty at MSU-Bozeman.

Purpose of the Study

This study was an exploratory examination of the changes in attitudes, goals, involvement, and behaviors of the students who live in residence hall floor communities and the influence of these communities on these changes. The purpose of this study was to investigate the influence of peers within a floor community on selected student outcomes. These outcomes included measures of (a) behaviors; (b) university involvement; (c) personality and self-concept; (d) attitudes, beliefs, and values; (e) academic and cognitive development; (f) degree and life goals; and (g) satisfaction with college. It also investigated the influence of the resident advisor of the floor on these student outcomes.

Research Questions

In order to analyze the influence of peers and of the resident advisor on floor communities on student outcomes the following questions were investigated:

1. Do residence hall students' behaviors; university involvement; personality and self-concept; attitudes, beliefs, and values; academic and cognitive development; degree and life goals; and satisfaction with college change during their

first year at Montana State University.

2. Is the amount of student involvement with the university influenced by the amount of involvement of the other residents on the floor community?
3. Are students' personality and self-concept influenced by the residence hall floor community?
4. Are student beliefs, attitudes, and values influenced by the beliefs, attitudes, and values of others in the community?
5. Do the behaviors of the other students on the floor in the residence hall influence individual student behaviors?
6. Is students' academic and cognitive development influenced by the residence hall floor community?
7. Are individual student's academic, degree, and life goals affected by the floor community's academic, life, and degree goals?
8. Is satisfaction with different aspects of the college environment affected by the satisfaction of the floor community?
9. How does the resident advisor influence the

behaviors; university involvement; personality and self-concept; attitudes, beliefs, and values; academic and cognitive development; degree and life goals; and satisfaction with college of the floor residents?

Limitations

This study had several limitations. Since the CIRP Freshmen Survey is administered during the student orientation sessions prior to the beginning of the academic year, only those students who attended the orientation were included in the study. In addition, the study was limited to those students who lived within the residence life program established at MSU-Bozeman. In addition, separate analyses were not done by gender, ethnicity, socioeconomic status, or other crucial student characteristics.

A student satisfaction survey was administered randomly to 25% of the residence hall population approximately one month prior to the posttest administration date, and this satisfaction survey was met with some resistance by the students. This may indicate that there was some opposition to or impatience with surveys. In addition, many of the questions on this study's survey were of a personal nature,

and there may have been some apprehension by survey respondents that the information would not be held confidential or might be identified.

Resident advisors were also asked to fill out the follow-up survey to compare their answers to their floor residents' responses. The RA's may have been apprehensive about how their survey answers would be used in connection with their job. Because much of the information is personal, the RA's may have feared that the answers they provided or comparisons by their residents would affect their evaluations by the residence life senior staff in the coming year. They were reassured that no identifying information would be used or released, and that the information would not be used in any job performance assessment.

Definition of Terms

Assessment

The collection of information about students, staff, and institutions of higher education and the evaluation of these data for the purpose of correcting problems and enhancing the educational experience. Assessment can be described as measurement or the gathering of information and evaluation or the use of the information for institutional improvement. The assessment practices of an institution

reflect its values (Astin, 1991a, p.5).

CIRP

The Cooperative Institutional Research Program (CIRP), directed by Alexander Astin at the Higher Education Research Institute at the University of California, Los Angeles, is a longitudinal study of the American higher education system. CIRP has collected data about students, faculty, and institutional characteristics since 1966 from approximately 1400 higher education institutions. The main data collection tools are surveys administered to freshman and upperclass students (Dey, Astin, Korn, & Riggs, 1992).

College Environment

College environment refers to the student's experiences while attending college. These include classes; interactions with peers, staff, and faculty; extra-curricular activities; place of residence; and any other variable that may have an effect on the student.

"Environmental variables might also be referred to as treatments, means, or educational experiences, practices, programs, or interventions" (Astin, 1991a, p. 18).

College Outcomes

The variables of student development that the college or university influences or attempts to influence through its programs and practices. These outcomes include cognitive and affective measures. College outcomes are also

known as the dependent variables, criterion variable, aims, goals, or objectives (Astin, 1993).

Floor Communities

A space in a residence hall staffed by a resident advisor and distinguished as a smaller living unit within the residence hall. Residents within a floor community generally have common living areas and a floor government, which interacts with the hall and inter-hall governments. The resident advisor and the floor residents often plan activities and functions in order for floor members to interact.

Resident advisors (RA's)

Students who live in the residence halls and function as paraprofessional residence life staff members. Their job includes conducting administrative duties such as record keeping of floor furnishings and repair; providing educational programming for floor residents; acting as a resource person for students; maintaining discipline; and acting as a positive role-model.

Student Inputs

Any characteristics that the student brings to the college experience (Astin, 1991a).

CHAPTER 2

REVIEW OF THE LITERATURE

College Outcomes Assessment

Student outcome assessment is not new to American education. Calls for increased assessment followed the expansionary periods in higher education of 1918-1928 and 1952-1975 (Erwin, 1991). In 1936 Stephen Corey reviewed seventeen studies published between 1925 and 1935 (cited in Pascarella & Terenzini, 1991, p.xi). Corey's article entitled "Attitude Differences Between College Classes: a Summary and Criticism" published in the Journal of Educational Psychology found that upper-level students tended to be more socially, politically, or religiously liberal than lower-level students. In this early literature review of college impact, Corey made the important point that the studies reviewed were based on cross-sectional rather than longitudinal data and as such that the changes could not necessarily be attributed to college impact, but were perhaps simply a result of differences between the upper and lower level classes.

Jacob (1957) provided one of the first comprehensive reviews of college impact (cited in Erwin, 1991; Feldman &

Newcomb, 1969; Pascarella & Terenzini, 1991). Jacob reported that "more homogeneity and greater consistency of values" (Erwin, 1991, p. 12) were found in seniors as compared to freshman. He attributed these changes to socialization of the student to college life, and not to the impact of the curriculum.

Katz and associates (1968) conducted an important longitudinal study on the classes that entered Berkeley and Stanford in 1961. The students were given inventories that collected data on many areas including personality, social maturity, attitudes toward authoritarianism and ethnocentrism, and attitudes toward drinking. These inventories were again administered to the students in 1965 during their senior year. This study was different because in addition to the freshman inventories, in-depth interviews were conducted with randomly selected students in the sample. The focus of the study was personality development in traditional college students. In the senior year, along with the personality inventories, a 19-page questionnaire based on these in-depth interviews was administered. One of the findings that surprised the researchers was the passivity with which students viewed their college lives. For many, the choice to attend college was a foregone conclusion and heavily influenced by their parents and society. The researchers noted that students came to

college for a variety of reasons. These included developing their identity or learning social or occupational skills to attending college because there was nothing else to do or because they felt pressured to attend. While students had many different reasons for attending college, Katz also noted that undergraduate education had many functions:

It is a further step in the socialization process; it provides channels for upward mobility; it provides some occupational preparation; and it gives professors a place to pursue their specialized investigations and to obtain some recruits for them. While serving these purposes, it also creates a learning environment in which, for many students, coercion predominates over curiosity and initiative." (p. 417)

In recommendations for changes Katz continued on to say:

The answer lies in providing environmental conditions and experiences that are conducive to psychological development; that is, any experiences, academic or otherwise, that further a student's sense of competence, enhance his self-esteem, and affect his readiness for genuine self-awareness and self-criticism as well as his resistance to improper external pressures....The starting point would be to make the student, not the course, the primary interest of the professor, the department, or the graduate or professional school; to make the student the 'unit of education'. (p.424)

Information about the impact of college expanded rapidly and Feldman and Newcomb (1969) published a comprehensive review of studies that has come to be considered a classic. Feldman and Newcomb noted that "every student who ever attends any college undergoes some impact

from the experience -- even if he withdraws at the end of one 'horrible week'" (p.325). Beyond this general observation, they laid the foundation for theories and framework for studying college impact. They noted that students had changed with substantial uniformity in American colleges, and though this did not necessarily reflect the impact of college, some of these changes were most likely attributable to exposure to college. They continued their argument that the question to be answered is one of what kinds of conditions generate change in students. Feldman and Newcomb also proved visionary about the challenges for higher education. They saw that American education had changed from small, intimate institutions to large urban universities, and they stated that maximizing impacts on students would need to utilize the internal organization of an institution and create horizontal structure to assure positive impact.

Pascarella and Terenzini (1991) published an exhaustive review of the literature on college impact that is sure to become another classic in the field of higher education. They noted that in the twenty years since the publication of Impact of College on Students (Feldman & Newcomb, 1969) the number of empirical studies and the areas of inquiry had more than doubled. Pascarella and Terenzini noted that

three major developments had affected this research. These were (a) the significant development of theoretical constructs to lead further study, (b) the development of sophisticated and powerful software statistical packages, and (c) the development of complex analytical and research designs (pp. 203).

The organization of Pascarella and Terenzini's work (1991) provides a good overview of the state of current knowledge about the impact of college. They note that there are now over twenty theories designed to direct research into college change or to guide policy. The authors divide current theory into four categories: "(1) psychosocial theories, (2) cognitive-structural theories, (3) typological models, and (4) person-environment interaction models" (p. 18). They segment the examination of research about change during college into several categories including development of learning; verbal, quantitative skills and subject matter competence; cognitive skills; psychosocial changes such as self-concept and relationships; attitudes, values, and moral development; and educational, social, and economic benefits of college attendance. In reviewing these areas they asked six questions: do students change, are these changes attributable to college, are these changes related to differences between institutions, are they related to

differences in experiences within the institution, are these changes related to student characteristics, and is the change long-term? They found that college students do change in a broad and substantial manner across cognitive, attitudinal, value, and psychosocial areas. In assessing the net effects of college there exists moderate to strong positive effects on learning and cognitive development, a moderate effect on attitude and values, and mixed net effects on psychosocial outcomes. However, they note that in the psychosocial area college impact is reliably and positively related to changes in students' self-concepts of academic and social abilities as well as self-esteem.

Assessment will continue to be a factor in shaping and revising higher education practices in the future. All six of the regional accrediting associations have adopted requirements relating to a formal program of outcome assessment. The Northwest Association of Schools and Colleges, which is the regional accrediting agency for Montana State University, has adopted an educational assessment policy which states:

The Commission on Colleges expects each institution and program to adopt an assessment scheme responsive to its mission and its needs. In so doing, the Commission urges the necessity of a continuing process of academic planning, the carrying out of those plans, the assessment of the outcomes, and the influencing of the planning process by the assessment activities.
(Accreditation Handbook, 1994, p. 57)

The Commission goes on to state:

The intent of Commission policy is to stress outcome assessment as an essential part of the ongoing institutional self-study and accreditation processes, to underline the necessity for each institution to formulate a plan which provides for a series of outcome measures that are internally consistent and in accord with its mission and structure, and finally to provide some examples of a variety of successful schemes for assessing educational outcomes. (p 58)

Alexander Astin and the Cooperative
Institutional Research Program

Alexander Astin has spent much of his life's work in assessing college student outcomes. The Cooperative Institutional Research Program (CIRP) now administered by the Higher Education Research Institute at UCLA and directed by Astin until this year has collected information on students attending American colleges and universities since 1966. Astin and his associates have used this information to do normative and methodological research about what effects students in college (Dey, Astin, Korn, & Riggs, 1992). Astin (1977, 1993) states that many of the problems in early research are due to lack of multi-institutional and longitudinal data. The CIRP Freshman Survey has tried to meet these needs by having entering freshman at participating institutions answer questions about themselves and their predictions of college outcomes. These

researchers have also used a follow-up survey, which is administered to college sophomores, juniors, or seniors at participating institutions.

Astin (1991a) considers "assessment to include the gathering of information concerning the functioning of students, staff and institutions of higher education" (p.2). He states that "an institution's assessment practices are a reflection of its values" and that "assessment practices should further the basic aims and purposes of our higher education institutions" (p.3). Astin asserts that higher education must define quality or excellence before it can be assessed. Good assessment is good research, and the goal is to make better educational decisions.

Astin (1982) presented five traditional approaches to gauging quality in higher education: (a) The nihilist view that the quality of undergraduate education is too complex to measure; (b) the reputational measure that quality is measured by consensus of opinion or how people perceive an institution; (c) the resource measure that equates quality with an institution's ability to attract money, prestigious faculty, and bright students; (d) the outcome measure which grades quality by the institution's products such as persistence rates or the number of students listed in *Who's Who*; and (e) the value-added measure which examines the

institution's ability to make a favorable impact in the development of students. Astin (1991b) further developed the value-added measure and suggested that a preferred method of measuring excellence is the talent development model. This approach defines excellence as the ability to develop the talents and aptitudes of students to their fullest. The reputational and resource model are the most common in higher education and in fact reinforce each other. The institution that can enhance its reputation has the best chance of attracting well-known faculty and those students with high SAT or ACT test scores. In turn, having a prestigious faculty and beautiful facilities can benefit an institution's reputation. However, the ability of an institution to develop a favorable reputation or attract significant resources tells nothing about its effectiveness or its ability to sufficiently develop the talents of students.

A model that Astin (1991a) has developed for assessment involves what he terms input-environment-output, or I-E-O. In this model, inputs are the characteristics of the students as they enter college; environment refers to the programs, people, and experiences the students encounter in college; and outcomes are the students' characteristics after exposure to college. "The real issue in research on college impact is to determine what difference college

attendance makes in the development of the individual" (Astin, 1993, p.5). Student outcomes cannot be attributed to environment without taking into account student inputs. Students who achieve after college may have entered with those talents and changes may instead be due to maturation or social change.

Astin (1973) organized student outcomes into categories of type of outcome, type of data, and time. The type of outcome can be either cognitive outcomes such as knowledge acquisition, critical thinking or reasoning skills and affective outcomes such as attitudes, values, self-concepts, aspirations or other everyday behaviors. These two types of outcomes are organized along two types of data: psychological or behavioral. Psychological data pertains to internal disposition or traits of the individual, and behavioral data concerns observable behavior. Time is considered from both the short-term aspect and longer-term perspective, and is applied to both the outcomes and the two types of data.

In his latest study, What Matters in College, Astin (1993) followed college students and their development from 1985 to 1989. Input data were collected on students from the 1985 CIRP freshman survey and from SAT or ACT scores from the Educational Testing Service and the American College Testing Program. Outcome measures were collected

from a follow-up mail survey sent to a random sample of students from four-year colleges who completed the 1985 freshman survey. Outcome data were also collected from the registrars of the institutions and from scores on the Graduate Record Exam, the Law School Admission Test, the Medical College Admission Test, and the National Teacher Examination. Environmental measures used included 16 measures of institutional characteristics, 35 measures of student peer group characteristics, 34 measures of faculty characteristics, 15 measures of the type of curriculum offered, 15 measures of financial aid, 16 measures of major field choice, 4 measures of type of residence, and 57 different measures of student involvement. Thus, Astin considered a total of 146 input measures, 192 environment measures, and 82 measures of student outcomes.

The findings for this study were intriguing and complex. However, certain themes run throughout the analysis. Astin concluded that the student's peer group is the most influential factor on growth and development. Next to the peer group, characteristics of the faculty exert the most influence on a student's development. Two measures of faculty orientation within an institution, Research Orientation or Student Orientation, had consistently opposite effects on student outcomes supporting the belief that the split between research and teaching priorities in

American institutions is real. The research also supports Astin's theory of student involvement (1984) that states that student's learn by becoming involved. A problem that exists in higher education is that policy makers are guided more by economic considerations than educational considerations (Astin, 1977, 1993). This is a matter of values and that higher education should value the talent development of students more than the acquisition of resources or reputation.

Astin (1993) studied students' satisfaction with their college education and noted that satisfaction and retention in college are directly related. He classified satisfaction responses in two ways: Satisfaction with the environment and ratings of the college experience. In this study, the environmental variable with the strongest negative effect on student satisfaction was lack of student community. The strongest positive effect was the environmental measure of the student orientation of the faculty.

Peer Influence

Socialization into the college culture has been noted as an important factor in student lives. Many students feel peer pressure to minimize their interest in academic pursuits (Katz, 1968). Because of fear of competition or fear of unfamiliar intellectual activities, freshman

students pressure each other to minimize their interest in academics. This peer pressure is obviously counterproductive to what the university would like to instill in freshman students.

Another model of student integration views attrition as a process by which students bring to college characteristics such as ability, background, and intentions which interact with the structures, sub-groups, and members of the institution, leading to varying degrees of integration into the college community (Tinto, 1975, 1993). Tinto views integration as the extent to which the student shares the normative feelings and beliefs and the extent to which the student accepts the formal and informal rules and structures of both the members of the whole institution and the sub-groups to which the student belongs. Although Tinto's theory concentrates on student attrition, Pascarella and Terenzini (1991, pp. 51-53) note that this model has been successfully used in researching other student outcomes such as academic skill acquisition, personal change, and academic major change.

Feldman and Newcomb (1969) noted that the campus-wide culture is mediated by a variety of sub-groups in which students are involved; each of these has a culture of its own. Student peer groups serve a variety of functions, including to ease the transition of students from parents

and home to college, to support academic growth, to offer emotional support, to provide growth in social interaction skills, to provide support in both unchanging and changing values, and to form social ties that keep students from leaving college and provide social networks that may continue in careers after college. Faculty were more influential on intellectual development and occupational and career choice, but student peers were more influential in social, interpersonal and personality development. They noted students were also more likely to turn to other students for advice and help than they were to seek out faculty.

Bank, Slavings, and Biddle (1990) examined the social influences on students' decisions to remain at college or to leave. Social influence is a substantial factor in decisions to leave or persist at college, and the identity of the influential person is a key factor. Peers, followed by parents, are most influential in these decisions. Faculty is less influential, but this may be because the faculty is less important to the respondents. The authors further made a distinction between normative and modeling influences and found each type to have independent effects on persistence. Normative influence had stronger effects in their study, but that this finding contradicts results in other studies.

Hallinan and Williams (1990) state that the most commonly used theories of peer influence are normative and comparative reference-group theory and role theory. Normative reference groups set norms for behavior, comparative reference groups provide a standard by which students evaluate their behavior, and role theory states that students imitate the behavior of an individual or group that they respect. These theories are criticized on the grounds that they fail to define the mechanisms that control the influence process. An alternate method for understanding peer influence is by using Parsons' theory of influence. "According to Parsons, influence is any factor that affects the formation of a person's attitudes and opinions by acting directly on his or her beliefs." (pp. 122-123). Parsons says that people can be influenced when there is a need for information, and their willingness to be influenced is affected by their trust in the source of influence. Hallinan and Williams used Parsons' theory to examine the influence of friends on students' aspirations to go to college and on actual college attendance. They found Parsons' framework to be useful in their study and that perceived trust of friends increased these peers influences, particularly for college expectations. They concluded that Parsons' theory has heuristic value in researching the influence process.

Unlike previous studies, in his latest study Astin (1993) "has been able to compare and contrast peer group effects with effects of faculty, curriculum, and institutional type, and to pinpoint how particular outcomes are affected by specific characteristics of the peer groups" (p. 398). It is clear that student's values and beliefs tend to change in the direction of the peer group. As a result, Astin has proposed a theory of peer group effects. The effects of peer groups on learning and development are subtle and complex and merit much more study. Peer groups can be viewed from two perspectives: the individual or psychological point of view and the group or sociological point of view. A peer group from the individual point of view is a unit of people with which the individual identifies and from whom the individual seeks acceptance and approval. A peer group from the sociological perspective is a group whose members identify with and seek approval and acceptance from each other. "The key to understanding this process may well lie in the norms and expectations of the group members" (p. 401).

Astin's (1993) theory suggests that beyond this basic prediction there are several other testable hypotheses:

- The peer groups having the greatest impact will be those with whom the individual most strongly identifies (this is an especially important issue, given the very large number

of possible peer groups that one finds in a single institution).

- The impact of the peer group will be proportional to the extent to which the individual seeks acceptance and approval from that group.
- The magnitude of any peer group effect will be proportional to the individual's frequency and intensity of affiliation or interaction with that group.

Some other possible corollaries that could be tested would include the following:

- Individual members of a peer group who exhibit beliefs and behaviors that are at variance with peer group norms will be more likely to leave that peer group than will students whose beliefs and behavior are consistent with peer groups norms.
- Individual peer group members with deviant beliefs or behavior will be less likely to leave the peer group if they change their beliefs and/or behavior in the direction of group norms. (p. 402)

Student to student interaction tends to facilitate learning and growth because interaction signifies affiliation and reinforces student values and behaviors that are associated with the student role such as studying and pursuit undergraduate and graduate degrees.

* In a study to examine out of class experiences effect on learning and personal development, Kuh (1995) found that peer interactions and leadership experiences were among the most mentioned by students as being related to positive growth in college. In this study 149 seniors from 12 institutions were interviewed. From the interview data five outcome factors were constructed and used as dependent

variables, and eight types of experiences used as independent variables. Peers were the single most important influence on the variables of Humanitarianism, Interpersonal Competence, and Cognitive Complexity, especially for traditional-age students who live in the residence halls (p. 146).

Pascarella, Edison, Nora, Hagedorn, and Terenzini (1996) reiterated that previous research has consistently found that students' interactions with peers and faculty have the greatest impact on value, attitudinal, and psychosocial change during college. A study to understand influence on students' openness to diversity in the first year of college supported Astin's research that the peer group is a potent source of influence during college and that the magnitude of any influence is proportional to the frequency and intensity of affiliation and interaction with that group. The study also found that controlling for the influence of all other predictors, living on-campus had a significant positive effect on first year openness to diversity.

While the fact that peers influence student values is widely understood, using interventions to influence this development is just starting to be accepted. Dalton (1989) believes that what is unique about peer influence in today's environment is the extent that it is detached from the

academic community, particularly in large institutions.

"Because the peer culture is largely invisible to outsiders, student affairs staff and faculty are likely to overlook its influence or underestimate its impact....The college peer culture is particularly influential today because its values are not strongly nor consistently confronted in the academic environment" (pp. 4-5). The university must influence peer culture to contribute to the educational goals of the institution. There are three strategies for influencing peer culture. First, it is important to understand the peer culture of the students. There are abundant data, such as the CIRP, on students, but it should be systematically used. In addition, researchers should understand how students spend their time. A look at where students put their energies can provide an important measure of what they are learning. The second strategy is to clearly establish student culture as a domain for intervention. While not returning to in locus parentis, higher education should become "more intentional in making formal connections between the curriculum, teaching, and student life" (pp. 7-8). The third strategy intends to label and challenge those items in the peer culture that conflict with the educational mission and objectives. For example, several issues such as alcohol and drug use or academic integrity should be targets for institutional intervention.

Role of Residence Halls in Student Development

The role of dormitories in campus life dates back to early English universities such as Oxford and Cambridge. The early American colonial colleges adopted the English tradition, and the dormitories became the center of the collegiate way of life, and the forerunner of in locus parentis. Faculty was charged with total responsibility for the students, including their discipline, and their moral development. After the Civil War, the influence of the German university system was in part responsible for the separation of the role of the residence hall and the academic part of the college life. The German system focused on research and teaching, and paid little attention to student life out of the classroom. American scholars who traveled to Germany to earn advanced degrees implemented this philosophy when they assumed leadership roles in the new educational institutions being formed.

The separation between academics and extra-curricular life continued to grow during the latter part of the nineteenth century. In 1890 the first dean of men was appointed at Harvard relieving faculty of discipline and extra-curricular duties. Throughout the twentieth century the role of faculty changed, and student affairs staff were appointed to serve extra-curricular student needs; this was

especially so after the Second World War. The development of student development theories in the late 1960's had a profound impact on residence hall staffing and programming. With increasing research on the effects of peer influence and the integrated nature of the academic experience, residence halls have become more important in the discussions about higher education reform (Schroeder, Mable & Associates, 1994, pp.5-13).

The role of the residence hall in the relationship between out-of-class experience and academic and cognitive student development is one of the most widely researched topics in higher education literature (Terenzini, Pascarella, & Bliming, 1996, p. 150). In their meta-analysis of college research, Pascarella and Terenzini summarized the effect of residence hall life on student outcomes. Residence hall life has a weak positive effect on the development of student autonomy, independence, and moral development, and there are moderate positive effects on values, self-concepts, and intellectual development. There is a strong correlation between on-campus residence and persistence and degree completion. The summary information included in Table 1.

Residential differences can be distinguished as "academic" and "non-academic" student orientations (Nasatir, 1969). The effect of residence on persistence was

further defined by examining the different rate between these two orientations. The attrition rate was highest when the individual student's orientation was incongruous with the orientation of the student's residence hall.

Table 1. Summary of Estimated Within-College Effects: Residence.

Outcome	Strength of Evidence	Direction of Effect	Major Rival Explanations Controlled	Magnitude of Net Effect
Aesthetic, cultural, intellectual values	Moderate	Positive in direction of on-campus residence	Gender, race, SES, ability, initial values	Unclear ^a
Sociopolitical attitudes and values	Moderate	Positive in direction of on-campus residence	Gender, race, SES, ability	Unclear
Secularism	Moderate	Positive in direction of on-campus residence	Gender, race, SES, ability, initial values	Unclear
Self-concepts	Weak to moderate	Positive in direction of on-campus residence	Gender, race, SES, ability, initial concepts	Unclear, but probably small and indirect via interpersonal relations
Autonomy, independence, internal locus of control	Weak	Positive in direction of on-campus residence	Gender, ability	Unclear
Intellectual orientation	Moderate	Positive in direction of on-campus residence	Gender, ability, initial levels	Unclear, but probably small and indirect, mediated by interpersonal relations and residence environment
Persistence and degree attainment	Strong	Positive in direction of on-campus residence	Gender, ability, SES, educational aspirations, high school achievement	Unclear
Moral development	Weak	Positive in direction of on-campus residence	Initial level	Unclear

Note. SES=socioeconomic status.

"Unclear," as used in this table, means we are acknowledging that the studies do not allow such estimates or that the evidence, though generally consistent, is still sufficiently complex to make an estimate of effect size hazardous.

Source: Pascarella & Terenzini, 1991, p. 612.

Over two decades ago, Astin (1975) found that on-campus living in a residence hall during the freshman year increased the student's chances of completing college. These results occurred across all types of students regardless of gender, race, qualification, or background, and across all institutional types.

Terenzini and Pascarella (1982) studied the relationship between residence arrangements and students' decisions to continue at or leave their college institution. All previous studies, except for Nasatir's 1969 study, had failed to examine the varying contexts within different residential types and how these differences influenced persistence. Terenzini and Pascarella found that student's residence influenced whether they persisted or withdrew from their institution.

Whereas the unit of analysis in this study was the entire residential unit, the selection of this level may have added unnecessarily to the within group variance, making real differences more difficult to detect. It seems reasonable to suggest that a larger sample of students, and adoption of a less-aggregated unit of analysis (e.g., floor or wing within large units: may produce greater differentiation and increased predictive power....The influences of these sub-environments, sub-cultures or sub-groups are, however, only dimly understood as yet. (p.16)

In a meta-analysis of the studies, Terenzini, Pascarella, and Bliming (1996) concluded that on-campus residence gave no advantage to students in grade performance

over commuting students. An exception to this is when students were assigned to halls based on their previous academic performance. Students who lived with other high-ability students tended to do better academically, even when controlling for their previous ability. The peer culture that supports academic achievement may account for the better performance. While residence hall life may not have a direct effect on grades, "a growing body of research indicates that student's interpersonal interactions with peers and faculty members shape a number of dimension of cognitive growth...and that residence halls clearly afford more opportunities than other living arrangements for students to interact with peers and faculty members" (p. 152).

While the evidence of effect on grades is limited, the research overwhelmingly shows the positive effects of residential living on persistence and completion of degree (Winston, Anchors, & Associates, 1993, p. 48). This is attributed to the positive influence of residence hall life on student involvement with the university. In addition, on-campus residence has a positive relationship with satisfaction with college, another strong predictor of retention and completion. "Most of the positive effects of traditional residence hall living appear attributable to the physical proximity of large numbers of peers and the

relationships they develop. Without intentionally designed, effective interventions, the potential power of residence hall living for positively affecting the lives of students will remain marginal" (p. 52).

On-campus living is consistently one of the factors leading to involvement and integration into the institution (Pascarella and Terenzini, 1991). Residence hall students also have significantly more social interaction with faculty and other students than do students who commute. This influence exists across student and institutional characteristics and when these characteristics are controlled. The positive effects of residential life are linked to the facilitation of campus involvement.

Despite the volume of research on the impact of residence halls, little is known about the effect of the impact of the residence hall floor or the effect of the immediate peer group. Pascarella and Terenzini (1982) point out that two limitations of these studies are that individual differences of students when they enter college are not taken into account, and that varying residential context is not examined (pp. 2-3).

Pascarella, Terenzini and Bliming offered two general observations about the nature of the impact of residence halls. First, the effects of residence halls are indirect, or rather, "transmitted largely by distinctive peer

environments and increased opportunities for interpersonal and cultural involvement" (Schroeder, et al. 1994, p. 41). Second, residence halls tend to attract like students and reinforce their impact. Future research should investigate the complex and indirect nature of the residence halls on students. In addition, most previous research has been on general effects and the effects of residence on academic achievement. Further research is needed on more specific aspects of the residential experience and on additional dimensions of student growth.

Role of the Resident Advisor

Residence halls commonly employ paraprofessionals, or resident advisors (RA's), to monitor and serve the floor communities. These RA's are typically undergraduate students who are selected, trained, and supervised to contribute to student development and to monitor floor residents and intervene when problems arise. The RA has several duties (Upcraft & Pilato, 1982, pp.10-12). They must provide help and assistance to students and be trained to refer them to other campus resources when necessary. They must also initiate the contact with students and intervene with support, even before being asked directly. RA's must manage and facilitate groups and provide leadership for those groups. They must also direct social,

recreational, and educational programming. Discipline and enforcement of rules are also important aspects of RA duties. A successful RA should explain the rules, and consistently and fairly enforce them. This can be a problematic area for many RA's as they find themselves enforcing rules with other residents of the same age whom they may see as peers. RA's are also required to maintain a safe and relatively quiet environment that is conducive to studying. This needs to be balanced with a sense a freedom for the students as they try to make the residence hall into a comfortable home environment.

There are five types of leadership power of RA's including referent power, legitimate power, expert power, reward power, and coercive power (Upcraft and Pilato, 1982, pp 121-122). RA's use referent power in modeling appropriate behavior. Legitimate power is a facet of the position RA's hold and the authority given them by the institution. RA use expert power because of their training and experience in university life and their interpersonal skills. Reward power comes from the ability to positively reinforce or to offer incentives for behaviors; however RA's generally have little power in this realm because they have little to offer as rewards. Coercive power is used to influence because of the RA's ability to discipline members of the floor.

RA influence on resident behavior has not been well researched (Upcraft & Pilato, 1982, p. 87). In an investigation of the relationship between RA's leadership style and the RA's and the students' influencing behaviors, the results indicated some resident influence on senior male RA's with at least two years of experience (Deluga, 1989). However, the RA's ability to build and maintain group dynamics may prove to be the primary factor of RA/student influence. In another study which examined the leadership practices of effective RA's on five leadership values, it was found that these practices are related to the RA's assessment of their own effectiveness (Posner and Broadsky, 1993). The residents rated their RA's effectiveness consistently with the RA's own appraisal of their practicing of the leadership behaviors. Berkowitz and Perkins (1986) compared the drinking patterns of RA's with their residents. While most of the RA's reported expressing concern to a resident about their drinking, the RA's had similar patterns of drinking, and also a comparable number of negative consequences as their residents.

The resident advisor is at the center of many residence hall systems (Upcraft & Pilato, 1982, p. 254). Many colleges rely on the professional residence life staff to influence the students, and integrate the students into the campus culture. In turn the professional residence life

staff relies upon the RA's to implement the programming. To accomplish these goals the RA's should be well trained.

This training requires that:

People who train RA's must recognize the power of the residential environment, know what creates that power, and understand how students' lives are affected by living in residence halls. They must be familiar with person-environment theories and understand the tremendous power of the peer group, in the residential setting. They must never forget how deeply college students need to be liked and accepted and how intensely they influence each other's attitudes and behaviors.
(p. 255)

CHAPTER 3

METHODOLOGY

Theoretical Framework

This study was an exploratory examination of the influence of peers within a residence floor community on student outcomes. It included measures of behavior; university involvement; personality and self-concept; attitudes, beliefs, and values; academic and cognitive development; degree and life goals; and satisfaction with college. It also included measures on the influence of the resident advisor of the floor on these student outcomes. Astin's (1984) theory of student involvement and Astin's (1993) theory of peer group effects were used as the theoretical frameworks for this study. The input-environment-outcome (I-E-O) model developed by Astin (1991a, pp. 16-37) was used as a conceptual guide for the evaluation of the data in this study. These models focus not on the dimensions of student change but rather on the processes and origins of change, and are often grouped as college impact models of student change (Pascarella & Terenzini, 1991, p. 50).

Astin (1984) defines student involvement as the amount

of physical and psychological energy and focus a student supplies to the college experience. Involvement occurs along a continuum in which different students are differently involved with different things and in which the same student is differently involved at different times. Involvement has both quantitative and qualitative features in that student development or learning is directly related to quality and quantity of student involvement in the program, and that the efficacy of any educational program is directly related to the program's ability to increase student involvement. Astin's theory of student involvement explicitly recognizes that students' time and energy are finite and that educational programs are competing with other factors in student life for that time and energy (pp. 297-298). Residential students have more occasion and opportunity to become involved in all facets of campus life, which leads to more involvement (p. 302).

As a conceptional guide for assessment activities in higher education, Astin (1991a) uses the input-environment-outcome (I-E-O) model. In this model, inputs are the characteristics of the students as they enter college, or control variables; environment refers to the programs, people, and experiences the students encounter in college, or the independent variables; and outcomes are the students' characteristics after exposure to college, or the dependent

variables. Input variables can be related to both outcomes and environments, and so they can affect the observed relationship between the environment and the outcomes.

"Basically, the purpose of the I-E-O design allows us to correct or adjust for input differences in order to get a less biased estimate of the comparative effects of different environments on outcomes" (Higher Education Research Institute [HERI], 1996 p. 3).

In recent years the I-E-O model has been revised to include intermediate outcomes, which are typically activities or experiences occurring after enrollment in college. These intermediate outcomes can be classified as involvement with college, which is affected by input variables and environmental variables. They can also be considered as outcomes, but in turn they can act on other outcomes. For example, the outcome variable which measures a student's political orientation may be considered in the following way. The student's orientation when entering college can be considered the input variable and is likely to affect the greatest influence on the outcome. However, the political orientation of the floor community may be considered an environmental variable and may influence the student to join a political organization which in turn leads to a change in the student's political orientation. Such

involvement in the political organization was influenced by the environment and can be considered an intermediate outcome. This may also influence the final orientation and be considered another environmental variable. Intermediate outcomes are most often entered into the model as the final block of environmental variables. This addition to Astin's I-E-O model was made to include his theory of involvement (HERI, 1996, p. 9).

Astin's (1993, pp. 399-404) theory of peer group effects holds that student's values, beliefs, and aspirations tend to change in the direction of the dominant values, beliefs, and aspirations of the peer group. The effects of peer groups on learning and development are complicated, and the key to understanding peer group influence is in understanding the norms and behavior of the peer group members. Peer groups can be viewed from two perspectives: the individual or psychological point of view and the group or sociological point of view. From the perspective of the individual, the peer group is the entity with whom the student identifies and affiliates, and from whom the student seeks acceptance or approval. From the group or sociological perspective, peer groups operate as an entity of individuals who identify with, affiliate with, and seek approval and acceptance from each other.

Sample

Montana State University in Bozeman is a land-grant institution established in 1893 under the Morrill Act of 1862. Montana State University-Bozeman, located in a growing city of 29,000 in mountainous Gallatin county, offers graduate and undergraduate programs in liberal arts, sciences, agriculture, architecture, business, nursing, education, and engineering. The student population in 1992 was approximately 10,000 of which 80% were from Montana and of which 90% were undergraduate. There were approximately 550 faculty members, more than two-thirds of whom held doctorates. At this time, the university had a student faculty ratio of approximately 19:1. (Montana State University Undergraduate Bulletin, 1991-1993).

Montana State University-Bozeman requires students to live in the residence halls during their freshman year unless they are exempted to live at home with parents, are married, or have dependents. In 1992, residence hall capacity was approximately 3,000 students. There were seven separate residence halls with a total of 69 different floor communities. These floor communities varied in capacity from 8 to 67 students. Population in the residence halls at the end of spring semester of 1993 totaled 2,414 students.

The population for the study includes all first-time

students to Montana State University during the fall semester of 1992 who (a) attended the orientation program and completed the Cooperative Institutional Research Program (CIRP) 1992 Student Information Form and (b) were enrolled during the Spring Semester of 1993 at MSU and lived in one of the residence halls. During 1992 fall orientation, 1,408 students completed the CIRP survey and gave permission for the survey information to be released for research purposes. A follow-up survey was administered to residence hall students in May of 1993. A total of 1,800 students completed this survey for a 75% response rate. The resident advisor on each floor also completed the follow-up survey.

The follow-up survey was developed from the 1992 CIRP with permission from HERI (see Appendix A). Other questions were added to determine involvement and satisfaction with the floor community. The 1992 Fall Student Information Forms and the follow-up surveys were compared by social security number to provide a pretest and posttest match, and a total of 615 surveys were matched. Ninety-seven percent of the matched group came to MSU as first-time full-time freshmen.

Method of Data Collection

The pretest data used in this study are from the 1992 Freshman Information Form, which is published by the Cooperative Institutional Research Program (CIRP) (see

Appendix B). CIRP is a continuing longitudinal study of American higher education and is sponsored by the American Council on Education and the Graduate School of Education at the University of California, Los Angeles. CIRP has surveyed freshman since 1966 to assess the effects of college on students, and the survey is revised annually to reflect the concerns of higher education. Each year information about their freshman is provided to the institutions participating in the survey. In turn, the normative data from freshman across the country is published (Astin, Dey, Korn, & Riggs, 1992). Montana State University has participated in CIRP almost every other year since 1966, including the summer of 1992 when the CIRP freshman survey was administered to new students during required orientation sessions.

The posttest was created from the 1992 CIRP Student Information Form (see Appendix C). Questions 15, 24, 25, 29, 31, 32, 33, 36, and 37 were duplicated from the pretest with permission from the Higher Education Research Institute (see Appendix A). Wording was changed slightly in questions 24, 29, and 32 to make the questions compatible with students who have completed a year of college. Questions were added to the survey about satisfaction with residence halls, amount of time spent in the floor community and with other floor members, and the effectiveness of the floor

resident advisor.

The survey was distributed to the students in the residence halls through the resident advisor during the last week of the semester. The survey was collected by the resident advisor and by the personnel working at the front desk of the residence hall before the students left for the semester. Resident advisors reminded students to complete the survey as part of the checkout process to ensure a good rate of return. The resident advisor of each floor also completed a survey and turned it in before leaving for the year. The surveys were coded with designations for each residence hall and floor community. Except for social security number, which was collected to match the pretest with the posttest, no identifying information was used.

Investigative Categories

Using items from the CIRP Student Information Form, seven investigative categories of student outcomes were researched. These categories were used to group student outcomes and were based in part on groupings developed by Astin (1993). The investigative categories were Behavior; University Involvement; Personality and Self-concept; Attitudes, Beliefs, and Values; Academic and Cognitive Development; Degree and Life Goals; and Satisfaction with College. The influence of the resident advisor of the floor

on these student outcomes was also researched using items from the posttest survey.

In order to gain a broad understanding of the changes among students during their first year in the residence halls, these categories were investigated at different levels. Because the amount of student involvement has an impact on student outcomes, involvement with the university and its influence on the amount of involvement of the other residents of the floor community was investigated. In turn, the other investigative categories were researched including: (a) How students' personality and self-concept are influenced by the residence hall floor community; b) student beliefs, attitudes, and values are influenced by the beliefs, attitudes, and values of others in the floor community; (c) how the behaviors of other students on the floor influence individual student behaviors; (d) how students' academic and cognitive development are changed by the residence hall floor community; (e) how individual student's degree and life goals are affected by the floor community's life and degree goals; (f) how academic outcomes are influenced by others on the residence hall floor community; (g) how satisfaction with different aspects of the college environment is affected by the satisfaction of the floor community; and (h) how the resident advisor influences the floor community residents' on these outcomes.

Within the individual categories, variables were compared using factor analysis to find groups of related variables. These variables were aggregated to form new factors within each category using the 1992 CIRP Freshmen Survey (see Appendix B) which served as the pretest and the survey modified from the 1992 CIRP Freshmen Survey which served as the posttest (see Appendix C).

Behavior

This category included questions on behaviors during the college year including attending a religious service; smoking cigarettes; consuming beer, wine or liquor; staying up all night; feeling overwhelmed or depressed; playing a musical instrument; attending a recital or concert; discussing "safe sex"; and socializing with someone from a different racial/ethnic group.

University Involvement

The category of university involvement was constructed of several questions gauging the level of interaction within the university environment. The measures included the following: total hours spent per week studying and doing homework, socializing with friends, talking with teachers outside of class, exercising, partying, working (for pay), volunteer work, participation in student clubs/groups, and watching TV. This category also included estimates of

future activities including: getting a job to pay for college, working full-time while attending college, joining a fraternity or sorority, playing varsity/intercollegiate athletics, getting married, and participating in volunteer or community service work.

Personality and Self-Concept

The category of personality and self-concept was organized by student self-ratings of traits as compared with the average person their age in competitiveness, cooperativeness, drive to achieve, emotional health, leadership ability, physical health, popularity, social self-confidence, and understanding of others. Also included were two questions asking students to indicate the level to which they felt overwhelmed by all they had to do and to which they felt depressed.

Attitudes, Beliefs, and Values

This category was made up of a variety of questions measuring political and personal values including views on the role of the Federal government, political involvement, and opinions on current social issues. It also included a question about the student's political orientation.

Academic and Cognitive Development

This category included questions from the survey including measures of being bored in class, failing to complete a homework assignment, tutoring another student,

studying with another student, being a guest in a teacher's home, coming late to class, and arguing with a teacher. This category also included measures of student self-ratings of traits as compared with the average person their age in academic ability, artistic ability, math ability, originality, public speaking ability, reading speed comprehension, intellectual self-confidence, and writing ability. Also included were measures of the following academic intentions: changing major field, changing career choice, failing one or more classes, graduating with honors, being elected to an academic honor society, making at least a "B" average, getting tutoring help, seeking vocational counseling, getting a bachelor's degree, and dropping out temporarily.

Degree and Life Goals

This category was grouped with questions about the student's reasons for attending college, the highest academic degree the student intends to obtain, plans for the next year, and the importance of personal and life goals. These included the importance of financial rewards, becoming accomplished in one's field, becoming a community leader, and several other goal-oriented questions.

Satisfaction with College

This category included questions from the survey about

student satisfaction with their choice of the institution, with college, with the residence hall experience, the floor community, the influence and effectiveness of the resident advisor, and with the resident advisor's help.

Analysis of Data

The data for this study were collected from the 1992 CIRP Freshmen Survey which served as the pretest and the follow-up survey which served as the posttest. This study used several types of analyses. Descriptive analysis was used to describe the data, and paired sample t-tests were used to determine if the responses had changed during the first year of college. Pearson r correlations were used to examine how the corresponding variables on the pretest and the posttest were related. Factor analysis was used to reduce the number of variables in each of the seven investigative categories for more convenient and manageable data manipulation. Finally, stepwise multiple linear regression was used to examine the influence of the residence hall floor community, involvement with the community, and influence of the residence advisor.

The first step in the analysis was descriptive. The means of the pre and posttest variables were compared to describe the students who lived in the residence halls and who had completed one year of college at Montana State

University, and to describe changes in this student group. Correlations were run on the variables in each investigative category to examine the data and explain the relationship between the pre and posttest responses. Descriptive comparisons of the data by pretest and posttest were used to understand changes in student's answers after one year. Finally, paired sample t -tests were applied to the data at the next step to determine if the mean of the pretest was significantly different from the mean of the posttest in the investigative categories on each floor community.

In the next step, factor analysis was applied to minimize the variables in each investigative categories. The factors were extracted from the posttest data which included all residence hall students who completed the survey at the end of spring semester in 1993. Factor analysis is commonly used to create a relatively small number of hypothetical variables or factors, which represent a larger number of interrelated variables from the original data set (Kim & Mueller, 1978a, pp. 9-10). Factor analysis is useful in deriving "a set of uncorrelated variables for further analysis when the use of highly intercorrelated variables may yield misleading results in regression analysis (1978b, p. 5). In this study, exploratory factor analysis was used to reduce the data in each of the seven investigative categories to a more parsimonious explanation

of the underlying constructs in each category from the posttest data. By using factor analysis the constructs used to explain the changes in students in the residence hall communities was reduced and made more meaningful.

The principal components method was used in the factor analysis to identify the number of meaningful components in the variables of each investigative category. The first principal component identified is the combination of variables that account for the greatest amount of variance. The second principal component accounts for the next largest amount and is not correlated with the first. Successive components are extracted until all variables and their variance are accounted for. Next, eigenvalues, which measure the total variance explained by each factor, were examined to determine the number of factors for each investigative category. In this study, eigenvalues greater than one were used as initial explanatory factors.

As a confirmatory analysis, a scree plot of the eigenvalues was charted and adjustments in the number of factors identified were made accordingly. Scree plots are named for the rubble that forms at the foot of a mountain. They can provide a visual image of the break between the large explanatory factors and the rest of the factors. The point in the plot where there is a distinct break in the slope was used as the confirmation of the number of factors

selected using eigenvalues (Norusis, 1994, pp. 53-55).

In order to make the factors more interpretable, an orthogonal rotation using the varimax method was performed. "The most commonly used method is the varimax method, which attempts to minimize the number of variables that have high loadings on a factor. This should enhance the interpretability of the factors." (Norusis, 1994, p. 65).

Finally, factor scores were computed to be used in the regression analysis. The factor scores were averaged for each floor community and used as a proxy variable for the influence of the members of the floor community on the student in the outcomes being investigated. Proxy variables are measures which are used to approximate the value of the variable of actual interest (Schroeder, Sjoquist, & Stephan 1986, p. 70).

As the final step in the analysis, stepwise multiple linear regression was used as defined by the I-E-O model. Astin and Dey (HERI, 1996) have developed the CAMBRA method (Causal Analytical Modeling via Blocked Regression Analysis) for interpreting I-E-O regression results. The I-E-O method allows for the controlling of input variables and the effect of environmental variables on the outcome variable. The CAMBRA method provides a means for dealing with the considerable degree of multicollinearity that is found in most longitudinal student data sets such as the pre and posttests

used in this study. The input variables consisted of the student's score on the related variables on the pretest. The environmental variables consisted of the mean of the student's floor community on the posttest factor scores of these same variables. The outcome variable was the student's posttest score on the factor being considered.

Some researchers have objected to linear regression analysis on the grounds that it is not appropriate for certain circumstances such as using dichotomous dependent variables or for when the relationship between the dependent and the independent variables is non-linear. Dey and Astin (1993) have found that there is little practical difference among probit, logit, or linear regression. Practical considerations such as the robustness under widely varying conditions the availability of software, and the fact that linear regression is widely used and understood, add favor to using linear regression. While some researchers would recommend discriminant analysis, Astin (1991a, p. 283) states that the regression weights in this statistical process are exactly proportional to the weights obtained in regression.

The CAMBRA method uses forward stepwise linear regression analysis which adds the independent variables to the regression equation according to the predictive power of the variable. CAMBRA allows for the interpretation of these data in a step by step manner and provides a means for

understanding the degree of multicollinearity or shared variance among the variables. The CAMBRA method utilizes the standardized beta coefficient which allows the researcher to compare different variables on the same scale. The CAMBRA method examines what the beta would be if it were entered in the equation at the next step. Thus the researcher can examine both the beta for each variable and the beta in, and understand the complexities of the variables.

One of the weaknesses of using regression analysis in social science research is the assumption that the linear relationship between the dependent variables and the independent variables is a functional form of a causal relationship (Achen, 1983, pp. 10-11). In other words, a significant relationship does not prove that the independent variables caused the changes in the dependent variable. The I-E-O model does not serve "to prove causation, but rather to minimize the risks involved in making causal inferences concerning the effects of environmental variables on outcomes." (Astin, 1991a, p. 309). Astin identifies certain conditions under which the researcher can make more confident inferences that the environmental outcomes is influencing outcomes. One such condition is when significant interactions effects among environmental variables are found. In any study of environmental effects,

it is advisable to cross check the data using another measure of college involvement. For example, in examining the effects of peer influence on student outcomes it can be hypothesized that more exposure to the peers would result in stronger results if the peer influence measure is found to be significant. This hypothesis could be checked by running separate analysis on the effects of the peer group variables by some involvement measure, such as on-campus residence vs. off-campus residence (Astin, 1991a, pp. 309-312).

In order to verify any significant results in this study, the posttest collected information from the students about the amount of time they spent with other residents or in the residence hall, their satisfaction with the residence hall and the floor community, and the influence and effectiveness of their RA. These variables were reduced using factor analysis into three factors measuring their rating of the RA, the amount of time spent with other residents, and the amount of time spent in the residence hall. If the peer influence environmental variable was found to be significant, regression analyses were run separately for students above the median score in the amount of time spent with other residents and for those students whose scores were below the median. The same was done on the basis of how much time was spent in the residence hall. If the RA environmental variable was found to be a

significant factor on the dependent variable, separate regression analyses were run for students above and below the median score on the factor measuring the RA's influence and effectiveness. This allowed the study to confirm the effects of peer and RA influence with more confidence.

CHAPTER 4

DATA ANALYSIS

Introduction

The data for this study were gathered from the Cooperative Institutional Research Program (CIRP) Freshmen Survey and a follow-up survey, administered at Montana State University-Bozeman. The freshmen survey, which served as the pretest data, was gathered at orientation sessions during the summer of 1992. At that time 1,408 students completed the CIRP survey and gave permission for the information to be released for research purposes. The posttest data were gathered strictly from a follow-up survey of residence hall students at the end of spring semester of 1993. A total of 1,800 students completed this survey. The resident advisor on each floor also completed the follow-up survey. Using social security numbers reported on both the pre and posttest surveys, a total of 615 cases were matched. Ninety-eight percent of these matched cases were first-time, full-time students at MSU-Bozeman during the fall semester of 1992. This group of freshmen was used as the sample for this study.

The data on the posttest survey were classified into

seven investigative categories: Behavior; University Involvement; Personality and Self-concept; Attitudes, Beliefs, and Values; Academic and Cognitive Development; Degree and Life Goals; and Satisfaction with College. Each of these investigative categories was examined, in order, with t-tests, correlational analysis, factor analysis, and linear regression analysis.

The framework for this study is the input-environment-outcome (I-E-O) model developed by Astin (1991a) and further refined by Astin and Dey as the Causal Analytical Modeling via Blocked Regression Analysis Method, or CAMBRA (HERI, 1996, pp 49-51). In this model, inputs are the characteristics of the students as they enter college; environment refers to the programs, people, and experiences the students encounter in college; and outcomes are the students' characteristics after exposure to college. The input variables are used as controls for the personal qualities that students bring to the college experience and that almost always have a significant effect on the outcomes being investigated. Astin (1991a) states that "the basic purpose of the I-E-O design is to allow us to correct or adjust for such input differences in order to get a less biased estimate of the comparative effects of different environments on outputs." (p. 19).

In this study, the CAMBRA method was used within the I-

E-O model to understand if the behaviors of the other students could be used to explain the outcome behavior of the freshmen in the residence hall floor community. The focus of the I-E-O model is on the effects of environments on outcomes, controlling for the input characteristics which students bring to college. The CAMBRA method uses a unique analysis of forward stepwise linear regression. Astin states:

The most unique feature of CAMBRA is that it takes advantage of a little-used feature of these computerized regression packages: the step-by-step changes in the coefficients for all variables (those in and those not in the predication equation)....The interpretation of the step-by-step changes is critical, for it provides researchers with a means of coping with what is probably the most vexing problem in any kind of multivariate nonexperimental research: the considerable degree of multicollinearity (confounding) that one normally finds in any real data set. (HERI, 1996, p. 50)

Method

Step One. In order to understand whether the students' responses had changed during their first year of college life in a residence hall, the first step in the analysis was to compare the means of the pretest questions to the corresponding means of the posttest questions. These means were then related using a paired sample t-test to identify responses that had changed during the year at the .05 level of significance. The paired sample t-test compares the

means of two variables for a single group such as variables on a pre and posttest.

Step Two. The student's input data almost always relates to the student's outcome data, and to the environmental data being examined (Astin, 1991a, p.64.) To better understand the relationship between the student's answer before coming to college and the response after a year of college, Pearson r correlation was run on every paired set of variables in each investigative category. Pearson r correlation is a measure of linear association or a measure of how two variables are related to each other.

Step Three. Factor analysis was next applied to each investigative category on the posttest in order to reduce the number of elements examined and to more parsimoniously interpret the regression analysis. Kim and Mueller state that "factor analysis has been used in economics to derive a set of uncorrelated variables for further analysis when the use of highly intercorrelated variables may yield misleading results in regression analysis." (1978b, p. 5). Factor analysis is commonly used to create a relatively small number of hypothetical variables or factors, which represent a larger number of interrelated variables from the original data set (Kim & Mueller, 1978a, pp. 9-10). A good factor analysis solution should represent the relationships between the variables parsimoniously, should explain the

relationships with as few variables as possible, and should be meaningful, simple, and interpretable. "When factors can be interpreted, new insights are possible." (Norusis, 1994, p. 49).

Principal components method of analysis was used for the factor extraction. This method transforms "a set of correlated variables into a set of uncorrelated variables (principal components)" (Norusis, 1994, p. 54). An initial factor analysis was run to examine the data and determine the suitability of factor analysis on this data. Two tests which evaluate the suitability of the factor model are Bartlett's test of sphericity and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. When using Bartlett's test of sphericity, the researcher should look for the test statistic significance level to be small (pp. 50-51). When using the KMO measure, researchers use Kaiser's scale which assigns "in the 0.90's as marvelous, in the 0.80's as meritorious, in the 0.70's as middling, in the 0.60's as mediocre, in the .50's as miserable, and below 0.50 as unacceptable." (pp. 52-53).

The posttest survey, which included responses from all 615 residence hall students, was used for the factor analysis. Factors were preliminarily selected with an eigenvalue of one or greater. Eigenvalues represent the amount of variance attributable to each factor (Norusis,

1994, p. 54). The factors selected were then confirmed by examining a scree test plot to best select the optimal number of factors in the investigative categories. A factor scree plot graphically represents the steep slope of the large factors and the trailing off of the smaller, less significant factors.

The next step was to rotate the factors selected with varimax rotation in order to more easily interpret them. The varimax method of rotation is the most commonly used. It aims to minimize the number of variables which have high loading on a factor (Norusis, 1994, p. 65). Finally, the factors were named by looking at the variables which loaded into each factor, and factor scores were calculated for each student who completed the posttest survey.

Two of the questions in this study involve the effect of the peers and of the resident advisor (RA) living in each floor community on any change in freshmen students in the seven investigative categories. In order to examine this, the posttest was divided into floor communities, and the factor scores for all of the residents on each floor were averaged. This mean score for each floor community was used as the first environmental variable examined in this study. Each floor's RA's factor score was used as the second environmental variable. On some floors there was more than one RA. In these cases the scores of all of the RA's on the

floor were averaged. The floor mean and the RA score were added as new variables to the linked file of freshmen who completed both the pre and posttests. This linked file of the first-time freshmen was then used for regression analysis.

Step Four. Within the I-E-O framework, forward stepwise linear regression analysis was used to analyze the influence of the student's peers and RA on the floor community in each of the seven investigative categories. Regression analysis is used to predict the value of the dependent variables with a linear equation involving one or more independent variables (SPSS, 1996, p. 215). Forward stepwise regression analysis is a procedure in which each independent variable is sequentially entered into the model in the order of the variables which have the largest positive or negative correlation with the dependent variable. The variable with the largest correlation is entered first, followed by the variable with the next largest correlation and so on until no variables are left which meet the entry criterion. In this study, the input variables were first entered together in a block using the forward stepwise method. After all input variables had been considered, the two environmental variables were entered together in a second block, again using the forward stepwise method.

In each regression analysis in this study, the student's score on each factor identified within each investigative category was used as the dependent variable. The pretest measures, which corresponded to the posttest variables loading on the factor, were the input variables. The mean score of the residence hall floor community and the RA's factor score were the environmental variables investigated.

Step Five. Astin (1991a) suggests that any study in which interaction effects are found to be significant should be corroborated with separate analyses on those students who have spent more time with the environment being studied, and compared with those who have spent less time in that environment (pp. 311-312). In this study, in the event the environmental variables were included in the regression model, a confirmatory analysis was run to substantiate the effect of the environmental variable.

In order to confirm the effect of any significant environmental variable, eight questions from the posttest were analyzed using factor analysis. The questions asked students to answer about how much time they spent in their floor community, with other residents, and in the residence hall, and about the helpfulness and effectiveness of their RA. Three factors were identified with eigenvalues greater than one. These factors were used as proxy variables for

the amount of time students spent with other residents on their floor, for how much time they spent in the residence hall, and for their satisfaction with their RA. The factor structure is detailed in Table 2. Each column details the factor loadings of each variable on each factor. Factor loading is a general term referring to the coefficient in the factor matrix (Kim & Mueller, 1978, p. 84).

Table 2. Factor Structure for Residence Involvement.

	Factor 1	Factor 2	Factor 3
	Satisfaction	Time with	Time Spent
	with RA	Residents	in Hall
RA's Effectiveness	.90448	.11319	-.02465
RA's Help	.90028	.01915	.03310
RA's Influence	.88955	.16939	-.00575
Time w/Residents	-.06137	.86397	.15570
Satisfaction w/Floor	.38537	.72506	-.01770
Time Spent in Floor	.09750	.69350	.31852
Satisfaction/Hall	.43482	.58491	.01285
Hours/Week with residents	-.13310	.54316	.52366
Hours/Week in Hall	.01495	.07582	.89451
Hours/Week on Floor	.03372	.17593	.87808

Factor scores were computed for every student and identified as being above the median score or below the median score to measure the amount of time spent with other residents, in the hall, or the amount of satisfaction with the RA. When the mean of the floor community was found to

be a significant predictor of the student's score in any of the seven investigative categories, regressions were run separately for those students who were above the median score, and for those below the median score on the amount of time spent with other residents. The same was done for those students above and below the median on the amount of time spent in the residence hall. If the RA's score was a significant predictor of the student's outcome, regressions were run separately for those students who are above the median score, and for those below the median score on satisfaction with the RA.

Behavior

The first investigative category deals with student behavior. This area includes questions on conduct, both before attending college and during the first college year. The category includes questions about attending a religious service; smoking cigarettes; drinking beer, wine, or liquor; staying up all night; feeling overwhelmed or depressed; playing a musical instrument; attending a recital or concert; discussing "safe sex"; and socializing with someone from a different racial/ethnic group.

The behaviors of the freshmen before they came to college were compared to their behaviors after one year of life in the residence halls with a paired sample t-test.

Eleven different items made up the Behavior category. Students were asked to respond if they had engaged in each behavior during the past year frequently, occasionally, or never. Of the 11 items, significant differences were found between the pretest and the posttest means for 9 of the items (see Table 3).

Table 3. Comparison of Pre and Post Behavior Means.

Behavior	Pretest	Posttest	<u>t</u>	<u>p</u>
Attended religious service	2.12	1.56	19.10	.00
Performed volunteer work	1.78	1.36	14.53	.00
Attended recital or concert	2.10	1.72	11.82	.00
Drank beer	1.79	2.01	9.15	.00
Played a musical instrument	1.68	1.39	9.06	.00
Discussed safe sex	2.09	1.85	9.01	.00
Drank wine or liquor	1.69	1.91	8.29	.00
Smoked cigarettes	1.25	1.34	4.74	.00
Socialized w/diff ethnic group	2.29	2.20	3.22	.00
Felt depressed	1.81	1.86	1.96	.05
Stayed up all night	1.89	1.85	1.46	.14

During their first year in college, students were less likely to have attended a religious service, performed volunteer work, played a musical instrument, attended a recital or concert, discussed safe sex, or to have

socialized with someone from a different ethnic group. Students were more likely to have smoked cigarettes or drank alcoholic beverages. No significant differences were found between the pre and posttest measures of staying up all night and feeling depressed.

Pearson r correlations were used to examine how closely pretest and posttest measures of each behavior were related.

Table 4. Correlation Between Pre and Post Behaviors.

Behavior	r	p
Drank beer	.606	.00
Smoked cigarettes	.580	.00
Attended religious service	.494	.00
Played a musical instrument	.473	.00
Drank wine or liquor	.395	.00
Discussed safe sex	.358	.00
Felt depressed	.358	.00
Stayed up all night	.311	.00
Socialized with different ethnic group	.288	.00
Attended recital or concert	.250	.00
Performed volunteer work	.238	.00

Table 4 shows the correlations between each measure. The strongest relationship in behavior was between drinking beer before coming to college and drinking beer during the first year of college ($r=.606$). The weakest correlation between the paired variables was performing volunteer work ($r=.238$). All pre and post behaviors were significantly correlated above the .00 level.

Factor analysis was used on the Behavior variables to simply the analysis and construct more meaningful categories from the variables. Initial analysis of Behavior resulted in a significance level of .00 on Bartlett's test of sphericity. The KMO measure of sampling adequacy resulted in a score of .67. The KMO score on the Behavior factors, while not ideal, was in the range of acceptance.

Communality is the squared multiple correlation coefficient between a variable and all other variables and is an indicator of the strength of the linear association among the variables. Any variable with a low communality score should be removed from the set of variables to be factored (Norusis, 1994, p. 53). In the Behavior category, the variable measuring whether a student had felt depressed had a communality score of .07, and so this variable was eliminated from the Behavior variable set before running the factor analysis.

To choose the number of factors, initially those with eigenvalues greater than one were selected. Three factors in the Behavior variables set had eigenvalues above one. This selection was then adjusted by examining the factor scree plot. The scree plot for the variables showed a leveling off after four factors were identified, so these four factors were extracted from the Behavior category. The factors were then rotated for ease of interpretation by

using varimax rotation.

Table 5. Factor Structure for Behavior.

	Factor 1	Factor 2	Factor 3	Factor 4
Drank Wine or Liquor	.79415	.16157	-.06638	-.13469
Drank Beer	.75499	.10285	-.09198	-.30192
Smoked Cigarettes	.61576	-.07810	.20963	-.01067
Stayed up all Night	.59721	.07629	.01854	.20286
Socialized w/dif Ethnic Group	-.04160	.83042	.04977	-.00194
Discussed Safe Sex	.24366	.70044	.11242	.10595
Played Musical Instrument	.05882	-.05103	.80123	.13170
Attended Recital or Concert	-.00339	.23498	.74058	.02844
Attended Religious Service	-.11508	-.07703	-.00465	.78189
Performed Volunteer Work	.02035	.19921	.17728	.67606

The Behavior category consists of four factors (see Table 5). The major factor, which accounts for 22.2% of the variance, contains four items which deal with Partying Behavior. The second strongest factor contains two items which were identified as Liberal Behavior, and accounted for 17.2% of the variance. The third factor contained two items which Represent Musical Behavior, and the fourth factor contained two items which denote Altruistic Behavior. These factors represented 10.4% and 9.2% of the variance respectively.

Scores were computed for each student in the posttest group on each of the four factors. The posttest group was then divided into floor communities and the scores of all

floor residents were averaged to make a floor mean score. This mean score was used as a proxy variable. Proxy variables are measures which are used to approximate the value of the variable of actual interest (Schroeder, Sjoquist, & Stephan 1986, p. 70). The proxy value in the Behavior factors represents the behavior of peers in the floor community. The mean for each floor and the factor score for each student was added to the target file of those students who had pre and post test scores, in order to run the regression analyses.

Partying Behavior

In analyzing the outcome, Partying Behavior, the student's posttest Partying Behavior score was used as the dependent variable. The student's pretest answers about their behavior before they came to college on the variables which loaded into Partying Behavior (drinking beer, drinking wine or liquor, smoking cigarettes, and staying up all night) were used as the input independent variables and entered into the regression first. The mean score of the floor community and the RA's score on Partying Behavior were used as the environment independent variables and entered into the regression second. The effect of these environmental variables is the focus of this study while the input variables were used to control for the characteristics

of the students before they came to college. However, the input characteristics can be expected to have the strongest effect on the dependent variable (Astin, 1991a, pp. 64-65).

First the input variables were entered as a block into the regression. Using forward stepwise regression, each variable was entered into the regression until no variable in this block was able to add significantly to the prediction of the student's Partying Behavior. The two environmental variables were entered in a second block. These two variables in turn were entered in order of their predictive power until the last variable with significant predictive power was entered.

Table 6. Predicting Party Behavior: Step by Step Beta Changes

Step	Variable entering	<u>R</u>	<u>r</u>	Beta after step			
				1	2	3	4
<u>Input Variables</u>							
1	Drank Beer	.472	.472	.472	.369	.355	.328
2	Smoked Cigarettes	.53	.407	.261	.261	.254	.231
3	Stayed Up All Night	.537	.189	.108	.092	.09	.09
<u>Environmental Variables</u>							
3	Floor Mean Score	.562	.295	.202	.173	.172	.172
<u>Variables Not Entering</u>							
5	Drank Wine or Liquor		.383	.101	.031	.016	.026
6	RA' Score		-.003	.011	-.011	-.011	-.036

Table 6 shows the results of the regression analysis on Partying Behavior. In block one, the variable measuring how

often students drank beer before coming to college entered the regression equation first, followed by the measure of how often students indicated they smoked cigarettes, and next the measure of whether a student stayed up all night. The variable of drinking wine or liquor did not enter the regression analysis. In block two of the analysis, the environmental variable, the mean of the floor community on Party Behavior, did enter the equation. The RA's Partying Behavior was not a significant variable in predicting student's Partying Behavior and did not enter the equation.

Table 6 lists several statistics from the Partying Behavior regression analysis. The first and second columns list the step numbers and the variables in the order in which they were entered into the regression analysis. The third column lists the multiple correlation coefficient at each step of the regression, the fourth column lists the correlation coefficient with the dependent variable, and the last four columns show the standardized beta coefficients, or beta-in, for the variables after each step in the analysis. The beta-in as reported by SPSS regression analysis is the beta coefficient the variable would receive if it entered the regression at the next step. Both variables entering and not entering the regression equation have a beta-in at each step. In order to identify meaningful beta changes, only those with a change of more

than .02 or greater will be considered as consequential.

Astin (1991a, pp. 288-289) classifies changes in the beta as normal, suppressor, or sign reversal. In a normal effect, the entry of an independent variable will cause the beta of the previously entered variables to decrease. However, a suppressor effect is evident when the entry of an independent variable causes the beta of a previously entered variable to increase. This is an indication that the second variable was suppressing the effect of the other variable. When the second variable is controlled, the true magnitude of the first variable is released. A sign reversal is when the beta changes signs when a variable is entered. "Perhaps the strongest evidence of true causation is when the sign (+ or -) of the regression coefficient for a given environmental variable in the final equation is the opposite of the simple correlation between the environmental variable and the outcome measure." (p. 310).

The standardized beta coefficient is the regression coefficient B converted to a standard unit for each variable. The beta coefficient measures the independent variables, as measured in standard deviations, that results in one standard deviation change in the dependent variable (Schroeder, Sjoquist, & Stephan, 1986, pp.33-34). By following the changes in the beta coefficient as each variable enters the equation, the researcher can assess how

much each of the individual variables adds to the prediction and what predictive power they share. Astin (1991a) suggests that three factors should be considered in analyzing regressions; these are "the variables's simple correlations with the dependent variable, the size of the beta at the point the variable enters the regression, and the other entering variables that cause the biggest drops in that variable's beta" (p. 298).

While many researchers use the R^2 as an indicator of the percent of variance the independent variables account for, Astin advocates the use of the beta coefficient as a better indicator of a variable's importance. He states that:

My two and half decades of work with stepwise regression convinces me that R^2 or change in R^2 is not a good guide to assessing the importance of the independent variableseven when the multiple correlation is quite modest and the percent of variance accounted for quite low, differences represented by the extremes of the independent variables can be of great practical significance. (1991a, pp 296-297)

The regression analysis in Table 6 for Partying Behavior presents the changes in the beta coefficients as each variable enters the prediction. How often the student reported drinking beer before they came to college was the first input variable to enter and had the largest beta coefficient after all other variables had been considered. However, its beta dropped from .472 in the first step to

.328 in the last step, indicating that it shares some of its predictive power with the other significant variables. How frequently the student smoked cigarettes or stayed up all night also entered in block one. The measure of drinking wine or liquor before coming to college was not a significant predictor of Partying Behavior. In block two the environmental measure of the floor's Partying Behavior entered the equation. The variable representing the RA's Partying Behavior did not enter the regression as a significant predictor of the student's Partying Behavior.

For more confidence in causal inferences, Astin (1991a) suggests that significant interaction effects should be checked when an environmental variable is found to be significant, and states that in peer group effects on a student outcomes, one would expect to find a stronger effect on those students more involved in the peer group than in those who were not (pp. 311). The significant predictive effect of the peer group's Partying Behavior on the outcome measure of Partying Behavior as indicated by the floor Partying Behavior being a variable in the equation warrants a second analysis to check for validity. In order to check the influence of the floor community on Partying Behavior, a regression analysis was run separately for those students above the median score and for those below the median score on the factor scores measuring time spent with other

residents and time spent in the residence hall. The beta coefficient at the final step for those students who spent more time with other residents was .275 compared to .172 in the original analysis indicating that spending more time with other residents leads to the Partying Behavior of those residents being more influential. In the analysis of those students whose score was below the median on time with other residents, the variable measuring the Partying Behavior of the floor did not enter the equation. This second analysis gives more confidence that the Partying Behavior of the floor is in fact causal and can be used as a significant predictor of Partying Behavior in students.

In separate analyses of those above the median score on the factor which measured time spent in the residence hall, and those below, the beta coefficient was .176 for those above and .169 for those below the median score, indicating little difference based on the amount of time a student spends in the residence hall.

Liberal Behavior.

Table 7 shows the results of the regression analysis for Liberal Behavior. The first variable to enter with a beta weight of .280 was the pretest measure of how frequently a student had discussed safe sex. The pretest measure of whether a student socialized with a different

ethnic group entered next with a beta of .194. The mean of the floor's Liberal Behavior entered the analysis in the second block with a beta of .213. At this point the beta weight for discussed safe sex dropped to .231. The RA's Liberal Behavior score did not enter.

Table 7. Predicting Liberal Behavior: Step by Step Beta Changes

changes

Step	Variable entering	<u>R</u>	<u>r</u>	Beta after step		
				1	2	3
<u>Input Variables</u>						
1	Discussed Safe Sex	.280	.280	.280	.238	.231
2	Socialized w/diff ethnic group	.338	.245	.194	.194	.175
<u>Environment Variables</u>						
3	Floor Mean Score	.399	.242	.227	.213	.213
<u>Variables Not Entering</u>						
4	RA's Score		-.009	-.015	-.018	-.031

To verify the significance of the effect of the floor's Liberal Behavior on the dependent variable, separate analyses were run for those students with scores above and below the median on measure of time spent with other residents and time spent in the residence hall. In the analysis of those students above the median in time spent with other residents, the final beta was .215, compared to .213 on the original analysis. The beta for those students below the median in time spent with other residents was .225

showing little difference. In the analysis of those students above the median in time spent in the residence hall, the final beta was .257, compared to .213 on the original analysis, and the beta for those students below the median was .193, indicating that time spent in the residence hall affects Liberal Behavior.

Musical Behavior

The score measuring Musical Behavior (see Table 8) was used as the dependent variable in the third regression analysis run in the Behavior investigative category. In the input block of variables, the first variable to enter was the amount students had played a musical instrument before coming to college, followed by the measure of how frequently they had attended a recital or concert. The environmental measure of the floor's musical behavior entered the regression in the next block with a beta weight of .164. The first variable showed multicollinearity with the second two as its beta weight dropped from .420 in the first step to .336 in the third step. The RA's musical behavior factor score did not enter the analysis.

Table 8. Predicting Musical Behavior: Step by Step Beta Changes

Step	Variable entering	<u>R</u>	<u>r</u>	Beta after step		
				1	2	3
<u>Input Variables</u>						
1	Played a Musical Instrument	.420	.420	.420	.346	.336
2	Attended a Recital or Concert	.445	.321	.163	.163	.147
<u>Environment Variables</u>						
3	Floor Mean Score	.473	.219	.175	.164	.164
<u>Variables Not Entering</u>						
4	RA's Score		.090	.072	.072	-.003

The beta for those students who spent more time with other residents or in the residence hall was .134 and .119 respectively. For those students who spent less time with other residents or in the hall, the beta of the floor mean score on the final step was .188 and .216. For those students whose scores were below the median on time spent in the hall, whether they had attended a concert did not enter the regression. These stronger results for students who spent less time with other residents or in the hall may be a result of the students needing to leave the halls to pursue their musical interests.

Altruistic Behavior.

Table 9 summarizes the changes in Altruistic Behavior. The pretest measure of attending a religious service was the

first predictor variable for the dependent variable. The second pretest variable of performing volunteer work entered the first block of the analysis next. In the second block, the mean of the floor on Altruistic Behavior entered while the RA's Altruistic Behavior score was excluded from the regression analysis.

Table 9. Predicting Altruistic Behavior: Step by Step Beta Changes

Step	Variable entering	<u>R</u>	<u>r</u>	Beta after step		
				1	2	3
<u>Input Variables</u>						
1	Attended a Religious Service	.347	.347	.347	.323	.305
2	Performed Volunteer Work	.366	.183	.119	.119	.112
<u>Environment Variables</u>						
3	Floor Mean Score	.399	.205	.164	.159	.159
<u>Variables Not Entering</u>						
4	RA's Score		-.009	-.002	-.011	-.021

Separate analyses were run for those students with scores above and below the median on measure of time spent with other residents and time spent in the residence hall. In the analysis of those students above the median in time spent with other residents, the final beta was .180, compared to .159 on the original analysis. The beta for those students below the median in time spent with other residents was .137 indicating that the Altruistic Behavior of the residence hall peers does have a significant effect

on the students. In the analysis of those students above the median in time spent in the residence hall, the final beta was .172, and the beta for those students below the median was .137. For those who were in the bottom half of time spent with other residents or in the hall, the measure of if they had performed volunteer work previously did not enter the regression and whether they had attended a religious service became more important.

University Involvement

The investigative category University Involvement deals with the student's expectations for involvement with different facets of the university and the amount of involvement the student reported at the end of the first year. This category included measures of how many hours per week the student the student spent studying, talking with teachers, participating in clubs or groups, working or volunteering, socializing or partying, playing sports, or watching TV. This category also included a report of how often the student was bored in class and the estimates of their chances of having to work full or part-time to pay expenses, volunteering, joining a fraternity or sorority, playing varsity athletics, or getting married while in college.

Table 10 shows the mean scores of the responses and

the significant changes during the year. Students' expectations about whether they would have to work in the future to pay for college increased while the amount of time they actually spent working during their first year of college as compared to before college, decreased.

Table 10. Comparison of Pre and Post Involvement Means.

Involvement	Pretest	Posttest	<u>t</u>	<u>p</u>
Work Full-time in College	1.77	2.39	15.33	.00
Get a Job to Pay for College	3.24	3.83	13.95	.00
Have to Work at Outside Job	2.73	3.38	13.24	.00
Studying/Homework	4.13	4.95	13.04	.00
Working	4.31	2.70	12.04	.00
Exercising/Sports	4.84	4.06	11.27	.00
Student Clubs or Groups	2.87	1.94	11.27	.00
Talking with teachers	2.69	2.17	10.75	.00
Volunteering	2.04	1.49	9.65	.00
Participate in Volunteer Work	2.57	2.98	9.46	.00
Partying	3.22	3.68	6.55	.00
Socializing	5.76	6.20	6.51	.00
Watching TV	3.73	3.26	6.29	.00
Get Married in College	2.29	2.52	5.43	.00
Was bored in class	2.27	2.34	2.75	.01
Play Varsity Sports	2.01	2.14	2.67	.01
Join Fraternity or Sorority	2.43	2.31	2.19	.03

Although students also reported that they expected to spend more time volunteering, they actually reported volunteering fewer hours their first year in college. More people expected to get married or play varsity athletics in college

while fewer people expected to join a fraternity or sorority. Students reported being bored in class more often than in high school while they spent less time talking to teachers, but spent more hours per week studying. The students reported spending less time in student clubs or groups, exercising, and watching TV at the end of the year than at the beginning. However, they spent more time partying and socializing with friends.

Table 11 shows the correlations between the pretest and the posttest responses in the Involvement category. The hours per week spent partying showed the strongest correlation between pre and posttest involvement. This corresponds with the highest correlation between the pre and posttest factor in the Behavior category of drinking beer. While the expectation that students would have to work to pay for college had moderate correlations, the report of hours per week the students actually worked had a very weak correlation. This may indicate that while students plan to have to work in college, they actually worked more in high school than they do in their first year of college. Their involvement in student groups in high school was weakly correlated to their involvement in groups in college.

Table 11. Correlation Between Pre and Post Involvement.

Involvement	<u>r</u>	<u>p</u>
Partying	.531	.00
Play Varsity Sports	.475	.00
Work Full-time in College	.454	.00
Get a Job to Pay for College	.453	.00
Exercising/Sports	.447	.00
Participate in Volunteer Work	.402	.00
Get Married in College	.395	.00
Studying/Homework	.376	.00
Have to Work at Outside Job	.364	.00
Join Fraternity or Sorority	.363	.00
Watching TV	.355	.00
Socializing	.354	.00
Volunteering	.268	.00
Was bored in class	.237	.00
Talking with teachers	.236	.00
Working	.185	.00
Student clubs/groups	.158	.00

The posttest variables in the Involvement category were analyzed with factor analysis. Initial analysis resulted in a significance level of .00 on Bartlett's test of sphericity. The KMO measure of sampling adequacy resulted in a score of .68, which was in the range of acceptance. Six factors were identified with an eigenvalue greater than one (see Table 12). These factors represent involvement or non-involvement with the university through working, time spent

with service organizations, social involvement, academic involvement, watching TV, and involvement with others.

Table 12. Factor Structure for Involvement.

	Factor					
	1	2	3	4	5	6
Have to Work at Outside Job	.78827	-.00346	.01000	-.04707	-.07766	.04762
Get a Job to Pay for College	.77011	.00644	.00346	-.01719	-.12603	.00560
Working for Pay	.64035	.14785	-.08776	.06486	.01999	-.11338
Work Full-time in College	.63252	.09377	.06705	-.01530	.18282	.25751
Student clubs/groups	.02188	.77725	-.00525	.11683	.07867	-.07931
Volunteering	.11237	.72978	-.06052	.17724	.05724	-.05759
Join Fraternity or Sorority	-.00820	.57253	.13496	-.15995	-.11654	.10081
Participate in Volunteer Work	.21847	.52347	-.08494	-.02389	-.27518	.27847
Exercise/Sports	-.13080	.01602	.68035	.12882	-.18621	.22616
Socializing	.06996	-.02411	.67294	-.12492	.06895	-.10683
Partying	.04725	.00318	.66592	-.15992	.24502	-.11533
Talking with teachers	.05102	.22945	.09072	.74884	.13266	-.06333
Was bored in class	.03905	.06913	.20725	-.61963	.03387	-.12226
Studying/Homework	-.03440	.00484	-.03453	.54812	-.48815	-.14225
Watching TV	-.07146	-.06255	.05284	.06096	.78751	.00511
Get Married in College	.16506	-.04692	-.11022	.06281	.09152	.78027
Play Varsity Sports	-.18824	.19950	.37930	-.08164	-.14243	.51123

Working Involvement

Table 13 shows the results of the regression analysis for Working Involvement. The three pretest variables which measured the amount of time students planned to work in college entered first as the best predictors of Working Involvement. These three variables showed a great deal of multicollinearity as their betas each dropped significantly at each step. The number of hours the students reported working before college entered last in the first block. The mean score of the floor's Working Involvement entered in the second block but did not effect the betas of the other entered variables, showing little multicollinearity. The RA's score was not a significant predictor of the student's Working Involvement.

Comparisons of students above and below the median in time spent with other residents indicate that students who are involved in working spend less time with other residents. The floor mean and the pretest measure of hours per week worked did not enter the regression of those students above the median. For those students below the median, the floor mean was a significant factor predictor of the Working Involvement. This may indicate that students who are working are congregated together in some residence hall communities. The floor mean of Working Involvement entered the regression in the separate analysis of those

above and below the median score of time spent in the residence hall. The beta of the floor mean in students above the median was .121 and the beta for those below was .137, showing little difference between the two groups.

Table 13. Predicting Working Involvement: Step by Step Beta Changes

Step	Variable entering	<u>R</u>	<u>r</u>	Beta after step				
				1	2	3	4	5
<u>Input Variables</u>								
1	Plan to get a job	.442	.442	.442	.352	.288	.280	.277
2	Plan to Work Full-time	.488	.366	.227	.227	.180	.176	.167
3	Plan to work at outside job	.504	.392	.219	.155	.155	.137	.132
4	Hours/Week spent Working	.513	.214	.134	.118	.102	.102	.093
<u>Environment Variables</u>								
3	Floor Mean Score	.526	.188	.148	.130	.125	.118	.118
<u>Variables Not Entering</u>								
4	RA's Score		.013	-.022	-.025	-.023	-.022	-.017

Service Organization Involvement

Students' plans to participate in volunteer or community service work was the best predictor of their Service Organization Involvement score. While their plans to join a fraternity or sorority or to participate in student groups were also significant predictors, the mean score of the floor was a stronger predictor than these two

input measures. Table 14 shows the final betas for Service Organization Involvement. Neither the pretest measure of the numbers of hours spent doing volunteer work or the RA's score were significant predictors of the dependent variable.

Table 14. Predicting Service Organization Involvement:
Step by Step Beta Changes

Step	Variable entering	<u>R</u>	<u>r</u>	Beta after step			
				1	2	3	4
<u>Input Variables</u>							
1	Plan to participate in volunteer work	.293	.293	.293	.266	.227	.222
2	Plan to join frat./sorority	.334	.206	.163	.163	.148	.146
3	Hours spent in clubs/groups	.358	.228	.154	.137	.137	.126
<u>Environment Variables</u>							
3	Floor Mean Score	.394	.192	.177	.174	.166	.166
<u>Variables Not Entering</u>							
4	Hours spent volunteering		.223	.134	.137	.099	.101
5	RA's Score		.056	.055	.051	.060	-.026

In the regression run on students above the median on time spent with other students, the floor mean score did not enter the prediction equation. In the students below the median the floor mean score was a stronger predictor with a final beta of .222. The floor mean score for those students who rated above the median on time spent in the residence hall had a beta of .161, little different from the original analysis. The only two variables to enter for those students below the median on time spent in the hall were

plans to participate in volunteer or community service work and the floor mean score with final betas of .326 and .153 respectively.

Table 15. Predicting Social Involvement: Step by Step Beta Changes

Step	Variable entering	<u>R</u>	<u>r</u>	Beta after step			
				1	2	3	4
<u>Input Variables</u>							
1	Hours spent Exercising or Sports	.368	.368	.368	.325	.303	.284
2	Hours spent partying	.480	.355	.311	.311	.263	.226
3	Hours spent socializing	.490	.308	.230	.114	.114	.107
<u>Environment Variables</u>							
3	Floor Mean Score	.517	.288	.239	.177	.173	.173
<u>Variables Not Entering</u>							
4	RA's Score		.076	.058	.035	.031	-.035

Social Involvement

This category of Involvement was measured by the amount of socializing with friends, exercising or sports, or partying the student reported. Table 15 shows the initial regression analysis. The pretest measure of the time spent exercising entered the regression first, followed by the measure of partying and socializing. When the floor's mean score entered in step 4, the beta of the first two variables dropped by .02 each. The floor's mean score had a larger final beta than the input measure of socializing with friends. The RA's score again did not enter the regression.

Table 16. Predicting Academic Involvement: Step by Step Beta Changes

Step	Variable entering	<u>R</u>	<u>r</u>	Beta after step		
				1	2	3
<u>Input Variables</u>						
1	Hours spent studying	.220	.220	.220	.206	.197
2	Was bored in class	.245	-.137	-.110	-.110	-.105
<u>Environment Variables</u>						
3	Floor Mean Score	.290	.171	.159	.156	.156
<u>Variables Not Entering</u>						
4	Time spent talking w/teachers		.101	.055	.048	.045
5	RA's Score		-.012	.009	.012	-.028

For those students above the median on time spent with other residents, the floor's mean score beta increased to .265, stronger than any other beta. This result was similar for those students above the median on time spent in the hall, in which the floor's mean score beta increased to .222. For those students below the median in time spent with other residents or in the hall the measure of socializing with friends, the floor mean score, and the RA's score did not enter the regression.

Academic Involvement

Correlations, multiple R, and beta weights were lower in the variables included in the Academic Involvement regression, than has been seen in the other categories (see Table 16). The floor mean beta was .156, which was stronger

than the input variables of being bored in class ($-.105$), but less than hours per week spent studying ($.197$). In a comparative analysis of those students who spent more time with other residents, the floor mean did not enter as a significant predictor. For those students who spent less time with other residents, the floor mean score was the strongest predictor with a final beta of $.214$. For the students above the mean on time spent in the hall, the floor mean score had a final beta of $.183$, which was stronger than the measure of being bored in class ($-.160$) or hours spent studying ($.163$). For those students below the median in time spent in the hall, the floor mean score beta on Academic Involvement was $.129$, and studying variable was $.245$. The measures of time spent with teachers and being bored in class did not enter. The RA's score did not enter any of the regressions.

The low beta weights indicate there are other significant predictors for Academic Involvement. These results parallel the results seen in Academic Behaviors. It may indicate that students who are more academically inclined are going outside of their floor community to study, and spending less time with other residents. They may also be finding other places within the hall to study.

TV Involvement

The fifth factor was a measure of how much TV students watched. The amount of TV watching before coming to college was a significant predictor of the amount of TV watched during college with a final beta of .247 (see Table 17).. The amount of TV the other floor residents watched was also a significant predictor with a final beta of .223. The RA's TV Involvement score was not a significant predictor. However, the sign reversed in the beta-in of the RA's score when the floor mean was controlled. The beta changed from .088 to -.046. "Perhaps the strongest evidence of true causation is when the sign (+ or -) of the regression coefficient for a given environmental variable in the final equation is the opposite of the simple correlation between the environmental variable and the outcome measure." (Astin, 1991a, p.310).

Table 17. Predicting TV Involvement: Step by Step Beta Changes

				Beta after step	
Step	Variable entering	<u>R</u>	<u>r</u>	1	2
<u>Input Variables</u>					
1	Hours Spent Watching TV	.277	.277	.277	.247
<u>Environment Variables</u>					
2	Floor Mean Score	.354	.255	.223	.223
<u>Variables Not Entering</u>					
3	RA's Score		.089	.088	-.046

The amount of time spent with other residents did not significantly change the final beta of the floor mean score. However, for those students above the median on time spent in the hall, the final beta of the floor mean score was .337. For the first time, the RA's score became a significant negative predictor with a beta of $-.143$.

Involvement with Others

This category is a measure of the students involvement with priorities outside of the hall or academic realm. Table 18 shows the results of the regression analysis. The strongest beta for Involvement With Others was the pretest measure of whether the student planned to marry in college. The floor's mean score had the next highest while the student's plans to participate in varsity athletics was third. The score of the RA again did not enter the regression. The analysis of students above and below the median on time spent with other residents and on time spent in the hall revealed little difference from the original analysis on the effect of the floor community.

Table 18. Predicting Involvement with Others: Step by Step Beta Changes

Step	Variable entering	<u>R</u>	<u>r</u>	Beta after step		
				1	2	3
<u>Input Variables</u>						
1	Plans to marry in college	.252	.252	.252	.254	.264
2	Plans to play varsity athletics	.274	.103	.108	.108	.095
<u>Environment Variables</u>						
3	Floor Mean Score	.349	.211	.223	.217	.217
<u>Variables Not Entering</u>						
4	RA's Score		.055	.072	.067	-.008

Self-Concept

The investigative category, Self-Concept, deals with self-ratings of the student's self-concept and ability to lead and deal with other people. This category included measures of how the students compared themselves to others in leadership ability, competitiveness, cooperativeness, drive to achieve, emotional and physical health, social self-confidence, understanding of others, and popularity. The category also included measures of how often the student felt overwhelmed or depressed.

Table 19 shows the mean scores of the responses and the significant changes during the year. Students reported feeling more overwhelmed than they had before coming to college. They also reported more social self-confidence and

understanding of others while they reported less drive to achieve. All other categories were not significantly different at the .05 alpha level.

Table 19. Comparison of Pre and Post Self-Concept Means.

Self-Concept	Pretest	Posttest	<u>t</u>	<u>p</u>
Felt overwhelmed	2.09	2.25	6.01	.00
Self-confidence (social)	3.46	3.59	3.54	.00
Drive to achieve	3.93	3.82	3.37	.00
Understanding of others	3.76	3.87	3.29	.00
Felt depressed	1.81	1.86	1.96	.05
Popularity	3.36	3.30	1.86	.06
Physical health	3.73	3.68	1.45	.15
Leadership ability	3.59	3.63	1.40	.16
Competitiveness	3.75	3.73	0.89	.38
Cooperativeness	3.87	3.84	0.78	.44
Emotional health	3.77	3.74	0.72	.47

Table 20 shows the correlations between pre and posttest Self-Concept scores. Leadership ability had the strongest correlation at .618. The measure of whether students felt overwhelmed had the weakest correlation between the pre and posttests at .196.

Table 20. Correlation Between Pre and Post Self-Concept.

Self-Concept Measure	<u>r</u>	<u>p</u>
Leadership ability	.618	.00
Physical health	.562	.00
Competitiveness	.560	.00
Drive to achieve	.536	.00
Popularity	.516	.00
Emotional health	.491	.00
Self-confidence (social)	.476	.00
Understanding of others	.411	.00
Cooperativeness	.369	.00
Felt depressed	.358	.00
Felt overwhelmed	.196	.00

Initial factor analysis of the Self-Concept category showed a significance level of less than .00 and a KMO score of .81, which Kaiser rates as *meritorious* (Norusis, 1994, p. 52). The factor analysis of the supplied three factors with eigenvalues greater than one. Varimax rotation helped identify these factors as Social Self-Concept, Competitive Self-Concept, and Emotional Self-Concept. The factor rotation is listed in Table 21.

Table 21. Factor Structure for Self-Concept.

	Factor		
	1	2	3
Understanding of others	.81779	-.04688	.05026
Self-confidence (social)	.69424	.23763	-.24321
Popularity	.55826	.34641	.01590
Cooperativeness	.55479	.19980	.04014
Leadership ability	.54606	.46414	-.05035
Emotional health	.49121	.31082	-.46307
Competitiveness	.06192	.84287	.03489
Physical health	.18309	.65002	-.13237
Drive to achieve	.31518	.63843	.00001
Felt depressed	-.10039	-.01769	.82092
Felt overwhelmed	.09689	.00740	.73698

Social Self-Concept

The first Self-Concept category included variables which were measures of how the students interacted with others. Table 22 lists the results of the regression analysis in which input variables were entered first, and the environmental variables entered second. The first input variable to enter the regression was the students' rating of their ability to understand others with a beta of .37. This beta dropped to .251 when the other input measure, the students' rating of their leadership ability and social self-confidence, entered. The input measures of the students' before college ratings of their popularity,

cooperativeness, and emotional health did not enter the regression.

Table 22. Predicting Social Self-Concept: Step by Step Beta Changes

Step	Variable entering	<u>R</u>	<u>r</u>	Beta after step				
				1	2	3	4	5
<u>Input Variables</u>								
1	Understanding of Others	.370	.370	.370	.294	.251	.244	.245
2	Leadership Ability	.441	.341	.252	.252	.194	.189	.175
3	Social Self-Confidence	.466	.340	.239	.170	.170	.177	.185
<u>Environmental Variables</u>								
4	Floor Mean Score	.494	.193	.174	.159	.165	.165	.181
5	RA's Score	.500	-.022	-.035	-0.30	-.041	-.077	-.077
<u>Variables Not Entering</u>								
6	Popularity		.260	.180	.100	.036	.045	.043
7	Cooperativeness		.248	.096	.065	.056	.060	.061
8	Emotional Health		.225	.153	.108	.070	.070	.073

Suppressor effects are shown on the negative RA's score by the input variables and especially by the floor mean score. In other words, the effect of the RA shows a greater negative effect after the student characteristics and the floor mean are controlled. In the next step the floor mean score and the RA's score entered the regression with beta weights of .181 and -.077 respectively. This is the first time the RA's score enter the regression, and it did so with

a negative effect.

For those students who spent more time with other residents, the floor mean score and the RA's score did not enter the regression analysis. For those students who spent less time in the hall the mean floor score had a beta of .185 which was similar to the final beta in the original analysis. The RA's score did not enter.

For those students who spent more time in the halls, a different phenomenon appeared (see Table 23). In the input block of variables, the students' pretest rating of their popularity entered as a predictor of the students' Social Self-Confidence, replacing the students' pretest rating of Social Self-confidence. Also, the RA's Social Self-Concept entered with a much higher beta of $-.182$ and had a moderately strong suppressor effect on the floor's mean score, which rose from .156 to .201 when the RA's score entered. This indicates that for people who spend more time in the hall, the floor's Social Self-Concept acts as a mediator on the negative influence of the RA's Social Self-Concept. For those students who spent less time in the hall, the RA's score did not enter the regression.

Table 23. Predicting Social Self-Concept: Step by Step
Beta Changes in Students above the Median in
Time Spent in the Residence Hall.

Step	Variable entering	<u>R</u>	<u>r</u>	Beta after step				
				1	2	3	4	5
<u>Input Variables</u>								
1	Understanding of Others	.417	.417	.417	.353	.341	.334	.333
2	Leadership Ability	.474	.332	.235	.235	.176	.166	.170
3	Popularity	.494	.287	.218	.152	.152	.149	.141
<u>Environmental Variables</u>								
4	Floor Mean Score	.518	.199	.173	.159	.156	.156	.201
5	RA's Score	.547	-.130	-.134	-.138	-.134	-.182	-.182
<u>Variables Not Entering</u>								
6	Social Self-Confidence		.318	.197	.131	.079	.060	.073
7	Cooperativeness		.262	.063	.045	.039	.047	.039
8	Emotional Health		.243	.161	.119	.091	.091	.105

Regressions were also run separately for those students above and below the median score on their rating of the RA's influence and effectiveness. For those students above the median in their rating of the RA, similar effects were found to the effects in the analysis for those students above the median in time spent in the hall. The beta weight of the floor mean before the RA's score entered was .189. The RA's score entered on step 5 with a beta of -.121. At that time the beta of the floor mean score increased .03 to .219. For those students below the median on their rating of the RA,

the floor mean score and the RA's score did not enter the regression. These findings are intriguing. It appears that those students who rate their RA as more influential and effective are more negatively impacted by the RA on their Self-Concept. The floor's Self-Concept is a mediating factor in this negative influence.

Competitive Self-Concept

The second factor in Self-Concept was a measure of the student's competitive nature and self-image. The variables that loaded into this factor were ratings of the student's competitiveness, physical health, and drive to achieve as compared to other students (see Table 24).

Table 24. Predicting Competitive Self-Concept: Step by Step Beta Changes

Step	Variable entering	<u>R</u>	<u>r</u>	Beta after step			
				1	2	3	4
<u>Input Variables</u>							
1	Competitiveness	.439	.439	.439	.356	.300	.276
2	Drive to Achieve	.482	.353	.215	.215	.195	.195
3	Physical Health	.507	.331	.195	.173	.173	.163
<u>Environmental Variables</u>							
4	Floor Mean Score	.523	.226	.141	.140	.129	.129
<u>Variables Not Entering</u>							
5	RA's Score		-.017	-.011	.017	.015	-.028

The three input variables all entered the regression as predictors of the student's Competitive Self-Concept. The

floor's mean score also entered in the second block as a predictor, and the RA's score did not enter. The sign reversed in the beta of the RA's score at step 2 after the rating of drive to achieve entered and again at step 5 after the floor's mean had entered. This indicates some mitigating of the RA's negative influence on the Competitive Self-Concept by the student's drive to achieve. However, this effect is lost as the floor's Self-Concept enters the regression.

Spending more time with residents took away the predictive value of the floor's mean score as both the floor's mean score and the RA's score did not enter the regression. For those spending less time with other residents, the predictive power of the floor's Self-Concept score increased by .04 to .169. For those students who reported spending more time in the hall, both the floor's mean score and the RA's score entered the regression analysis. At the final step the floor's mean score was the strongest predictor of any variable with a beta of .300. The beta of the RA's score at the final step was $-.110$, increasing from $-.027$ when the floor's mean score was controlled. For those students who spent less time in the hall, the floor's mean score and the RA's score were not significant predictors.

Emotional Self-Concept

The third factor in the Self-Concept category was made up of the measure of whether the student reported feeling overwhelmed during college or feeling depressed (see Table 25). The floor's mean score was a significant predictor of the student's Emotional Self-Concept. The RA's score and the measure of whether the student felt overwhelmed before college did not enter as significant predictors.

Table 25. Predicting Emotional Self-Concept: Step by Step Beta Changes

Step	Variable entering	<u>R</u>	<u>r</u>	Beta after step	
				1	2
<u>Input Variables</u>					
1	Felt Depressed	.299	.299	.299	.275
<u>Environment Variables</u>					
2	Floor Mean Score	.381	.265	.237	.237
<u>Variables Not Entering</u>					
3	Felt Overwhelmed		.163	.079	.029
4	RA's Score		.027	.028	-.005

There were few differences in the results in the separate analyses of those students above and below the median score on time spent with other residents. There was also little difference in the results for those students who reported spending more time in the hall. For those students spending less time in the hall, the measure of whether they felt overwhelmed entered the regression with a beta of .082

indicating that those students who are overwhelmed are spending time out of the hall.

Attitudes, Beliefs, and Values

The investigative category; Attitudes, Beliefs, and Values; deals with student views on political and social issues. Students were asked to respond about their political orientation and to give their views by responding to a series of questions about political and social issues. The students responded on a Likert scale of one equaling strongly disagree to four equaling strongly agree.

Table 26 shows the results of the changes in means from the pretest to the posttest. Students showed no significant change in their responses to if AIDS should be controlled by mandatory testing, if there is too much concern for criminals, if married women should stay at home, if they believe the individual can do little to change society, if sex is acceptable if people like each other, and there was no change in their political views. The students were more likely to agree that marijuana should be legalized, that the government should increase military spending, that racial discrimination is no longer a problem, that homosexual relations should be prohibited, that the government should raise taxes to reduce deficits, that the death penalty should be abolished, and that college officials should

approve student publications. They were less likely to agree that the college should prohibit racist or sexist speech, that there should be preferential treatment for the disadvantaged, or that busing is O.K. to achieve racial balance. They were also less likely to agree that the government is not doing enough to protect the consumer or should do more to control handguns, that the government should discourage energy consumption, or that the government is not doing enough to control pollution. They were less likely to agree that a national health care plan was needed, that wealthy people should pay more taxes, that nuclear disarmament is attainable, or that employers should be able to require drug testing. They were also less likely to agree that abortion should be legal or that a man should be entitled to sex if he thinks the woman "led him on." They also agreed less with the statement that college increases earning power. In most areas, the students became more conservative.

Table 26. Comparison of Pre and Posttest Attitudes, Beliefs, and Values Means.

Attitudes, Beliefs, and Values	Pretest	Posttest	<u>t</u>	<u>p</u>
Legalize Marijuana	1.72	2.12	9.48	.00
Government Not Controlling Pollution	3.25	2.92	9.28	.00
Increase Federal Military Spending	1.71	1.98	7.20	.00
Wealthy People Should Pay More Taxes	3.15	2.87	6.87	.00
Fed Govt Discourage Energy Consumption	3.03	2.83	5.55	.00
National Health Care Plan Needed	2.91	2.70	5.53	.00
College Increases Earning Power	2.89	2.67	5.52	.00
Man Not Entitled to Sex by "Leading On"	3.64	3.41	5.51	.00
Employers Can Require Drug Testing	3.13	2.92	5.33	.00
Racial Discrimination Not a Problem	1.62	1.82	4.99	.00
Abortion Should Be Legal	2.96	2.78	4.35	.00
Prohibit Homosexual Relations	2.13	2.31	4.19	.00
Fed Govt. Do More to Control Handguns	2.66	2.50	3.91	.00
Nuclear Disarmament Attainable	2.90	2.74	3.89	.00

Table 26. Comparison of Pre and Posttest Attitudes, Beliefs, and Values Means.

Attitudes, Beliefs, and Values	Pretest	Posttest	<u>t</u>	<u>p</u>
Busing OK to Achieve Balance	2.49	2.35	3.39	.00
Government Not Protecting Consumer	2.67	2.56	3.28	.00
Raise Taxes to Reduce Deficits	2.06	2.19	3.23	.00
Abolish Death Penalty	1.57	1.68	2.90	.00
Coll Officials Clear Student Publ.	1.89	1.99	2.54	.01
Pref Treatment for Disadvantaged	2.14	2.04	2.47	.01
Coll Prohibit Racist/sexist Speech	2.46	2.34	2.41	.02
Political Orientation	3.04	2.98	1.73	.08
Sex Ok If People like Each Other	2.41	2.47	1.38	.17
Ind Can Do Little to Change Society	2.01	2.06	1.11	.27
Married Women Best in Home	1.67	1.72	0.93	.35
Too Much Concern for Criminals	2.93	2.91	0.34	.73
Control Aids by Mandatory Testing	2.57	2.58	0.12	.90

Table 27 shows the correlations between pre and posttest Attitudes, Beliefs, and Values. All pre and posttest variables were significantly correlated at less

Table 27. Correlation Between Pre and Post Attitudes, Beliefs, and Values.

Attitudes, Beliefs, and Values	<u>r</u>	<u>p</u>
Abortion Should Be Legal	.609	.00
Fed Govt. Do More to Control Handguns	.514	.00
Legalize Marijuana	.506	.00
Political Orientation	.480	.00
Sex OK If People like Each Other	.471	.00
Prohibit Homosexual Relations	.470	.00
Wealthy People Should Pay More Taxes	.455	.00
National Health Care Plan Needed	.430	.00
Abolish Death Penalty	.425	.00
Government Not Controlling Pollution	.401	.00
Busing Ok to Achieve Balance	.381	.00
Coll Officials Clear Student Publ.	.373	.00
Raise Taxes to Reduce Deficits	.373	.00
Control Aids by Mandatory Testing	.361	.00
Nuclear Disarmament Attainable	.351	.00
Too Much Concern for Criminals	.348	.00
College Increases Earning Power	.343	.00
Increase Federal Military Spending	.341	.00
Pref Treatment for Disadvantaged	.341	.00
Ind Can Do Little to Change Society	.334	.00
Employers Can Require Drug Testing	.317	.00
Married Women Best in Home	.289	.00
Man Not Entitled to Sex by "Lead On"	.278	.00
Coll Prohibit Racist/sexist Speech	.259	.00
Govt Discourage Energy Consumption	.215	.00
Government Not Protecting Consumer	.198	.00
Racial Discrimination Not a Problem	.186	.00

than .05. Students views about abortion, handguns, and legalization of marijuana were most highly correlated. Comparisons about students' views on whether the government is doing enough to protect consumers, and whether racial discrimination is no longer a problem were least correlated.

Examination of the factor analysis of Attitudes, Beliefs and Values showed a KMO score of .81 and a significance level of .00 on Bartlett's test of sphericity. Both confirmed the goodness of fit for the factor analysis. In the initial factor analysis six factors were identified with eigenvalues greater than one. However, the scree plot showed a steep decline with five factors and then a very gradual leveling off of the plot. For this reason, five factors were selected for the analysis which explained 40.7% of the variance. The five factors were labeled in order Politically Liberal, Socially Conservative, Politically Conservative, Socially Liberal, and Regulatory (see Table 28).

Table 28. Factor Structure for Attitudes, Beliefs and Values.

	Factor				
	1	2	3	4	5
Government Not Controlling Pollution	.62673	-.22704	-.01446	.13289	-.03267
Govt Should Discourage Energy Consumption	.59096	-.18144	-.00584	.02719	-.17417
Government Not Protecting Consumer	.57858	.03106	.11522	.02815	.07807
Wealthy People Should Pay More Taxes	.53583	-.17278	.10469	-.02888	.09498
Nuclear Disarmament Attainable	.50786	-.11947	-.02607	.04572	-.07136
National Health Care Plan Needed	.49421	-.27285	-.01920	.17492	.33091
Raise Taxes to Reduce Deficits	.41662	.05166	-.17835	.18847	.03268
Busing Ok to Achieve Balance	.40778	.17628	-.09322	.03438	.10028
Pref Treatment for Disadvantaged	.34355	.31101	-.33056	.04001	.29651
Married Women Best in Home	.03985	.66885	.00925	-.12693	-.03193
Increase Federal Military Spending	-.14035	.56058	.13781	-.02848	.03327
Prohibit Homosexual Relations	-.05462	.55413	.35010	-.22659	.05339
Racial Discrimination Not a Problem	-.20040	.48920	-.02572	.13399	.24901
Man "Led On" Not Entitled to Sex	.25348	-.47706	.26190	-.13367	-.02720
There is Too Much Concern for Criminals	.09196	.14974	.62321	-.06949	-.22014
Abolish Death Penalty	.17121	.09003	-.62054	-.05488	.19222
Employers Can Require Drug Testing	.06796	-.05556	.58527	-.26212	.23243
College Increases Earning Power	-.02422	.17166	.49878	.20486	.24165

Sex OK/People like Each Other	.09213	.06298	.05271	.73769	-.09841
Abortion Should Be Legal	.17278	-.27461	.09168	.69816	-.02411
Legalize Marijuana	.16341	.00671	-.34339	.58954	-.12263
Political Orientation	.32767	-.18885	-.26776	.39698	.15139
Ind. Can Do Little to Change Society	-.10424	.27287	.08857	.32404	.22669
College Officials Should Clear Student publications	-.07090	.29412	-.06016	-.11609	.61084
Colleges Should Prohibit Racist/Sexist Speech	.07861	-.04334	-.00633	-.06236	.60888
Control AIDS by Mandatory Testing	.06905	.20333	.36404	.06306	.40233
Fed Govt. Should Control Handguns	.37098	-.32295	-.21181	.00863	.39615

Politically Liberal Attitude

Table 29 shows the results of the regression analysis for Politically Liberal Attitudes. Four of the input variables were significant predictors of the student's Politically Liberal Attitude, including beliefs whether the government should controlling pollution, the wealthy should pay more taxes, busing should be used to achieve racial balance, and whether the government was protecting the consumer. In the second block of the regression the floor mean score entered with a beta of .132. The RA's score did not enter the regression.

Table 29. Predicting Politically Liberal Attitudes,
Beliefs and Values: Step by Step Beta Changes

Step	Variable entering	<u>R</u>	<u>r</u>	Beta after step				
				1	2	3	4	5
<u>Input Variables</u>								
1	Govt not controlling pollution	.308	.308	.308	.269	.262	.224	.211
2	Wealthy should pay more taxes	.376	.267	.220	.220	.208	.182	.168
3	Busing OK to achieve racial balance	.422	.218	.203	.191	.191	.176	.172
4	Govt not protecting consumer	.443	.276	.204	.166	.146	.146	.144
<u>Environmental Variables</u>								
5	Floor Mean Score	.462	.200	.163	.141	.134	.132	.132
<u>Variables Not Entering</u>								
6	Govt/discourage energy use		.124	.032	.006	.007	.011	.008
7	Nuclear disarmament attainable		.167	.122	.099	.096	.087	.088
8	Health Plan Needed		.225	.165	.130	.109	.083	.076
9	Tax to reduce deficits		.138	.065	.048	.031	.037	.036
10	Preference for disadvantaged		.150	.129	.113	.086	.067	.069
11	RA's Score		.031	.020	.014	.013	.015	-.030

In comparing these results with the results of those students who reported spending more time with other residents, the beta of the floor mean score became the strongest predictor at the final step with a beta of .179 compared to .132 in the original analysis. For those students who spent less time with other residents, the floor

mean score did not enter the regression. A similar result was found when comparing those students who reported spending more time in the residence hall. The floor mean score had a final beta of .170. At the final step, only the input measure of the belief whether government should control pollution had a strong beta at .220. For those students reporting spending less time in the hall, the floor mean score did not enter. The RA's score did not enter in any of the regression models.

Socially Conservative Attitude

The regression of the outcome measure of Socially Conservative Attitudes again showed the influence of the residence hall floor community. Table 30 shows the results of the regression analysis. At the final step, the floor mean score was the strongest predictor with a beta of .325. The RA's score did not enter the regression. The only input variable which did not enter was the measure of the belief that racial discrimination is no longer a problem. As has been seen in previous analyses, the beta of the RA's score in the excluded variables was positive, until the floor mean score was controlled, at which point the RA's score beta became negative. This beta-in indicates that if the RA's score had entered at the next step, it would have a very weak negative beta.

Table 30. Predicting Socially Conservative Attitudes, Beliefs and Values: Step by Step Beta Changes

Step	Variable entering	<u>R</u>	<u>r</u>	Beta after step				
				1	2	3	4	5
<u>Input Variables</u>								
1	Prohibit Homosexuals	.374	.374	.374	.365	.338	.289	.225
2	Military Spending	.408	.183	.163	.163	.148	.200	.204
3	No sex if 'led on'	.431	-.227	-.161	-.145	-.145	-.145	-.100
4	Married women best at home	.452	.259	.149	.144	.144	.144	.102
<u>Environmental Variables</u>								
5	Floor Mean Score	.547	.427	.353	.351	.338	.352	.325
<u>Variables Not Entering</u>								
6	Racial bias not a problem		.173	.109	.080	.075	.074	.050
7	RA's Score		.039	.066	.078	.068	.065	-.009

Comparing these results to the results for those students who spent more time with other residents showed a slight decrease in the beta of the floor mean score to .300, and an increase in the beta for the attitude that homosexual relations should be prohibited to .310. The beta of the RA's score dropped to -.109 at the final step. For those students who reported spending less time with other residents, the final beta of the floor mean score increased to .366, and the beta of the attitude to prohibit homosexual relations dropped to .152. The final beta of the RA's score

became a positive influence at .088. For those students reporting spending more time in the hall, the floor mean score was the strongest predictor with a final beta of .352, compared to the next highest final beta of .244 for the attitude to prohibit homosexual relations. For those students who spent less time in the hall, all input variables entered. The floor mean score was the strongest predictor with a beta of .279 followed by the belief that married women should stay at home with a beta of .224. Only the RA's score did not enter the regression. It had a beta of $-.065$ at the final step.

Politically Conservative Attitude

Table 31 shows the regression results for Politically Conservative Attitudes. The floor mean score entered in the second block of the regression with a beta of .148. This was the second strongest predictor after the belief that the death penalty should be abolished with a beta of $-.262$. This negative beta weight reflects the student's disagreement with the view that the death penalty should be abolished. Neither the RA's score, nor the input measure of the attitude that there is too much concern for criminals entered the regression model. The beta of the RA's score increased from $-.014$ to $-.074$ when the floor mean score entered the regression.

Table 31. Predicting Politically Conservative Attitudes, Beliefs and Values: Step by Step Beta Changes

Step	Variable entering	<u>R</u>	<u>r</u>	Beta after step			
				1	2	3	4
<u>Input Variables</u>							
1	Abolish Death Penalty	.316	-.316	-.316	-.283	-.270	-.262
2	College Increases Earnings	.348	.212	.151	.151	.149	.142
3	Employers Should Drug Test	.372	.165	.134	.133	.133	.127
<u>Environmental Variables</u>							
4	Floor Mean Score	.401	.180	.159	.152	.148	.148
<u>Variables Not Entering</u>							
5	Too Much Concern for Criminals		.131	.040	.036	.027	.036
6	RA's Score		.004	-.015	-.018	-.014	-.074

When comparing these results with the results for those students who reported spending more time in the residence halls, the beta of the floor mean score increased to .246 and the beta of the attitude to abolish the death penalty increased to -.311. The attitudes that there is too much concern for criminals or that employers should require drug testing and the RA's score did not enter. For those students who reported spending less time with other residents, the floor mean score, the RA's score, and the attitude that there is too much concern for criminals did not enter the regression model. For those students who

reported spending more time in the hall, the final results were similar to the original analysis. For those students who reported spending less time in the hall, only the belief that the death penalty should be abolished and the floor mean score entered the regression. Their betas at the final step were $-.348$ and $.177$ respectively.

Socially Liberal Attitude

Table 32 show the results of the regression analysis on Socially Liberal Attitudes. The mean floor score was a significant predictor of the outcome variable with a beta of $.189$ in the final step of the regression. The input measures of the belief that an individual can do little to change society and the student's political orientation before coming to college did not enter the regression. Also the RA's score did not enter.

For those students who reported spending more time with other residents, the value that abortion should be legal was the strongest predictor variable with a final beta of $.301$, followed by the floor mean score of $.230$. For those students who reported spending more time in the hall, the results were similar. The beta for the legalized abortion value was $.339$ while the beta for the floor mean was $.252$. For those students who reported spending less time with other residents, the beta of the floor mean score

entered the regression model, but dropped to .144. For those students spending less time in the hall, the floor mean did not enter the regression. Only the input variables measuring the attitudes that sex is OK between people who like each other and that marijuana should be legalized entered the regression model. The RA's score did not enter in any of the analyses.

Table 32. Predicting Socially Liberal Attitudes, Beliefs and Values: Step by Step Beta Changes

Step	Variable entering	<u>R</u>	<u>r</u>	Beta after step			
				1	2	3	4
<u>Input Variables</u>							
1	Sex is OK if People Like Each Other	.406	.406	.406	.305	.258	.222
2	Abortion Should Be Legal	.471	.378	.258	.258	.227	.231
3	Legalize Marijuana	.507	.333	.233	.200	.200	.182
<u>Environmental Variables</u>							
4	Floor Mean Score	.540	.283	.204	.205	.189	.189
<u>Variables Not Entering</u>							
5	India. Can Do Little to Change Society		.091	.011	.028	.019	.006
6	Political View		.242	.162	.113	.085	.085
7	RA's Score		.036	.058	.055	.061	.044

Regulatory Attitude

The final category in Attitudes, Beliefs, and Values is a measure of the students' attitudes toward regulation in society. Table 33 shows the results of the regression

analysis. The floor mean score was the strongest predictor of Regulatory Attitude with a final beta of .258. The RA's score did not enter the regression, but the beta-in for the RA's score dropped from .182 to .038 when the floor mean score was controlled.

Table 33. Predicting Regulatory Attitudes, Beliefs and Values: Step by Step Beta Changes

Step	Variable entering	<u>R</u>	<u>r</u>	Beta after step				
				1	2	3	4	5
<u>Input Variables</u>								
1	Colleges May Clear Student Publications	.328	.328	.328	.267	.249	.246	.230
2	Colleges should prohibit speech	.414	.322	.259	.259	.236	.230	.204
3	Govt Should Control Guns	.436	.228	.178	.142	.142	.131	.093
4	AIDS Mandatory Testing	.450	.157	.140	.123	.111	.111	.098
<u>Environmental Variables</u>								
5	Floor Mean Score	.515	.338	.305	.278	.263	.258	.258
<u>Variables Not Entering</u>								
6	RA's Score		.227	.222	.196	.182	.102	.038

In the analysis of those students who reported spending more time with other residents, both the floor mean score and the RA's score entered the regression model with a beta of .199 and .160 respectively at the final step. The

attitude that colleges should clear student publications had the strongest beta at .264. The attitudes that AIDS should be controlled through mandatory testing and that government should control handguns did not enter the regression. For those students who reported spending less time with other residents the results were very similar to the original analysis. The regression results were also similar to the original analysis for both groups of students who were above the median or below the median in time spent in the residence hall.

Academic and Cognitive Development

The fifth investigate category includes self-ratings of students' academic and cognitive abilities, their academic involvement, and academic expectations and goals. The category included 10 questions about academic activities which were coded on a 3 point scale (1=frequently, 2=occasionally, 3=never). These measures included responses to whether the student was bored in class, did not complete homework on time, tutored or studied with other students, was a guest in a teacher's home, asked a teacher for advice, argued with a teacher, and came late to class. This category also included responses to the students' best estimate of their chances of changing their major field or career choice, failing a class, being elected to honor

society or graduating with honors, making at least a "B" average, getting tutoring help or vocational counseling, dropping out temporarily, or getting a bachelor's degree. These questions were coded on a four point scale on the pretest, with one equaling no chance and four equaling very good chance. The posttest added a fifth category for the student to respond if they already had engaged in the activity. This category also included students' self-ratings of the their academic and cognitive abilities, including academic, artistic, mathematical, public speaking, and writing abilities; originality; reading speed comprehension; and intellectual self-confidence. The students were asked to compare themselves to other students on a scale of 1 to 5 (1=top 10% to 5=bottom 10%).

Table 34 shows the comparisons of the pretest and posttest responses. There was no difference in the pretest and posttest means in responses to the questions about being elected to honor society, graduating with honors, getting a bachelor's degree, tutoring or studying with another student, and in their rating of their originality and reading speed comprehension. Students' responses indicated that at the end of their first year they were more likely to anticipate earning at least a "B" average, yet they also felt that they were more likely to fail one or more classes and to have to drop out temporarily. They were more likely

to expect to change their career choice or major and to seek tutoring help or vocational counseling. They also reported higher ratings of their writing, artistic, and public speaking abilities and of their intellectual self-confidence. Students were more likely to report being bored in class or to be late for class. They were less likely to have argued with a teacher, asked a teacher for advice, or been a guest in a teacher's home. They reported that they had less frequently failed to complete homework on time. Students' rating of their math ability and their academic ability also dropped.

Table 34. Comparison of Pre and Posttest Academic and Cognitive Development.

Academic and Cognitive Development	Pretest	Posttest	<u>t</u>	p
Argued with a teacher	1.74	1.34	13.73	.00
Drop out Temporarily	1.57	2.11	11.54	.00
Fail One or More Classes	1.99	2.54	11.49	.00
Asked teacher for advice	2.08	1.81	8.93	.00
Guest in teacher's home	1.32	1.11	7.92	.00
Writing ability	3.38	3.62	7.69	.00
Seek Vocational Counseling	2.05	2.34	6.01	.00
Public speaking ability	3.05	3.25	5.84	.00
Came late to class	1.60	1.76	5.84	.00

Table 34. Comparison of Pre and Posttest Academic and Cognitive Development Cont'd.

Academic and Cognitive Development	Pretest	Posttest	<u>t</u>	<u>p</u>
Make at Least "B" Average	3.43	3.65	5.47	.00
Get Tutoring Help	2.74	2.98	5.24	.00
Failed to complete homework on time	1.70	1.58	4.19	.00
Math ability	3.42	3.31	3.34	.00
Change Career Choice	2.64	2.80	3.26	.00
Change Major Field	2.66	2.82	3.22	.00
Was bored in class	2.27	2.34	2.75	.01
Academic ability	3.84	3.76	2.72	.01
Artistic ability	2.85	2.92	2.10	.04
Self confidence (intellectual)	3.72	3.78	2.03	.04
Be Elected to Honor Society	2.39	2.48	1.94	.05
Tutored another student	1.52	1.46	1.79	.07
Get a Bachelor's Degree	3.77	3.71	1.70	.09
Studied with another student	2.20	2.24	1.48	.14
Originality	3.62	3.65	1.06	.29
Reading speed comprehension	3.35	3.37	0.57	.57
Graduate with Honors	2.71	2.71	0.09	.93

Table 35 shows the correlations between the pre and posttest responses in the Academic and Cognitive Development

category. All were significantly correlated except for the

Table 35. Correlation Between Pre and Post Academic and Cognitive Development.

Academic and Cognitive Development	<u>r</u>	Sig. (two-tailed)
Math Ability	.694	.00
Artistic Ability	.693	.00
Public Speaking Ability	.650	.00
Academic Ability	.613	.00
Reading Speed Comprehension	.601	.00
Writing Ability	.596	.00
Self Confidence (Intellectual)	.525	.00
Originality	.503	.00
Be Elected to Honor Society	.450	.00
Graduate with Honors	.430	.00
Change Major Field	.370	.00
Change Career Choice	.350	.00
Failed to Complete Homework	.326	.00
Fail One or More Classes	.309	.00
Get Tutoring Help	.299	.00
Tutored Another Student	.292	.00
Argued with a Teacher	.288	.00
Make at Least "B" Average	.286	.00
Seek Vocational Counseling	.281	.00
Studied with Another Student	.276	.00
Came Late to Class	.273	.00
Was Bored in Class	.237	.00
Drop out Temporarily	.205	.00
Asked Teacher for Advice	.137	.00
Get a Bachelor's Degree	.115	.00
Guest in Teacher's Home	.021	.60

measure of whether the student had been a guest in a teacher's home. Students' ratings of their abilities were most strongly correlated; this was especially so for their ratings of math and artistic abilities. Their expectations whether they would earn a bachelor's degree and their report of whether they had asked a teacher for advice were least correlated.

Factor analysis on the Academic and Cognitive Development category showed a significance level of .00 on Bartlett's test of sphericity and a score of .76 on the KMO measure of sampling adequacy. Both were in the range of an acceptable factor solution. Eight factors were originally identified with an eigenvalue greater than one. However, examination of the scree plot showed a leveling off after six factors, so the final factor analysis was run selecting six factors. These factors were identified as Academic Confidence, Academic Abilities, Academic Uncertainty, Academic Dissonance, Academic Support, and Academic Connection. The factor rotation matrix is shown in Table 36.

Table 36. Factor Structure for Academic and Cognitive Development.

	Factor					
	1	2	3	4	5	6
Be Elected to Honor Society	.74522	.14828	.05049	-.08072	.13940	.02932
Graduate with Honors	.71782	.11919	.02925	-.14201	.10713	.10420
Academic ability	.67748	.35068	-.09952	.07195	-.13532	.02421
Make at Least "B" Average	.59839	.08648	-.06513	-.15255	.12047	.42458
Math ability	.59205	.00105	-.07820	.14563	-.21115	-.09340
Tutored another student	.39464	.03334	-.16445	.30447	.21301	-.07166
Writing ability	.09347	.70504	-.00155	-.00998	.00230	.07569
Originality	-.02680	.70248	.00866	.02855	.07349	-.02368
Reading speed comprehension	.20429	.63573	.04932	-.04053	-.11625	.01990
Self confidence (intellectual)	.32826	.60037	-.07344	.04274	-.09176	.08200
Public speaking ability	.09332	.56451	-.07653	.14357	.12282	.12156
Artistic ability	-.02422	.51605	-.05972	-.00503	.14780	-.28529
Change Career Choice	.00199	-.01258	.86449	.07518	-.02717	.04730
Change Major Field	-.00943	-.03341	.84914	.07381	-.08363	.07779
Fail One or More Classes	-.40528	-.08379	.49684	.16877	.10030	-.06540
Drop out Temporarily	-.12913	.02166	.47863	.05384	.21371	-.36557
Came late to class	-.00808	-.04003	.07926	.62977	.03505	.04179
Failed to complete homework on time	-.15757	.05714	.13030	.59528	-.04437	-.11744
Argued with a teacher	.15140	.21488	.00074	.46121	.26273	-.09828

Was bored in class	-.07912	-.01750	.16781	.44193	-.33002	.28414
Get Tutoring Help	-.14277	-.02465	.26001	-.01601	.64140	.29739
Asked teacher for advice	.05771	.13790	-.14884	.11380	.57773	.00744
Seek Vocational Counseling	.09449	-.09673	.40539	-.02854	.49501	-.13171
Get a Bachelor's Degree	.19269	.08960	.02720	-.13312	.00667	.59092
Studied with another student	-.03593	.00874	-.15251	.22426	.25384	.52244
Guest in teacher's home	.21524	.05393	-.14912	.30978	.20467	-.35853

Academic Confidence

In the regression analysis of Academic Confidence, the input and environmental variables explained 42% of the variance (see Table 37). In the first block three input variables which measured the students' ratings of their academic ability, whether they expected to graduate with honors, and their mathematical ability entered the regression. In the second block the floor mean score entered the regression.

Table 37. Predicting Academic Confidence: Step by Step
Beta Changes

Step	Variable entering	<u>R</u>	<u>r</u>	Beta after step				
				1	2	3	4	5
<u>Input Variables</u>								
1	Academic Ability	.532	.532	.532	.376	.265	.237	.220
2	Graduate with Honors	.599	.502	.316	.316	.287	.231	.223
3	Mathematical Ability	.625	.480	.262	.220	.220	.214	.210
4	Be Elected to Honor Society	.631	.459	.254	.128	.116	.116	.100
<u>Environmental Variables</u>								
5	Floor Mean Score	.648	.290	.188	.163	.158	.152	.152
<u>Variables Not Entering</u>								
6	Make "B" Average		.336	.141	.030	.032	.021	.011
7	Tutored Students		.190	.096	.049	.015	.003	.008
8	RA's Score		-.037	-.034	-.012	-.006	-.006	-.017

Much of the variance was shared in this model.

Academic Ability had a beta of .532 in the first step which dropped to .220 when all other input variables and the floor mean score had entered. Two input variables, the students' expectation to make at least a "B" GPA and whether they had tutored others did not enter the regression. Once again the RA's score did not enter the regression model.

For those students who reported spending more time

with other residents the results were very similar to the original regression. The beta of the floor mean score increased by .025 to .177 at the final step. For those students who reported spending less time with other residents, the beta of the floor mean score decreased slightly to .144. However, for those students who reported spending more time in the hall, the floor mean score did not enter the regression. In this regression the expectation that the student would graduate with honors became the strongest predictor with a beta of .360, along with academic and math ability. For those students reporting spending less time in the hall, the floor mean again entered with a beta at the final step of .228, which was stronger than the original analysis.

Academic Abilities

The next category dealt with the students' ratings of their communication abilities, aesthetic abilities, and intellectual self-confidence. All input variables entered the regression and proved to have much multicollinearity. The floor mean score entered in the second block with a beta of .142. The RA's score was not a significant predictor of Academic Abilities (see Table 38).

Table 38. Predicting Academic Abilities: Step by Step Beta Changes

Step	Variable entering	R	r	Beta after step						
				1	2	3	4	5	6	7
<u>Input Variables</u>										
1	Writing	.452	.452	.452	.337	.283	.216	.177	.149	.144
2	Public Speaking	.529	.428	.298	.298	.288	.253	.215	.195	.191
3	Artistic	.592	.365	.282	.272	.272	.269	.266	.224	.225
4	Reading	.622	.396	.260	.216	.211	.211	.174	.177	.181
5	Academic Confidence	.640	.416	.282	.219	.212	.173	.173	.150	.129
6	Originality	.652	.418	.290	.244	.169	.166	.142	.142	.126
<u>Environmental Variables</u>										
7	Floor Mean Score	.666	.257	.201	.180	.173	.171	.153	.142	.142
<u>Variables Not Entering</u>										
8	RA's Score		.069	.034	.029	.040	.047	.048	.038	-.006

The regression for those students both above and below the median in time spent with other residents was very similar to the original regression. In the final step, the floor mean score beta for those above the median was .149, and for those below the median it was .148. For those students who reported spending more time in the hall, the beta for the floor mean score rose slightly at the final step to .169. For those spending less time in the hall, the final beta was .114.

Academic Uncertainty

The third category included measures of students' uncertainty in their career and major choice and in their ability to succeed as measured by the expectation to fail a class or to drop out of college.

Table 39. Predicting Academic Uncertainty: Step by Step Beta Changes

				Beta after step			
Step	Variable entering	<u>R</u>	<u>r</u>	1	2	3	4
<u>Input Variables</u>							
1	Change Major Field	.280	.280	.280	.165	.156	.126
2	Change Career Choice	.295	.276	.146	.146	.144	.156
3	Drop Out Temporarily	.307	.124	.088	.087	.087	.092
<u>Environmental Variables</u>							
4	Floor Mean Score	.379	.240	.217	.220	.223	.223
<u>Variables Not Entering</u>							
5	Fail a Class		.020	-.006	-.015	-.035	-.050
6	RA's Score		-.004	-.003	-.010	-.011	-.008

The input variables of the expectation of changing major, changing career, or dropping out entered in the first block. The floor mean score entered in the second block with a beta stronger than any of the input variables. The measure of the students' expectation of failing a course and the RA's score did not enter the regression. Table 39 displays the regression.

For those students who spent more time with other

residents, the expectation to change their career choice became a stronger predictor with a final beta of .195. The floor mean score beta dropped slightly to .192. The expectations of changing majors or failing a class and the RA's score did not enter the regression. For those students spending less time with other residents only changing the major field and the floor mean score entered with final betas of .249 and .290 respectively. For those spending more time in the hall only the expectation of changing career choice and the floor mean score entered with final betas of .159 and .268 respectively. The regression for those who spent less time in the hall was similar to the regression analysis for those students who spent more time with other residents. The three variables of changing major field, dropping out, and the floor mean score entered the regression with final betas of .345, .123, and .195.

Academic Dissonance

This category included student responses about whether they were late for class, were bored in class, failed to complete their homework, or argued with a teacher. Table 40 shows the results of the regression analysis. All input variables entered the regression except for the measure of being bored in class. The floor mean score entered in the second block with a beta of .258, which was stronger than

any of the input variables. The environmental variable, RA score, did not entered the regression. However, again the RA's score had a sign reversal when the floor mean score was controlled. If it had entered at the next step, the beta of the RA score changed from .050 to $-.054$ when the floor mean score had entered.

Table 40. Predicting Academic Dissonance: Step by Step Beta Changes

Step	Variable entering	<u>R</u>	<u>r</u>	Beta after step			
				1	2	3	4
<u>Input Variables</u>							
1	Came Late to Class	.280	.280	.280	.212	.195	.197
2	Didn't Complete Work	.326	.260	.179	.179	.158	.130
3	Argued with Teacher	.336	.192	.124	.090	.090	.068
<u>Environmental Variables</u>							
4	Floor Mean Score	.422	.295	.279	.263	.258	.258
<u>Variables Not Entering</u>							
5	Was Bored in Class		.155	.090	.058	.046	.056
6	RA's Score		.074	.064	.054	.050	-.054

For those students who spent more time with other residents, having been late to class before coming to college became a predictor on par with the floor mean score. This variable had a final beta of .265 compared with the floor mean score beta of .258. The relationship of the final betas was similar for those students who reported spending more time in the hall. For those spending less

time with other residents, the floor mean score again had the strongest beta at .263. For those students spending less time in the hall, only coming late to class and the floor mean score entered the regression with final betas of .271 and .307 respectively.

Academic Support

This category combined measures of students' willingness to get academic help. Table 41 shows the regression results for Academic Support. The expectation that the student would get tutoring help or seek vocational counseling entered in the first block. The floor mean score entered in the second block. The frequency with which students report having asked a teacher for help and the RA score did not enter the regression.

Table 41. Predicting Academic Support: Step by Step Beta Changes

Step	Variable entering	<u>R</u>	<u>r</u>	Beta after step		
				1	2	3
<u>Input Variables</u>						
1	Get Tutoring Help	.241	.241	.241	.222	.226
2	Seek Vocational Counseling	.262	.146	.104	.104	.083
<u>Environmental Variables</u>						
3	Floor Mean Score	.316	.186	.187	.178	.178
<u>Variables Not Entering</u>						
4	Asked Teacher for Advice		.075	.060	.064	.065
5	RA's Score		.001	.011	.016	.003

The results were similar for those students who reported spending more time with other residents and for those students who reported spending less time in the hall. However, the final betas became slightly stronger at the final step both for the students who reported spending less time with other residents and for the students who reported spending more time in the hall. In both these regressions, the expectation of getting tutoring help and the floor mean score entered with final betas of .230 and .229 in the first and .207 and .194 respectively.

Academic Connection

The category of Academic Connection included measures of the student's expectation of getting a bachelor's degree, of the activities of studying with other students, and of being a guest in a teacher's home. The regression results in Table 42 show that the floor mean score was the strongest predictor of Academic Connection. Only the input variable of the students' report of studying with others entered the regression. The RA score again did not enter and its beta-in had a sign reversal when the floor mean score was controlled.

Table 42. Predicting Academic Connection: Step by Step Beta Changes

Step	Variable entering	<u>R</u>	<u>r</u>	Beta after step	
				1	2
<u>Input Variables</u>					
1	Studied with Other Students	.140	.140	.140	.113
<u>Environmental Variables</u>					
2	Floor Mean Score	.313	.292	.281	.281
<u>Variables Not Entering</u>					
3	Was a Guest in Teacher's Home		.059	.035	.042
4	Get Bachelor's Degree		.051	.052	.066
5	RA's Score		.017	.016	-.022

For those students who spent more time with other residents, the floor mean score became a stronger predictor with a final beta of .323. For those students who spent less time with other residents, the floor mean score became the only variable to enter the regression model with a beta of .268. For spent more time in the hall, the floor mean score was also the only variable to enter with a beta of .40. For those students who spent less time in the hall, the input variable of studying with other students entered with a beta of .220 followed by the floor mean score with a beta of .206.

Degree and Life Goals

The sixth investigative category included responses to

questions about the students' reasons for going to college, their educational and personal goals, and their plans for the future. Table 43 shows the changes in the means from the pretest and the posttest. There were no changes in the pre and posttest degree aspirations. There were also no changes in the students' reasons for attending college, including to prepare for graduate school, to make more money, to be more cultured, and to find a job in their field. It became more important to the students to achieve in performing arts, to write original works, to create artistic work, and to gain a general education. It also became more important to the students to get involved in community action, to become a community leader. The values of raising a family, influencing social values, helping others in difficulty, promoting racial understanding, and developing a meaningful philosophy of life also became more important. Students were also more likely to want to aspire to have administrative responsibility, become an authority in their field, be successful in their own business, obtain recognition from colleagues, or make a theoretical contribution to science. Students were also more likely to want to influence the political structure, to keep up on political affairs, and to clean up environment. Students reported more often on the posttest that they were in college to get a better job, because they could not find a

job or because they had nothing better to do. Their parents' influence also became more important. Students were less likely after the first year of college to report they were in college because they wanted to learn more about their interests, to improve their reading and study skills, to aspire to being well off financially, or to get away from home.

Table 43. Comparison of Pre and Posttest Degree and Life Goals.

Degree and Life Goals	Pretest	Posttest	<u>t</u>	<u>p</u>
Achieve in Performing Arts	1.47	1.82	9.63	.00
Take Part in Community Action	1.91	2.24	9.39	.00
Write Original Works	1.45	1.77	9.18	.00
Raising a Family	2.72	3.08	9.14	.00
Influencing Social Values	2.20	2.52	8.49	.00
Create Artistic Work	1.49	1.80	8.17	.00
Become Community Leader	2.05	2.33	7.80	.00
Influence Political Structure	1.78	2.03	6.45	.00
Promote Racial Understanding	2.22	2.47	6.42	.00
Improve Reading and Study Skills	2.16	1.97	6.33	.00
Nothing Better to do	1.12	1.26	6.24	.00
Having Admin. Responsibility	2.19	2.43	6.22	.00
Be Successful in Own Business	2.22	2.47	5.97	.00
Helping Others in Difficulty	2.56	2.76	5.86	.00
Obtain Recognition from Colleagues	2.54	2.75	5.52	.00
To Get Away from Home	1.97	1.82	5.01	.00
Develop Meaningful Phil. of Life	2.36	2.56	4.70	.00
Make Theoretical Contribution to Science	1.84	1.97	3.73	.00

Table 43. Comparison of Pre and Posttest Degree and Life Goals Cont'd.

Degree and Life Goals	Pretest	Posttest	<u>t</u>	<u>p</u>
To Get a Better Job	2.66	2.77	3.65	.00
Keep up on Political Affairs	2.27	2.39	3.26	.00
Being Well off Financially	2.90	2.79	3.14	.00
Clean up Environment	2.29	2.40	3.01	.00
Become an Authority in My Field	2.81	2.89	2.45	.02
General Education	2.50	2.57	2.27	.02
Can't Find Job	1.17	1.23	2.21	.03
To Learn More about Interests	2.71	2.66	2.10	.04
Parents	1.95	2.02	2.01	.04
Degree Aspirations	4.70	4.64	1.16	.25
Prepare for Graduate School	2.23	2.26	0.96	.34
To Make More Money	2.66	2.65	0.47	.64
To Be More Cultured	2.11	2.13	0.38	.70
Find a Job in Field	3.68	3.69	0.31	.76

On the posttest, students were also asked to respond to questions about their plans in the next year. They were asked to check any of the seven responses that applied to them. Seventy-eight percent of the students who completed the posttest survey planned to return to MSU-Bozeman the next fall. Eighty-two percent of the freshmen who matched on the pre and posttest planned to return. Table 44 shows the questions and the responses from all students who completed the survey and for the freshmen target group.

Table 44. Students' Plan for Next Year.

I plan to:	<u>All Students</u>		<u>Freshmen</u>	
	Yes	No	Yes	No
Return to MSU	78.8	21.2	82.3	17.7
Live in the Residence Halls	28.6	71.4	30.1	69.9
Drop out of School	3.9	96.1	4.7	95.3
Get Married	3.7	96.3	2.8	97.2
Go to Another University	11.2	88.8	9.4	90.6
Live Off-campus	45.4	54.6	47.2	52.8
Work Full-time	11.5	88.5	8.9	91.1

Table 45 shows the correlations between pre and posttest responses. All pre and posttest measures were significantly correlated at less than the .05 level of significance. The measures of the goals of writing or making a contribution to science being a community leader, or cleaning up the environment were most strongly correlated in this category. Whether the student reported they were in college only because they could not find a job was least correlated.

Table 45. Correlation Between Pre and Post Degree and Life Goals.

Degree and Life Goals	<u>r</u>	<u>p</u>
Write Original Works	.552	.00
Make Theoretical Contribution to Science	.522	.00
Become Community Leader	.521	.00
Clean up Environment	.507	.00
Be Very Well off Financially	.497	.00

Table 45. Correlation Between Pre and Post Degree and Life Goals Cont'd.

Degree and Life Goals	<u>r</u>	<u>p</u>
Be Successful in Own Business	.476	.00
Keep up on Political Affairs	.475	.00
Raise a Family	.473	.00
Create Artistic Work	.471	.00
Help Others in Difficulty	.469	.00
Authority in my	.466	.00
Performing Arts	.459	.00
Develop Meaningful Philosophy of Life	.446	.00
To Get Away from Home	.439	.00
Promote Racial Understanding	.438	.00
To Be More Cultured	.427	.00
Prepare for Graduate School	.422	.00
Influence Political Structure	.410	.00
Influence Social Values	.409	.00
To Make More Money	.407	.00
Recognition from Colleagues	.405	.00
Improve Reading and Study Skills	.402	.00
Take Part in Community Action	.372	.00
Have Administrative Responsibility	.362	.00
Parents	.337	.00
Degree Aspirations	.308	.00
To Learn More about Interests	.293	.00
Nothing Better to do	.280	.00
Gain General Education	.271	.00
Find a Job in Field	.252	.00
To Get a Better Job	.252	.00
Can't Find Job	.089	.03

In the factor analysis of the Degree and Life Goals

category, the variables of the students' plans for next year were removed because they had no corresponding pretest measure. Examination of the factor analysis of Degree and Life Goals showed a significance level of .00 on Bartlett's test of sphericity and a score of .84 on the KMO measure of sampling adequacy. Both were in the range of a good factor solution. Nine factors were initially identified with eigenvalues greater than one. However, examination of the scree plot showed a trailing off after six factors, so these factors were selected for the analysis, and accounted for 46.2% of the variance. The six factors identified were named Social and Community Goals, Professional Goals, Scholarly Goals, Creative Goals, Lack of Goals, and Graduate School Goals (see Table 46).

Table 46. Factor Structure for Degree and Life Goals.

	Factor					
	1	2	3	4	5	6
Become Community Leader	.69323	.24586	.03928	.07062	.06995	.17556
Community Action	.69155	.00752	.14408	.24487	.02555	.00070
Influencing Social Values	.67282	.05322	.06990	-.00292	.05453	.02915
Keep up on Political Affairs	.62992	.03512	.00160	.04611	.09076	.24477
Racial Understanding	.60526	-.05509	.20513	.25779	-.04271	-.02287

Table 46. Factor Structure for Degree and Life Goals
Cont'd.

Factor	1	2	3	4	5	6
Influence Political Structure	.59663	.18962	-.03953	.16481	.13456	.25757
Helping Others in Difficulty	.53238	.05670	.17603	.06779	-.14197	-.03061
Meaningful Phil. of Life	.49027	-.05737	.12347	.40471	-.09309	.06647
Raising a Family	.42085	.16496	.06229	-.23062	-.03202	-.15596
Being Well off Financially	.00295	.76761	.00059	.03250	.03992	.00969
Be Successful in Business	.11112	.61135	-.04486	.29591	.00667	-.00654
Recognition from Colleagues	.23160	.60507	.04128	.10934	-.04387	.40066
Administrative Responsibility	.38037	.57393	-.04191	-.00692	.09976	.10729
To Make More Money	-.12171	.56132	.40256	-.21304	.08226	-.11334
Become Authority in My Field	.24251	.48893	.02822	.07712	-.10166	.44235
General Education	.12844	-.02307	.71252	.12662	-.02113	.03812
To Be More Cultured	.18809	-.05306	.63084	.14548	.12211	.12680
To Learn More	.08306	-.00940	.62742	.07960	-.07057	.22002
Reading and Study Skills	.12506	.08589	.59016	.07174	.15578	-.01088
To Get a Better Job	-.07439	.38665	.44917	-.23038	-.03255	-.20509
Create Artistic Work	.04722	.10224	.09692	.78604	.06581	-.02683
Write Original Works	.16024	.01250	.09366	.72221	.09901	.09844

Table 46. Factor Structure for Degree and Life Goals
Cont'd.

Factor	1	2	3	4	5	6
Achieve in Performing Arts	.13139	.05049	.04878	.61978	.13470	.03744
Clean up Environment	.43707	.11896	.10977	.45736	-.03712	-.05979
Nothing Better to do	-.08213	-.03631	-.11045	.16443	.60426	.13248
Can't Find Job	.02829	.04211	-.00857	.05132	.59544	-.01930
To Get Away from Home	-.02771	.08373	.12862	.04027	.55395	-.08306
Parents	.11519	.09505	.17309	-.11632	.52620	-.19699
Role Model	.21525	.00271	.31263	-.02653	.46895	.10011
Find a Job in Field	.11050	.17638	.14320	-.18354	-.37888	-.03811
Degree Aspirations	.01681	-.00229	.14293	-.02293	-.07607	.66136
Prepare for Graduate School	.12059	.08591	.46828	-.00011	.04654	.54920
Contribution to Science	.19354	.27308	-.01164	.29044	.08482	.37625

Social and Community Goals

Table 47 shows the results of the Social and Community Goals regression analysis. Six of the input variables were significant predictors of the students' Social and Community Goals. At the final step, the largest beta of .176 was for the importance to the student of keeping up with political affairs. The floor mean score entered at the final step with a beta of .176. Three other input variables and the RA's score did not enter the regression analysis.

Table 47. Predicting Social and Community Goals: Step by Step Beta Changes

Step	Variable entering	R	r	Beta after step						
				1	2	3	4	5	6	7
<u>Input Variables</u>										
1	Community Leader	.407	.407	.407	.297	.230	.196	.160	.162	.168
2	Keep up w/ Political Affairs	.459	.377	.240	.240	.221	.196	.184	.179	.176
3	Help Others	.499	.345	.228	.210	.210	.174	.145	.130	.115
4	Influence Soc. Values	.511	.318	.225	.184	.132	.132	.116	.100	.080
5	Community Action	.519	.382	.232	.195	.133	.114	.114	.116	.100
6	Raise a Family	.525	.205	.155	.135	.099	.082	.085	.085	.089
<u>Environmental Variables</u>										
7	Floor Mean Score	.553	.261	.222	.212	.189	.180	.174	.176	.176
<u>Variables Not Entering</u>										
8	Racial Understand		.311	.189	.133	.070	.050	.016	.016	.017
9	Influence Pol. Struc.		.318	.149	.036	.032	— .029	— .040	— .034	— .024
10	Meaningful Phil/Life		.271	.149	.106	.071	.038	.013	.014	.032
11	RA's Score		.022	.021	.027	.051	.053	.053	.055	.030

For those students who spent more time with other residents, the importance of raising a family had the largest beta at the final step of .220, and the floor mean

beta dropped to .135. For those students who spent less time with other residents, the floor mean beta increased to .222. The same pattern was seen in the breakdown by time spent in the residence hall. For those who spent more time in the hall, the floor mean score final beta was .117 while the final beta was .229 for those who spent less time in the hall.

Professional Goals

The students' professional goals were also impacted by the floor goals. The floor mean score entered the regression in the second block with a beta of .161. The measure of the importance of obtaining recognition from colleagues and the RA's score did not enter the regression analysis. Table 48 shows the results of the regression analysis.

In the analysis of those students who reported spending more time with other residents or in the hall, the final beta of the floor mean score rose to .210 and .203 respectively. The floor mean score did not enter in the analysis of those students who spent less time with other residents or in the residence hall.

Table 48. Predicting Professional Goals: Step by Step Beta Changes

				Beta after step					
S	Variable	<u>R</u>	<u>r</u>	1	2	3	4	5	6
t	entering								
e									
p									
<u>Input Variables</u>									
1	Be Well Off	.392	.392	.392	.360	.282	.251	.229	.208
2	Authority in Field	.438	.256	.200	.200	.197	.190	.156	.151
3	Make More Money	.469	.320	.186	.183	.183	.180	.175	.178
4	Successful in Business	.491	.272	.190	.158	.154	.154	.133	.126
5	Admin. Responsibility	.500	.300	.198	.146	.138	.110	.110	.126
<u>Environmental Variables</u>									
6	Floor Mean Score	.525	.192	.152	.151	.155	.151	.161	.161
<u>Variables Not Entering</u>									
7	Obtain Recognition		.287	.189	.108	.103	.074	.045	.054
8	RA's Score		-.037	-.046	-.038	-.025	-.020	-	-
								.012	.051

Scholarly Goals

The regression analysis of Scholarly Goals analyzed the predictive power of the input variables measuring the importance to students of going to college to increase their general education, to become more cultured, to learn more,

to improve study skills, or to get a better job. All of these input variables were significantly correlated with the students' Scholarly Goals except the measure of the importance of college to get a better job. All of the input variables entered in the regression in the first block except the importance of going to college to get a better job and the desire to gain a general education. In the second block the environmental variable of the floor mean score entered the analysis with a beta of .305, which was higher than any other variable studied. The environmental variable of the RA's score did not enter the regression (see Table 49).

Table 49. Predicting Scholarly Goals: Step by Step Beta Changes

Step	Variable entering	<u>R</u>	<u>r</u>	Beta after step			
				1	2	3	4
<u>Input Variables</u>							
1	Become More Cultured	.273	.273	.273	.208	.177	.146
2	Improve Study Skills	.314	.249	.168	.168	.143	.121
3	Learn More Things	.336	.225	.155	.129	.129	.078
<u>Environmental Variables</u>							
4	Floor Mean Score	.447	.368	.329	.317	.305	.305
<u>Variables Not Entering</u>							
5	Gain Gen. Education		.237	.150	.098	.063	.021
6	Get a Better Job		.023	.023	.015	.013	-.004
7	RA's Score		-.037	-.043	-.036	-.027	-.048

In results that are similar to previous analysis of

academic measures, spending more time with other residents reduced the size of the final beta for the floor mean score. At the same time spending less time with other residents increased the final beta. The beta in the analysis for those who spent more time with other residents or in the hall was .220 while the final beta was .402 for those who spent less time with residents. Spending time in the hall did not have the same effect. The final beta for those who spent more time in the hall was .364 and it was .294 for those who spent less time in the hall. In this analysis, the RA's score entered the equation at the final step with a beta of $-.171$.

Creative Goals

The regression analysis for Creative Goals included the input variables which measured the desire of the student before coming to college of creating artistic or original works and of being involved in environmental cleanup. In the second block the floor mean score also entered the regression with a beta of .219. The input measure of the students' desire to achieve in a performing art and the environmental variable of the RA's score did not enter the regression. Table 50 shows the results of the analysis.

Table 50. Predicting Creative Goals: Step by Step Beta Changes

Step	Variable entering	<u>R</u>	<u>r</u>	Beta after step			
				1	2	3	4
<u>Input Variables</u>							
1	Create Artistic Work	.388	.388.	.388	.277	.266	.240
2	Create Original Work	.446	.371	.246	.246	.230	.224
3	Environment Cleanup	.457	.197	.134	.104	.104	.120
<u>Environmental Variables</u>							
4	Floor Mean Score	.506	.257	.214	.211	.219	.219
<u>Variables Not Entering</u>							
5	Achieve in Perf. Art		.248	.132	.084	.074	.072
6	RA's Score		.053	.045	.037	.045	-.006

The analyses for those groups broken out by time with other residents or time in the hall were very similar to the original analysis. The final beta for the floor mean score did not differ more than .029.

Lack of Goals

The lack of goals in students was measured by their following reasons for attending college: because the students had nothing better to do, because they could not find a job, to get away from home, or because their parents or a mentor wanted them to. It also included the wish to find a job in the student's major field; this was negatively correlated with the students' lack of goals score, but not at the .05 alpha level. In the regression analysis the

floor mean score entered the prediction with a final beta of .160. Table 51 shows the results of the regression.

Table 51. Predicting Lack of Goals: Step by Step Beta Changes

Step	Variable entering	<u>R</u>	<u>r</u>	Beta after step			
				1	2	3	4
<u>Input Variables</u>							
1	Get Away From Home	.218	.218	.218	.200	.200	.183
2	Nothing Better To Do	.250	.153	.123	.123	.109	.103
3	Mentor Encouraged Me	.268	.120	.114	.098	.098	.110
<u>Environmental Variables</u>							
4	Floor Mean Score	.312	.175	.154	.152	.160	.160
<u>Variables Not Entering</u>							
5	Couldn't Find Job		.044	.002	-.021	-.026	-.032
6	Parent's Wish		.116	.100	.095	.077	.079
7	To Find Job in Field		-.071	-.069	-.055	-.048	-.046
7	RA's Score		.049	.047	.041	.046	-.002

The results were slightly stronger for those students who spent more time with other residents or in the residence halls with final betas of .191 and .210 respectively. The results were slightly weaker for those who spent less time with other residents (.131) and for those students who spent less time in the hall (.150).

Graduate School Goals

The regression on the students' plans for continuing education is shown in Table 52. The strongest predictor of

the students' aspirations for further education was their response to the highest degree planned before they came to college. The floor mean score was also a mild predictor with a final beta of .133. The floor mean score did not enter in the analysis for those students who spent more time with other residents. It did enter in the analysis for those students who spent less time with other residents, with a slightly stronger beta of .190. The floor mean score did enter in the analysis for those students who reported spending more time in the hall with a final beta of .151, compared to a final beta of .148 for those students who spent less time in the hall.

Table 52. Predicting Graduate School Goals: Step by Step Beta Changes

Step	Variable entering	<u>R</u>	<u>r</u>	Beta after step			
				1	2	3	4
<u>Input Variables</u>							
1	Plans for Degree	.303	.303	.303	.233	.203	.210
2	To Prepare for Grad. School	.341	.267	.171	.171	.148	.147
3	Make a Contribution to Science	.361	.229	.150	.126	.126	.106
<u>Environmental Variables</u>							
4	Floor Mean Score	.384	.153	.152	.147	.133	.133
<u>Variables Not Entering</u>							
5	RA's Score		-.082	-.076	-.070	-.077	-.081

Satisfaction

The category of Satisfaction included responses on the survey about the students' happiness with their resident advisor, their floor and hall environment, and their college choice. This category differed from the previous categories in that only two of the responses came from the pretest. The first was the student's response to whether MSU-Bozeman was their first, second, third, or fourth choice for college. The second response dealt with the measure of how satisfied the students expected to be with their college choice. There were seven questions which were asked only on the posttest. Three of the questions asked for the students' opinions about the RA's help, influence, and effectiveness. Two of the questions asked the students to report the amount of time they spent on the floor or in the hall, and the last two questions asked the students to report their satisfaction with the floor and hall communities.

This category was included in the analysis because of the importance that satisfaction with college plays in the college experience. Satisfaction tends to be less related to experiences prior to college and more dependent on the student's environment in college. Satisfaction is also highly related to retention and to degree completion (Astin,

1993, pp. 277-280). While the analysis of the Satisfaction category is different from the previous format, it can shed light on the role of the floor in student satisfaction. Table 53 shows the mean of the students responses to the Satisfaction questions.

Table 53. Mean Scores of Satisfaction Responses

Question	Mean
Choice of This Institution (4=First Choice to 1=Fourth Choice or Lower)	3.64
Pretest Response to Be Satisfied with College (1=No Chance to 4=Very Good Chance)	3.48*
Posttest Response to Be Satisfied with College (1=No Chance to 4=Very Good Chance, & 5=Already Have)	3.57*
RA's effectiveness (1=Not at All to 4= Very Much)	3.20
RA's Help (1=Not at All to 4= Very Much)	3.12
RA's Influence (1=Not at All to 4= Very Much)	3.11
Time Spent on Floor (1=Not at All to 4= Very Much)	3.22
Time Spent with Floor Residents (1=Not at All to 4= Very Much)	3.11
Satisfaction with Floor Community (1=Not at All to 4= Very Much)	3.10
Satisfaction with Residence Hall Experience (1=Not at All to 4= Very Much)	3.09

*Pretest and Posttest answers are different with $t=2.437$, $p=.015$.

Factor analysis was applied to the Satisfaction category to more easily interpret the responses. The Bartlett Test of Sphericity significance level was .00 and the KMO measure of sampling adequacy was .78. Because of its low communality score, the variable measuring how

satisfied the student was with their college choice was eliminated from the analysis. Two factors were identified with eigenvalues greater than one. They were identified as Satisfaction with RA and Satisfaction with Floor and Hall. The factor analysis is identified in Table 54.

Table 54: Factor Structure for Satisfaction

	Factor	
	1	2
RA's Influence	.90012	.1566
RA's Effectiveness	.89368	.11066
RA' Help	.88731	.09219
Time Spent on Floor	-.01771	.84767
Time Spent with Floor Residents	.01573	.78589
Satisfaction with Floor Community	.40229	.68849
Satisfaction with Residence Hall Experience	.41588	.57491

Because there are no input variables to consider in these two factors, regression analysis was not done in the Satisfaction category. Instead, correlations between the factor scores for each student and the floor mean score and RA score for these factors were analyzed.

The correlations for Satisfaction with RA are shown in Table 54. Satisfaction with the RA was significantly correlated with the floor mean score at the .01 level of significance. There were no other significant correlations.

Table 55. Pearson Correlation for Satisfaction with RA Factor.

	Satisfaction with RA	Floor Mean Score	RA Score
Satisfaction with RA	1.000	0.448	0.064
Floor Mean Score	0.448	1.000	0.288
RA Score	0.064	0.288	1.000

The correlations for Satisfaction with Hall and Floor and the floor mean and the RA's score are shown in Table 55. Satisfaction with the with Hall and Floor, and the RA's score were significantly correlated with the floor mean score at the .01 level of significance. The RA's score was not significantly correlated with the student's Satisfaction with Floor and Hall score.

Table 56. Pearson Correlation for Satisfaction with Floor and Hall Factor.

	Satisfaction with Floor and Hall	Floor Mean Score	RA Score
Satisfaction with Floor and Hall	1.000	.261**	.007
Floor Mean Score	.261**	1.000	.207**
RA Score	.007	.207**	1.000

Summary

In this study, 125 variables were examined with t-tests. There were increases in the results of 60 of the

variables, decreases in the results of 38, and no change from the pretest to the posttest in 27 of the variables. Students were more likely to drink alcohol, smoke, work at a paying job, party, socialize, or be bored in class. They were also more likely to spend more time studying, and reported more social self-confidence and understanding of others. Students reported more intellectual self-confidence, and artistic abilities after the first year of college, but were also more likely to report that they expected to change majors, fail a class, or drop out of college. Generally, students became more conservative, both politically and socially. They were more likely to agree that taxes should be lowered, that racial discrimination is not a problem, and that homosexual relations should be prohibited. In opposition to these views, they were also more likely to agree that marijuana should be legalized. Overall, the students' goals increased over the first year, including their aspirations for community, artistic, and professional success. Students also rated their satisfaction with college higher on the posttest than they had anticipated on the pretest.

In all, 30 regressions were run in the first 6 investigative categories. The floor mean score was a significant predictor of the student's score in every analysis. The RA's score was a significant predictor in

only the regression analysis of Social Self-Concept.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Summary of Study

At the beginning of this century Dewey (1916) declared that "We never educate directly, but indirectly by means of the environment. Whether we permit chance environments to do the work, or whether we design environments for the purpose makes a great difference" (p.22). Researchers in higher education have consistently recognized on-campus residence and peer influence as two of the factors which are significant in student outcomes. Peer influence has been identified as one of the most influential factors on student development (Astin, 1993, pp. 398-410), while on-campus living is consistently identified as one of the factors leading to involvement and integration into the institution (Pascarella & Terenzini, 1991, pp. 611-613). In his extensive study, What Matters in College, Astin (1993) concludes that "viewed as a whole, the many empirical findings from this study seem to warrant the following general conclusion: the student's peer group is the single most potent source of influence on growth and development during the undergraduate years." (p. 398).

Living in a residence hall is another factor that can have a beneficial impact on college outcomes. Living on campus has proved to have positive effects on college persistence, involvement, and integration with the institution (Alfert, 1966; Astin, 1975; Pascarella & Terenzini, 1991). In their meta-analysis of higher education research Pascarella and Terenzini (1991) concluded that "living on campus (versus commuting to college) is perhaps the single most consistent within-college determinant of impact" (1991, p. 611). Residence hall living provides an environment where students can interact closely with their peers and also offers college administrators a way to access students.

While much is known about the effects of residence halls and the influence of peers in college, little is known about the influence of the peer groups that students encounter living within a residence hall floor community. Floor communities are sub-units of the residence hall, organized as smaller living units in the hall. Residence hall professionals have long acknowledged the influence of these floor communities on students within them and have watched as floors within the hall took on unique personalities of their own. While this has been recognized, little is known about specific influences of floor communities on college students and how students change in

this smaller and more personal environment.

The data for this study were collected through the use of the CIRP freshmen survey and a follow-up survey based on this CIRP survey. The Cooperative Institutional Research Program (CIRP) was established by Alexander Astin in 1966 at the American Council of Education and is now the largest and longest empirical study of higher education in the United States. CIRP combines data from approximately 1,400 institutions, over 8 million students, and more than 200,000 faculty. The annual CIRP Freshmen Survey is now administered by HERI under the continuing sponsorship of the American Council of Education (Sax, Astin, Korn, & Mahoney, 1996, pp. ii-1). While the CIRP is widely used in higher education, it is often overlooked as a source of information on individual college campuses.

The purpose of this study was to investigate the influence of peers within a floor community on selected student outcomes. These included measures of behaviors; university involvement; personality and self-concept; attitudes, beliefs, and values; academic and cognitive development; degree and life goals; and satisfaction with college. The influence of the resident advisor on the students in these student outcomes was also investigated.

In order to analyze the influence of peers and of the resident advisor on floor communities on student outcomes

these categories were analyzed to determine changes in the students during the first year of college and the relationship between the students' responses on the pre and posttests.

The data for this study were collected during orientation sessions before the fall semester of 1992 and at the end of spring semester in 1993. During 1992 fall orientation, 1,408 students completed the CIRP Freshmen Survey and gave permission for the survey information to be released for research purposes. A follow-up survey was administered to residence hall students in May of 1993. A total of 1,800 students completed this survey for a 75% response rate. The resident advisor on each floor also completed the follow-up survey.

The follow-up survey was developed from the 1992 CIRP Freshmen Survey with permission from HERI (see Appendix A). Other questions were added to determine involvement and satisfaction with the floor community. The 1992 CIRP Freshmen Survey and the follow-up survey were compared by social security number to provide a pretest and posttest match, and a total of 615 surveys were matched. Ninety-seven percent of the matched group came to MSU as first-time full-time freshmen.

The data were examined using a five step process. First, descriptive analysis was used to describe the data,

and paired sample t-tests were used to determine if the responses had changed during the first year of college. In the second step correlations were used to examine how the pre and posttest variables were related. In the third step, factor analysis was used to reduce the number of variables in each of the seven investigative categories for more convenient and manageable data manipulation. In the fourth step, stepwise linear regression was used to examine the influence of the residence hall floor community and influence of the residence advisor. Finally, the results of the regression analysis were corroborated with separate analyses for students according to the amount of time they had spent with other floor residents or in the residence hall.

Summary of the Findings

In all, this study examined 133 different variables in 7 investigative categories. Changes in these variables were examined with t-tests and correlational analysis. Within these categories, 30 factors were identified for regression analysis.

A total of 125 variables were examined with t-tests. There were increases in the results of 60 of the variables, decreases in the results of 38, and no change from the pretest to the posttest in 27 of the variables. In a few of

the categories such as Behavior and University Involvement students were more likely to change in ways the university would like to discourage, such as being more likely to drink alcohol, smoke, work, party, socialize, or be bored in class. However, they were also more likely to spend more time studying, and reported more social self-confidence and understanding of others. Students reported more intellectual self-confidence, and artistic abilities after the first year of college, but were also more likely to report that they expected to change majors, fail a class, or drop out of college. Generally, students became more conservative, both politically and socially. They were more likely to agree that taxes should be lowered, that racial discrimination is not a problem, and also that homosexual relations should be prohibited. In opposition to these views, they were also more likely to agree that marijuana should be legalized. Overall, the students' goals increased over the first year, including their aspirations for community, artistic, and professional success. Students also rated their satisfaction with college higher on the posttest than they had anticipated on the pretest.

In this study, students were less likely to attend religious services, attend concerts, or perform volunteer work at the end of their first year of college than they were before they started college. They were also less

likely to report interactions with teachers by talking or arguing with teachers, asking for advice, or being a guest in their home. Students were less likely to agree with statements that are generally considered politically liberal such as support of government control of pollution, energy consumption, handguns, or consumer protection. Students were also less likely to agree with statements that are generally considered socially liberal, such as support of busing, abortion rights, or affirmative action. Students were less likely to agree that one of the benefits of college is to increase earning power, and were less likely to report that a future goal is to be well off financially.

There was no significant change in 27 of the variables studied. These included measures of feeling depressed, self-ratings in emotional and physical health, leadership abilities, political orientation, and views on AIDS, premarital sex, married women's place, and concern for criminals. There was also no change in their expectations of earning college honors or a bachelor's degree. The students' degree aspirations and plans for graduate school also did not change significantly.

To better understand the relationship between the student's answer before coming to college and the response after a year of college a correlation was run on every paired set of variables in each investigative category.

Every pre and posttest answer was significantly correlated at less than the .05 level of significance except for the questions asking if the student had been a guest in a teacher's home. Those responses which had a correlation of .50 or greater included student responses related to the Behavior and Involvement categories about drinking beer, smoking cigarettes, partying; views about legalization of abortion and marijuana, and government control of handguns; academic self-ratings in math, artistic, public speaking, academic, and writing abilities, and in reading speed comprehension, intellectual self-confidence, and originality; aspirations to write original works, make a contribution to science and become a community leader or clean up the environment. Those variables which had a correlation of .20 or less included hours spent working, involvement in student clubs, views that the government should protect the consumer or that racial discrimination is no longer a problem, whether the students asked a teacher for advice or planned to get a bachelor's degree, or reported being in college because they could not find a job.

Regression analysis was run on 30 factors which were identified in the 7 investigative categories. Table 56 summarizes the final beta of the environmental variable, floor mean score, in each of the factors. The first column lists the name of the factor. The second and third columns

list the correlation and the final beta coefficient between the floor mean score and the student's score on the factor. The final four columns list the difference between the final beta in the original analysis and the final beta in the analysis of the following four groups: students above the median score on time spent with other residents, students below the median score on time spent with other residents, students above the median score on time spent with other residents, and students below the median score on time spent with other residents. Two dashes indicate the variable did not enter the regression model. A notation of n/c means the difference was less than .02, and no change was noted.

In every analysis, the floor mean score was significantly correlated with the student's outcome score and the floor mean score entered the regression as a significant predictor of that score. Each regression was run again separately for students above and below the median on time spent with other residents and time spent in the hall. In the 30 regressions run in the first 6 categories, the floor mean score proved to be a significant predictor of the student's score. To better understand if the amount of time spent with other residents or in the hall affected the outcome variable, separate analyses were run for those students who were above and below the median score in both of these groups. In Table 56, the amount the beta increased

or decreased from the beta in the original analysis is reported in the last four columns. Only differences of greater than .02 were reported.

Table 57. Summary of the Final Beta for the Floor Mean Score and Student Outcome Factor Score, Final Betas and Changes in Betas Above and Below the Median on Time With Residents and Time Spent In Hall.

Floor Mean	$\underline{r}$	β	Time With Residents		Time Spent In Hall	
			More Time	Less Time	More Time	Less Time
Partying Behavior	.295*	.172	+.103	--	n/c	n/c
Liberal Behavior	.242*	.213	n/c	n/c	+.044	-.020
Musical Behavior	.219*	.164	-.030	+.024	-.045	+.052
Altruistic Behavior	.205*	.159	+.021	-.022	n/c	-.022
Working Involvement	.188*	.118	--	+.044	n/c	n/c
Service Org. Involvement	.192*	.166	-.038	+.056	n/c	n/c
Social Involvement	.288*	.173	+.092	--	+.059	--
Academic Involvement	.171*	.156	--	+.058	+.027	-.027
TV Involvement	.277*	.223	n/c	n/c	+.114	-.033
Involvement With Others	.211*	.217	n/c	+.032	n/c	n/c
Social Self-Concept	.193*	.181	--	n/c	+.020	-.028
Competitive Self-Concept	.226*	.129	--	+.040	+.171	--
Emotional Self-Concept	.265*	.237	n/c	n/c	-.021	n/c
Politically Liberal Attitude	.200*	.132	+.047	--	+.038	--
Socially Conservative Attitude	.427*	.325	-.025	+.041	+.027	-.046
Politically Conservative Attitude	.180*	.148	+.098	n/c	n/c	+.029
Socially Liberal Attitude	.283*	.189	+.041	-.045	+.063	--

Table 57. Summary of the Final Beta for the Floor Mean Score and Student Outcome Factor Score, Final Betas and Changes in Betas Above and Below the Median on Time With Residents and Time Spent In Hall Cont'd.

Floor Mean	$\bar{r}$	β	Time With Residents		Time Spent In Hall	
			More Time	Less Time	More Time	Less Time
Regulatory Attitude	.338*	.258	-.059	n/c	n/c	n/c
Academic Confidence	.290*	.152	+.025	n/c	--	+.076
Academic Abilities	.257*	.142	n/c	n/c	+.027	-.028
Academic Uncertainty	.240*	.223	-.031	+.067	+.045	-.028
Academic Dissonance	.295*	.258	n/c	n/c	-.077	+.049
Academic Support	.186*	.178	-.036	+.051	n/c	n/c
Academic Connection	.292*	.281	+.042	n/c	+.119	-.075
Social & Community Goals	.261*	.176	-.041	+.046	-.059	+.053
Professional Goals	.192*	.161	+.049	--	+.042	--
Scholarly Goals	.368*	.305	-.085	+.097	+.059	n/c
Creative Goals	.257*	.219	n/c	-.029	n/c	n/c
Lack of Goals	.175*	.160	+.031	-.029	+.050	--
Graduate School Goals	.153*	.133	--	+.057	n/c	n/c

*p=.01

The factor, Time with Residents, was comprised of measures of how much time each student spent with other residents and on the floor and how satisfied the students was with the floor and hall communities. The factor, Time Spent in Hall, was comprised of two variables: hours per week spent on the floor and hours per week spent in the hall. The first factor was a measure of the student's involvement with other residents and the floor community.

The second factor was a measure of the students' physical presence in the hall, and not necessarily their involvement.

In the analysis of those students above the median on Time With Residents, the final beta increased from the original analysis in 10 of the regressions while it was lower in 8 of the regressions. There was no change from the original analysis in seven of the regressions. In five other analyses of students above the median for Time With Residents, the floor mean score did not enter the regression model. In several of the regressions, a decrease in the beta from the original analysis in those students below the above the median in Time with Residents was matched by an increase in the beta in those students above the median in Time Spent In Hall.

In the analysis of those students above the median on Time Spent in Hall, the final beta increased from the original analysis in 15 of the regressions while it was lower in 4 of the regressions. There was no change from the original analysis in 10 of the regressions. In one of the analysis with students above the median on Time Spent in Hall, the floor mean score did not enter the regression model.

The second environmental variable, the RA's score, entered the regression model in only one of the original analyses, Social Self-Concept (see Table 57). The very weak

negative effect of the RA's score increased by .105 for those students who spent more time in the hall. In a few of the other analyses of those students above and below the median in Time With Residents or Time Spent in Hall, the RA's score entered the regression. The amount of change from the Pearson r correlation is listed in Table 57. One change worth noting is TV Involvement. The RA's score did not enter in the original analysis, but the RA's score became a negative score for those students who spent more time in the hall. Were they trying to get away from a disapproving RA by going to the hall TV room?

Table 58. Summary of the Final Beta for the RA's Score and Student Outcome Factor Score, Final Betas and Changes in Betas Above and Below the Median on Time With Residents and Time Spent In Hall.

Floor Mean	r	β	Time With Residents		Time Spent In Hall	
			More Time	Less Time	More Time	Less Time
Partying Behavior	-.003	--	--	--	--	--
Liberal Behavior	-.009	--	--	--	--	--
Musical Behavior	.090**	--	--	--	--	--
Altruistic Behavior	-.009	--	--	--	--	--
Working Involvement	-.013	--	--	--	--	--
Service Org. Involvement	.056	--	--	--	--	--
Social Involvement	.076**	--	--	--	--	--
Academic Involvement	-.012	--	--	--	--	--
TV Involvement	.089**	--	--	--	-.232	--
Involvement With Others	.055	--	--	--	--	--

Table 58. Summary of the Final Beta for the RA's Score and Student Outcome Factor Score, Final Betas and Changes in Betas Above and Below the Median on Time With Residents and Time Spent In Hall
Cont'd.

Floor Mean	$\bar{r}$	β	Time With Residents		Time Spent In Hall	
			More Time	Less Time	More Time	Less Time
Social Self-Concept	-.022	-.080	--	--	-.105	--
Competitive Self-Concept	-.017	--	--	--	-.090	--
Emotional Self-Concept	.027	--	--	--	-.090	--
Politically Liberal Attitude	.031	--	--	--	--	--
Socially Conservative Attitude	.039	--	--	--	--	--
Politically Conservative Attitude	.004	--	--	--	--	--
Socially Liberal Attitude	.036	--	--	--	--	--
Regulatory Attitude	.227*	--	-.070	--	--	--
Academic Confidence	-.037	--	--	--	--	--
Academic Abilities	.069	--	--	--	--	--
Academic Uncertainty	-.004	--	--	--	--	--
Academic Dissonance	.074	--	--	--	--	--
Academic Support	.001	--	--	--	--	--
Academic Connection	.017	--	--	--	--	--
Social & Community Goals	.022	--	--	--	--	--
Professional Goals	-.037	--	--	--	--	--
Scholarly Goals	-.037	--	--	--	--	-.134
Creative Goals	.053	--	--	--	--	--
Lack of Goals	.049	--	--	--	--	--
Grad. School Goals	-.082**	--	--	--	--	--

*p=.01; ** p=.05

Conclusions

Peer Influence

Peer influence in the residence hall floor communities is clearly a factor in changes in student outcomes in the first year of college. While the floor's orientation on the various factors investigated explained a relatively small part of the variance, the results were of moderate to strong size in terms of the results generally seen in student outcomes research. Still, caution must be used in interpreting and utilizing these results. Students are a diverse and complex group, and they operate in many different realms in the university setting. They do not come in as blank slates but rather shape their futures with their own backgrounds, goals, and experiences. While peer influence has been identified as one of the most potent influences on students (Astin, 1993), it is still only one of many factors in the student's development and academic achievement.

As predicted, in most regression analyses the students' input variables were the strongest predictors of the student outcome. However in several analyses the floor mean score was as strong or stronger than the input variables. In the regression analyses on Liberal Behavior, TV Involvement,

Emotional Self-Concept, Socially Conservative Attitude, Regulatory Attitude, Academic Uncertainty, Academic Dissonance, Academic Connection, Social and Community Goals, and Scholarly Goals the floor mean score was the strongest predictor of the student's score. In the regression analysis on Lack of Goals, the students' desire to get away from home when they came to college was only slightly stronger than the floor's mean. These results indicate that the floor's academic involvement or lack thereof is a very important aspect of the student's academic development during the first year.

The factors with the strongest betas at the final step were for Socially Conservative Attitude, Regulatory Attitude, Academic Dissonance, Academic Connection, and Scholarly Goals. For all of these factors, the floor mean score was a stronger predictor than any of the input variables. For the factor, Socially Conservative Attitude, there is a puzzling result for those above or below the median in time spent with residents or in the hall. The final beta decreased from the original analysis for those students who spent more time with other residents, but the beta increases in the analysis of those students who spent more time in the hall. This may mean that those who are socially conservative are spending less time with the residents or are less satisfied, but they are influenced by

those around them none the less. There was a similar result for Scholarly Goals. Those who spent more time with other residents were less influenced than those who spent less time with them. However, the results were opposite for those who spent more time in the hall. This may indicate that on floors where Scholarly Goals are more important students are spending less time with each other and more time studying. Those who are spending time in the hall are influenced by others in Scholarly Goals and therefore are spending less time with others. There was no significant change among groups for the factors Regulatory Attitude, Academic Dissonance, and Academic Connection.

There is a dynamic between spending time and relating with other residents and spending time in the hall that needs to be further investigated. In several of the analyses the final beta increased for those students spending more time with other residents, but it decreased for those students spending more time in the hall. The opposite effect was also seen. These factors included Competitive Self-concept, Socially Conservative Attitude, Politically Conservative Attitude, Regulatory Attitude, Academic Uncertainty, Academic Dissonance, and Scholarly Goals. Time with Residents represents both time spent with others and the satisfaction with the floor community and hall. Is it possible that being less satisfied and spending

less time with others somehow spreads among the students to foster these other outcomes? Does spending time in the hall, but not with other residents generate influence? These are questions that should be further investigated.

A few areas of peer influence in the residence hall floor communities seem to be more defined. The first area that the floor community seems to influence is partying and social behaviors and involvement. The more time that students spend with other residents, the more likely they are to adopt the norm of the floor for partying and socializing. Students' political and social attitudes are influenced across the study by the floor attitudes. Finally, academic direction and involvement are strongly influenced by other residents of the floor and the hall.

Those students who are engaged in musical activities, service organizations, or are working are less influenced in these behaviors by the others on the floor. These students are most likely leaving the hall to pursue these activities.

The Influence of the Resident Advisor

The RA's behaviors, attitudes, involvement, and goals, do not seem to impact the same behaviors, attitudes, involvement, and goals of their residents. This study was not a measure of what the RA's are hired to do, but rather it investigated their own beliefs and values. Perhaps the

RA's do not reveal their own feeling to the residents but instead present to the students the views that Residence Life encourages.

There were a few areas in which the RA's scores had a slight impact. The number of hours an RA watched television was a negative predictor of the number of TV hours watched for those students who spent more time in the hall. Perhaps the RA's discouraged television watching and were unconsciously pushing students off the floor to the TV room. The RA's attitude toward regulation entered the regression as a negative predictor for those students who spent more time with other residents. Perhaps the students were rebelling against an RA perceived as overly restrictive. Finally, the RA's score entered as a negative predicator on Social Self-Concept, Competitive Self-Concept, and Emotional Self-Concept for those students who spent more time in the hall. Perhaps the RA's were not connecting with those students who were not connecting with other residents, but were spending time in the hall.

One of the role's of resident advisors is to act as role models and mentors to their residents. Contrary to the beliefs of most residence life professionals, the RA's personality has little influence on the students. Some of the small influence they do seem to have is negative. Does the RA's authoritarian role keep them from positively

influencing the students?

Recommendations

The importance of the peer culture should be taken seriously by the university, and the smaller peer cultures such as residence hall floor communities should not be overlooked. This study illustrates the importance of intentionally building positive floor communities from the first day of the term. Kuh (1993) summarized this view well by stating "no matter what institutional agents say or do, within four to six weeks following the start of an academic term, new students are exposed to the prevailing student culture, which tells them what classes and instructors are to be taken seriously and when and how much to study" (p.36). In order to influence this student culture, and prevail over its negative aspects, the university should organize programs to intervene early, and to provide information and services which allow integration into the larger university culture.

RA's are perhaps asked to do too much to shape the floor community although for most institutions' budgets and staffing realities make this a necessity. RA's are in a very difficult position within the floor community. They are asked to be leaders and positive role models for the students on their floors, yet they are students themselves.

As such they are susceptible to all of the same influences as the other students. They are also very busy juggling their academic work, their clerical duties, and a variety of unexpected incidents on their floor. They are expected to handle or refer crisis situations on their floors which would intimidate and scare many student affairs professionals. At the same time they are expected to develop a positive student culture on their floors in the face of the behaviors and attitudes of the residents which are beyond their control. RA's will need more training and support from the university if they are to be expected to fully develop a positive environment for academic and personal growth on their floors.

Student affairs professionals are realizing that to develop more effective students communities, they need to understand how institutional goals interact with student goals (Komives, Woodard, & Associates, 1996, pp. 519-520). Students come to college with an understanding of the college experience that is often very different from what the institutional culture itself expects. Student culture can develop in a way which is counterproductive to institutional goals. The university should have clear expectations of what they want to accomplish and work to integrate students from the beginning into this plan.

According to Astin (1985) "the effectiveness of any

educational policy or practice is directly related to the capacity of that policy or practice to increase students involvement" (p. 136). The goal for the university should be to capitalize on this involvement in the smaller units of the residence hall floors. "The challenge to educational institutions is to create and support smaller campus subenvironments (or 'undermanned settings'), such as cluster college, residence hall units, student organizations, and class sections, that more fully engage students in meaningful ways and in which students can experience a sense of functional importance and identity" (Komives, et al., 1996, p. 263).

University professionals who wish to influence the student culture should understand how it works and what it looks like. For this reason, further study on the topic of peer influence in the residence hall community should be conducted. This study did not consider the differing effects of peer influence on male or female students or on students of different ethnic backgrounds. In addition, this study did not take into account important student characteristics such as socio-economic status or family educational background. How these factors interact with peer influence should also be further researched.

A quantitative study can indicate if peer influence is at work on student outcomes and can measure the relative

impact of this influence, but it cannot give an understanding of the more complex issues at work. A qualitative study should be pursued to understand more fully how other students are important in student development, and to more clearly illuminate the intricacies of these relationships.

Finally, institutions should take advantage of the data that are currently available on campus, such as the CIRP. Data are gathered every day in a myriad of ways, but often not used beyond descriptive purposes. Institutions should inventory the information at hand and be creative about ways to more fully utilize the information.

This study was an exploratory examination of the impact of peers in the residence hall floor communities. The results show that this group of peers definitely has an impact on students' personal and academic development. The results were complex and intriguing. More research should be done to further expand on how these units within the residence hall interact with students, and what can be done to positively channel these influences.

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APPENDICES

APPENDIX A

HIGHER EDUCATION RESEARCH INSTITUTE
PERMISSION LETTER

UNIVERSITY OF CALIFORNIA, LOS ANGELES



UCLA

BERKELEY • DAVIS • IRVINE • LOS ANGELES • RIVERSIDE • SAN DIEGO • SAN FRANCISCO

SANTA BARBARA • SANTA CRUZ

HIGHER EDUCATION RESEARCH INSTITUTE

GRADUATE SCHOOL OF EDUCATION
105 HILGARD AVENUE
LOS ANGELES, CALIFORNIA 90024-1521

(310) 825-1925

June 14, 1993

Nancy Krogh
Resident Director
Montana State University
South Hedges
Bozeman, MT 59715

Dear Ms. Krogh:

The Higher Education Research Institute grants you permission to use selected questions from the 1992 CIRP Freshman Survey instrument (Question Numbers: 15, 24, 25, 29, 31, 32, 33, 36, 37) to create your own questionnaire. The Institute grants you permission to include reproductions of the 1992 CIRP Freshman Survey instrument in the appendices of your dissertation, if appropriate. Because parts of the 1992 CIRP instrument will be used for and included in your dissertation, the Institute will waive its standard reprint and permissions fee.

Permission must be obtained from the Higher Education Research Institute at UCLA if data results or analysis citing items from the CIRP Freshman Survey instrument or comparable data from our annual publication, *The American Freshman: National Norms*, are used for or written about in anything other than your dissertation.

Please accept my apology for the delay of this response. If you have any questions or need additional information, please feel free to call me (310) 825-1925. Thank you for your interest in the research conducted at the Higher Education Research Institute.

Sincerely,

A handwritten signature in cursive script, appearing to read "Ellyne Riggs".

Ellyne Riggs
Adm Officer/Project Coordinator,
Higher Education Research Institute at UCLA

APPENDIX B

COOPERATIVE INSTITUTIONAL RESEARCH PROGRAM
FRESHMEN SURVEY

PLEASE PRINT (one letter or number per box)

FIRST										M I LAST										When were you born?																			
NAME:																				Month (01-12) Day (01-31) Year																			
ADDRESS:																																							
CITY:										STATE:										ZIP:										PHONE:									

1992 STUDENT INFORMATION FORM

DIRECTIONS

Your responses will be read by an optical mark reader. Your careful observance of these few simple rules will be most appreciated.

- Use only black lead pencil (No. 2 is ideal).
- Make heavy black marks that fill the oval.
- Erase cleanly any answer you wish to change.
- Make no stray markings of any kind.

EXAMPLE:

Will marks made with ballpoint or felt-tip marker be properly read? Yes... ☐ No... ☒

Dear Student:

The information in this form is being collected as part of a continuing study of higher education conducted jointly by the American Council on Education and the University of California at Los Angeles. Your participation in this research is being solicited in order to achieve a better understanding of how students are affected by their college experiences. Detailed information on the goals and design of this research program are furnished in research reports available from the Higher Education Research Institute at UCLA. Identifying information has been requested in order to make subsequent mail follow-up studies possible. Your response will be held in the strictest professional confidence.

Sincerely,

Alexander W. Astin

Alexander W. Astin, Director
Higher Education Research Institute

PLEASE USE #2 PENCIL

FORM NO: 324848

PLEASE PROVIDE YOUR SOCIAL SECURITY NO.

Mark here if directed

GRP CODE A

GRP CODE B

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

1. Your sex: Male... ☐ Female... ☐

2. How old will you be on December 31 of this year? (Mark one)

- 16 or younger... ☐ 21-24... ☐
 17... ☐ 25-29... ☐
 18... ☐ 30-39... ☐
 19... ☐ 40-54... ☐
 20... ☐ 55 or older... ☐

3. Are you a veteran? (Mark one)

No... ☐ Yes... ☐

4. In what year did you graduate from high school? (Mark one)

- 1992... ☐ Did not graduate but
 1991... ☐ passed G.E.D. test... ☐
 1990... ☐ Never completed
 1989 or earlier... ☐ high school... ☐

5. Are you enrolled (or enrolling) as a: (Mark one)

Full-time student? ☐ Part-time student? ☐

6. How many miles is this college from your permanent home? (Mark one)

- 5 or less... ☐ 11-50... ☐ 101-500... ☐
 6-10... ☐ 51-100... ☐ Over 500... ☐

7. What was your average grade in high school? (Mark one)

- A or A+... ☐ B... ☐ C... ☐
 A-... ☐ B-... ☐ D... ☐
 B+... ☐ C+... ☐

8. What were your scores on the SAT and/or ACT?

SAT VERBAL...

SAT MATH...

ACT Composite...

9. During high school (grades 9-12) how many years did you study each of the following subjects? (Mark one for each item)

- English... ☐ ☐ ☐ ☐ ☐ ☐
 Mathematics... ☐ ☐ ☐ ☐ ☐ ☐
 Foreign Language... ☐ ☐ ☐ ☐ ☐ ☐
 Physical Science... ☐ ☐ ☐ ☐ ☐ ☐
 Biological Science... ☐ ☐ ☐ ☐ ☐ ☐
 History/Am. Govt... ☐ ☐ ☐ ☐ ☐ ☐
 Computer Science... ☐ ☐ ☐ ☐ ☐ ☐
 Arts and/or Music... ☐ ☐ ☐ ☐ ☐ ☐

10. Prior to this term, have you ever taken courses for credit at this institution?

☐ Yes ☐ No

11. Since leaving high school, have you ever taken courses at any other institution?

(Mark all that apply For Credit Not for Credit)

- Yes, at a junior or comtv. college... ☐
 Yes, at a 4-yr. college or university... ☐
 Yes, at some other postsecondary school (for example, technical, vocational, business)... ☐

12. Where do you plan to live during the fall term? (Mark one)

- With parents or relatives... ☐
 Other private home, apartment or room... ☐
 College dormitory... ☐
 Fraternity or sorority house... ☐
 Other campus student housing... ☐
 Other... ☐

13. Is this college your: (Mark one)

- First choice? ☐ Less than third
 Second choice? ☐ choice? ☐
 Third choice? ☐

14. To how many colleges other than this one did you apply for admission this year?

- No other 1... ☐ 3... ☐ 5... ☐
☐ 2... ☐ 4... ☐ 6 or more... ☐

15. What is the highest academic degree that you intend to obtain? (Mark one)

- None... ☐
 Vocational certificate... ☐
 Associate (A.A. or equivalent)... ☐
 Bachelor's degree (B.A., B.S., etc.)... ☐
 Master's degree (M.A., M.S., etc.)... ☐
 Ph.D. or Ed.D... ☐
 M.D., D.O., D.D.S., or D.V.M... ☐
 LL.B. or J.D. (Law)... ☐
 B.D. or M.Div. (Divinity)... ☐
 Other... ☐

16. Is English your native language?

☐ Yes ☐ No

17. Citizenship status:

- ☐ U.S. citizen
☐ Permanent resident (green card)
☐ Neither

18. Are your parents: (Mark one)

- Both alive and living with each other? ☐
 Both alive, divorced or living apart? ☐
 One or both deceased? ☐

19. Do you have any concern about your ability to finance your college education? (Mark one)

- None (I am confident that I will have sufficient funds)... ☐
 Some concern (but I will probably have enough funds)... ☐
 Major concern (not sure I will have enough funds to complete college)... ☐

20. How much of your first year's educational expenses (room, board, tuition, and fees) do you expect to cover from each of the sources listed below? (Mark one answer for each possible source)

a. My Own or Family Resources	None	\$1,000	\$1,000-\$1,499	\$1,500-\$1,999	\$2,000	Over \$2,000
Parents, other relatives or friends	☐	☐	☐	☐	☐	☐
Spouse	☐	☐	☐	☐	☐	☐
Savings from summer work	☐	☐	☐	☐	☐	☐
Other savings	☐	☐	☐	☐	☐	☐
Part-time job on campus	☐	☐	☐	☐	☐	☐
Part-time job off campus	☐	☐	☐	☐	☐	☐
Full-time job while in college	☐	☐	☐	☐	☐	☐
b. Aid Which Need Not Be Repaid						
Pell Grant	☐	☐	☐	☐	☐	☐
Supplemental Educational Opportunity Grant	☐	☐	☐	☐	☐	☐
State Scholarship or Grant	☐	☐	☐	☐	☐	☐
College Work-Study Grant	☐	☐	☐	☐	☐	☐
College Grant/Scholarship (other than above)	☐	☐	☐	☐	☐	☐
Other private grant	☐	☐	☐	☐	☐	☐
Other Government Aid (ROTC, BIA, GI/military benefits, etc.)	☐	☐	☐	☐	☐	☐
c. Aid Which Must Be Repaid						
Stafford/Guaranteed Student Loan	☐	☐	☐	☐	☐	☐
Perkins Loan	☐	☐	☐	☐	☐	☐
Other College Loan	☐	☐	☐	☐	☐	☐
Other Loan	☐	☐	☐	☐	☐	☐
d. Other Than Above	☐	☐	☐	☐	☐	☐

21. Are you: (Mark all that apply)

White/Caucasian	☐
African-American/Black	☐
American Indian	☐
Asian-American/Oriental	☐
Mexican-American/Chicano	☐
Puerto Rican-American	☐
Other Latino	☐
Other	☐

22. Current religious preference: (Mark one in each column)

	Your's	Father's	Mother's
Baptist	☐	☐	☐
Buddhist	☐	☐	☐
Eastern Orthodox	☐	☐	☐
Episcopal	☐	☐	☐
Islamic	☐	☐	☐
Jewish	☐	☐	☐
LDS (Mormon)	☐	☐	☐
Lutheran	☐	☐	☐
Methodist	☐	☐	☐
Presbyterian	☐	☐	☐
Quaker	☐	☐	☐
Roman Catholic	☐	☐	☐
Seventh Day Adventist	☐	☐	☐
United Church of Christ	☐	☐	☐
Other Protestant	☐	☐	☐
Other Religion	☐	☐	☐
None	☐	☐	☐

23. Do you consider yourself a born-again Christian? ☐ Yes ☐ No

24. For the activities below, indicate which ones you did during the past year. If you engaged in an activity frequently, mark F. If you engaged in an activity one or more times, but not frequently, mark O (occasionally). Mark N (Not at all) if you have not performed the activity during the past year.

(Mark one for each item)

Attended a religious service	☐	☐	☐
Was bored in class	☐	☐	☐
Participated in organized demonstrations	☐	☐	☐
Failed to complete a homework assignment on time	☐	☐	☐
Tutored another student	☐	☐	☐
Studied with other students	☐	☐	☐
Was a guest in a teacher's home	☐	☐	☐
Smoked cigarettes	☐	☐	☐
Drank beer	☐	☐	☐
Drank wine or liquor	☐	☐	☐
Stayed up all night	☐	☐	☐
Spoke a language other than English at home	☐	☐	☐
Felt overwhelmed by all I had to do	☐	☐	☐
Felt depressed	☐	☐	☐
Performed volunteer work	☐	☐	☐
Came late to class	☐	☐	☐
Played a musical instrument	☐	☐	☐
Asked a teacher for advice after class	☐	☐	☐
Voted in a student election	☐	☐	☐
Discussed politics	☐	☐	☐
Attended a recital or concert	☐	☐	☐
Worked in a local, state, or national political campaign	☐	☐	☐
Argued with a teacher in class	☐	☐	☐
Discussed "safe sex"	☐	☐	☐
Socialized with someone from a different racial/ethnic group	☐	☐	☐

25. Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself.

(Mark one in each row)

	Highest 10%	Above Average	Average	Below Average	Lowest 10%
Academic ability	☐	☐	☐	☐	☐
Artistic ability	☐	☐	☐	☐	☐
Competitiveness	☐	☐	☐	☐	☐
Cooperativeness	☐	☐	☐	☐	☐
Drive to achieve	☐	☐	☐	☐	☐
Emotional health	☐	☐	☐	☐	☐
Leadership ability	☐	☐	☐	☐	☐
Mathematical ability	☐	☐	☐	☐	☐
Originality	☐	☐	☐	☐	☐
Physical health	☐	☐	☐	☐	☐
Popularity	☐	☐	☐	☐	☐
Public speaking ability	☐	☐	☐	☐	☐
Reading speed/comprehension	☐	☐	☐	☐	☐
Self-confidence (intellectual)	☐	☐	☐	☐	☐
Self-confidence (social)	☐	☐	☐	☐	☐
Understanding of others	☐	☐	☐	☐	☐
Writing ability	☐	☐	☐	☐	☐

26. What is your best estimate of your parents' total income last year? Consider income from all sources before taxes. (Mark one)

☐ Less than \$6,000	☐ \$40,000-49,999
☐ \$6,000-9,999	☐ \$50,000-59,999
☐ \$10,000-14,999	☐ \$60,000-74,999
☐ \$15,000-19,999	☐ \$75,000-99,999
☐ \$20,000-24,999	☐ \$100,000-149,999
☐ \$25,000-29,999	☐ \$150,000-199,999
☐ \$30,000-39,999	☐ \$200,000 or more

27. What is the highest level of formal education obtained by your parents?

(Mark one in each column)

	Father	Mother
Grammar school or less	☐	☐
Some high school	☐	☐
High school graduate	☐	☐
Postsecondary school other than college	☐	☐
Some college	☐	☐
College degree	☐	☐
Some graduate school	☐	☐
Graduate degree	☐	☐

28. Do you have a disability? (Mark all that apply)

None	☐
Hearing	☐
Speech	☐
Orthopedic	☐
Learning disability	☐
Health-related	☐
Partially sighted or blind	☐
Other	☐

29. In deciding to go to college, how important to you was each of the following reasons?

(Mark one answer for each possible reason)

	Very Important	Somewhat Important	Not Important
My parents wanted me to go	☐	☐	☐
I could not find a job	☐	☐	☐
Wanted to get away from home	☐	☐	☐
To be able to get a better job	☐	☐	☐
To gain a general education and appreciation of ideas	☐	☐	☐
To improve my reading and study skills	☐	☐	☐
There was nothing better to do	☐	☐	☐
To make me a more cultured person	☐	☐	☐
To be able to make more money	☐	☐	☐
To learn more about things that interest me	☐	☐	☐
To prepare myself for graduate or professional school	☐	☐	☐
A mentor/role model encouraged me to go	☐	☐	☐

30. Mark only three responses, one in each column.

(M) Your mother's occupation

(F) Your father's occupation

(Y) Your probable career occupation

NOTE: If your father or mother is deceased, please indicate his or her last occupation.

Accountant or actuary	☐ Y ☐ F ☐ M
Actor or entertainer	☐ Y ☐ F ☐ M
Architect or urban planner	☐ Y ☐ F ☐ M
Artist	☐ Y ☐ F ☐ M
Business (clerical)	☐ Y ☐ F ☐ M
Business executive (management, administrator)	☐ Y ☐ F ☐ M
Business owner or proprietor	☐ Y ☐ F ☐ M
Business salesperson or buyer	☐ Y ☐ F ☐ M
Clergy (minister, priest)	☐ Y ☐ F ☐ M
Clergy (other religious)	☐ Y ☐ F ☐ M
Clinical psychologist	☐ Y ☐ F ☐ M
College teacher	☐ Y ☐ F ☐ M
Computer programmer or analyst	☐ Y ☐ F ☐ M
Conservationist or forester	☐ Y ☐ F ☐ M
Dentist (including orthodontist)	☐ Y ☐ F ☐ M
Dietitian or home economist	☐ Y ☐ F ☐ M
Engineer	☐ Y ☐ F ☐ M
Farmer or rancher	☐ Y ☐ F ☐ M
Foreign service worker (including diplomat)	☐ Y ☐ F ☐ M
Homemaker (full-time)	☐ Y ☐ F ☐ M
Interior decorator (including designer)	☐ Y ☐ F ☐ M
Interpreter (translator)	☐ Y ☐ F ☐ M
Lab technician or hygienist	☐ Y ☐ F ☐ M
Law enforcement officer	☐ Y ☐ F ☐ M
Lawyer (attorney) or judge	☐ Y ☐ F ☐ M
Military service (career)	☐ Y ☐ F ☐ M
Musician (performer, composer)	☐ Y ☐ F ☐ M
Nurse	☐ Y ☐ F ☐ M
Optometrist	☐ Y ☐ F ☐ M
Pharmacist	☐ Y ☐ F ☐ M
Physician	☐ Y ☐ F ☐ M
School counselor	☐ Y ☐ F ☐ M
School principal or superintendent	☐ Y ☐ F ☐ M
Scientific researcher	☐ Y ☐ F ☐ M
Social, welfare or recreation worker	☐ Y ☐ F ☐ M
Statistician	☐ Y ☐ F ☐ M
Therapist (physical, occupational, speech)	☐ Y ☐ F ☐ M
Teacher or administrator (elementary)	☐ Y ☐ F ☐ M
Teacher or administrator (secondary)	☐ Y ☐ F ☐ M
Veterinarian	☐ Y ☐ F ☐ M
Writer or journalist	☐ Y ☐ F ☐ M
Skilled trades	☐ Y ☐ F ☐ M
Other	☐ Y ☐ F ☐ M
Unemployed	☐ Y ☐ F ☐ M

31. Mark one in each row:

	☐ 1 Disagree Strongly	☐ 2 Disagree Somewhat	☐ 3 Agree Somewhat	☐ 4 Agree Strongly
The Federal government is not doing enough to protect the consumer from faulty goods and services	☐ 1	☐ 2	☐ 3	☐ 4
The Federal government is not doing enough to control environmental pollution	☐ 1	☐ 2	☐ 3	☐ 4
The Federal government should raise taxes to reduce the deficit	☐ 1	☐ 2	☐ 3	☐ 4
There is too much concern in the courts for the rights of criminals	☐ 1	☐ 2	☐ 3	☐ 4
Federal military spending should be increased	☐ 1	☐ 2	☐ 3	☐ 4
Abortion should be legal	☐ 1	☐ 2	☐ 3	☐ 4
The death penalty should be abolished	☐ 1	☐ 2	☐ 3	☐ 4
If two people really like each other, it's all right for them to have sex even if they've known each other for only a very short time	☐ 1	☐ 2	☐ 3	☐ 4
The activities of married women are best confined to the home and family	☐ 1	☐ 2	☐ 3	☐ 4
Marijuana should be legalized	☐ 1	☐ 2	☐ 3	☐ 4
Busing is O.K. if it helps to achieve racial balance in the schools	☐ 1	☐ 2	☐ 3	☐ 4
It is important to have laws prohibiting homosexual relationships	☐ 1	☐ 2	☐ 3	☐ 4
The chief benefit of a college education is that it increases one's earning power	☐ 1	☐ 2	☐ 3	☐ 4
Employers should be allowed to require drug testing of employees or job applicants	☐ 1	☐ 2	☐ 3	☐ 4
The best way to control AIDS is through widespread, mandatory testing	☐ 1	☐ 2	☐ 3	☐ 4
Just because a man thinks that a woman has "led him on" does not entitle him to have sex with her	☐ 1	☐ 2	☐ 3	☐ 4
The federal government should do more to control the sale of handguns	☐ 1	☐ 2	☐ 3	☐ 4
A national health care plan is needed to cover everybody's medical costs	☐ 1	☐ 2	☐ 3	☐ 4
Nuclear disarmament is attainable	☐ 1	☐ 2	☐ 3	☐ 4
Racial discrimination is no longer a major problem in America	☐ 1	☐ 2	☐ 3	☐ 4
The Federal government should do more to discourage energy consumption	☐ 1	☐ 2	☐ 3	☐ 4
Realistically, an individual can do little to bring about changes in our society	☐ 1	☐ 2	☐ 3	☐ 4
Students from disadvantaged social backgrounds should be given preferential treatment in college admissions	☐ 1	☐ 2	☐ 3	☐ 4
Student publications should be cleared by college officials	☐ 1	☐ 2	☐ 3	☐ 4
Grading in the high schools has become too easy	☐ 1	☐ 2	☐ 3	☐ 4
Wealthy people should pay a larger share of taxes than they do now	☐ 1	☐ 2	☐ 3	☐ 4
Colleges should prohibit racist/sexist speech on campus	☐ 1	☐ 2	☐ 3	☐ 4

32. During your last year in high school, how much time did you spend during a typical week doing the following activities?

Hours per week:	None	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20	21-22	23-24
Studying/homework	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Socializing with friends	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Talking with teachers outside of class	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Exercising/sports	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Partying	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Working (for pay)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Volunteer work	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Student clubs/groups	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Watching TV	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

33. How would you characterize your political views? (Mark one)

Far left	☐
Liberal	☐
Middle-of-the-road	☐
Conservative	☐
Far right	☐

34. Below are some reasons that might have influenced your decision to attend this particular college. How important was each reason in your decision to come here? (Mark one answer for each possible reason)

	☐ Very Important	☐ Somewhat Important	☐ Not Important
My relatives wanted me to come here	☐	☐	☐
My teacher advised me	☐	☐	☐
This college has a very good academic reputation	☐	☐	☐
This college has a good reputation for its social activities	☐	☐	☐
I was offered financial assistance	☐	☐	☐
This college offers special educational programs	☐	☐	☐
This college has low tuition	☐	☐	☐
My guidance counselor advised me	☐	☐	☐
I wanted to live near home	☐	☐	☐
A friend suggested attending	☐	☐	☐
A college rep. recruited me	☐	☐	☐
The athletic department recruited me	☐	☐	☐
This college's graduates gain admission to top graduate/professional schools	☐	☐	☐
This college's graduates get good jobs	☐	☐	☐
I was attracted by the religious affiliation/orientation of the college	☐	☐	☐
I wanted to go to a school about the size of this college	☐	☐	☐
Not accepted anywhere else	☐	☐	☐

35. Below is a list of different undergraduate major fields grouped into general categories. Mark only one oval to indicate your probable field of study.

ARTS AND HUMANITIES

- Art, fine and applied 11
English (language and literature) 12
History 13
Journalism 14
Language and Literature (except English) 15
Music 16
Philosophy 17
Speech 18
Theater or Drama 19
Theology or Religion 20
Other Arts and Humanities 21

BIOLOGICAL SCIENCE

- Biology (general) 22
Biochemistry or Biophysics 23
Botany 24
Marine (Life) Science 25
Microbiology or Bacteriology 26
Zoology 27
Other Biological Science 28

BUSINESS

- Accounting 29
Business Admin. (general) 30
Finance 31
Marketing 32
Management 33
Secretarial Studies 34
Other Business 35

EDUCATION

- Business Education 36
Elementary Education 37
Music or Art Education 38
Physical Education or Recreation 39
Secondary Education 40
Special Education 41
Other Education 42

ENGINEERING

- Aeronautical or Astronautical Eng. 43
Civil Engineering 44
Chemical Engineering 45
Electrical or Electronic Engineering 46
Industrial Engineering 47
Mechanical Engineering 48
Other Engineering 49

PHYSICAL SCIENCE

- Astronomy 50
Atmospheric Science (incl. Meteorology) 51
Chemistry 52
Earth Science 53
Marine Science (incl. Oceanography) 54
Mathematics 55
Physics 56
Statistics 57
Other Physical Science 58

PROFESSIONAL

- Architecture or Urban Planning 59
Home Economics 60
Health Technology (medical, dental, laboratory) 61
Library or Archival Science 62
Nursing 63
Pharmacy 64
Preclinical, Premedicine, Preveterinary 65
Therapy (occupational, physical, speech) 66
Other Professional 67

SOCIAL SCIENCE

- Anthropology 68
Economics 69
Ethnic Studies 70
Geography 71
Political Science (gov't., international relations) 72
Psychology 73
Social Work 74
Sociology 75
Women's Studies 76
Other Social Science 77

TECHNICAL

- Building Trades 78
Data Processing or Computer Programming 79
Drafting or Design 80
Electronics 81
Mechanics 82
Other Technical 83

OTHER FIELDS

- Agriculture 84
Communications (radio, TV, etc.) 85
Computer Science 86
Forestry 87
Law Enforcement 88
Military Science 89
Other Field 90
Undecided 91

36. Please indicate the importance to you personally of each of the following: (Mark one for each item)

(N) Not Important
(S) Somewhat Important
(V) Very Important
(E) Essential

- Becoming accomplished in one of the performing arts (acting, dancing, etc.) E V S N
Becoming an authority in my field E V S N
Obtaining recognition from my colleagues for contributions to my special field E V S N
Influencing the political structure E V S N
Influencing social values E V S N
Raising a family E V S N
Having administrative responsibility for the work of others E V S N
Being very well off financially E V S N
Helping others who are in difficulty E V S N
Making a theoretical contribution to science E V S N
Writing original works (poems, novels, short stories, etc.) E V S N
Creating artistic work (painting, sculpture, decorating, etc.) E V S N
Becoming successful in a business of my own E V S N
Becoming involved in programs to clean up the environment E V S N
Developing a meaningful philosophy of life E V S N
Participating in a community action program E V S N
Helping to promote racial understanding E V S N
Keeping up to date with political affairs E V S N
Becoming a community leader E V S N

37. What is your best guess as to the chances that you will: (Mark one for each item)

(N) No Chance
(V) Very Little Chance
(S) Some Chance
(V) Very Good Chance

- Change major field? V S L N
Change career choice? V S L N
Fail one or more courses? V S L N
Graduate with honors? V S L N
Be elected to student office? V S L N
Get a job to help pay for college expenses? V S L N
Work full time while attending college? V S L N
Join a social fraternity, sorority, or club? V S L N
Play varsity/intercollegiate athletics? V S L N
Be elected to an academic honor society? V S L N
Make at least a "B" average? V S L N
Need extra time to complete your degree requirements? V S L N
Get tutoring help in specific courses? V S L N
Have to work at an outside job during college? V S L N
Seek vocational counseling? V S L N
Get a bachelor's degree (B.A., B.S., etc.)? V S L N
Participate in student protests or demonstrations? V S L N
Drop out of this college temporarily (exclude transferring)? V S L N
Drop out permanently (exclude transferring)? V S L N
Transfer to another college before graduating? V S L N
Be satisfied with your college? V S L N
Find a job after college in the field for which you were trained? V S L N
Get married while in college? (skip if married) V S L N
Participate in volunteer or community service work? V S L N

38. The Higher Education Research Institute at UCLA actively encourages the colleges that participate in this survey to conduct local studies of their students. If these studies involve collecting follow-up data, it is necessary for the institution to know the students' ID numbers so that follow-up data can be linked with the data from this survey. If your college asks for a tape copy of the data and signs an agreement to use it only for research purposes, do we have your permission to include your ID number in such a tape? Yes ☐ No ☐

The remaining ovals are provided for questions specifically designed by your college rather than the Higher Education Research Institute. If your college has chosen to use the ovals, please observe carefully the supplemental directions given to you.

39. (A) (E) (C) (D) (I) 43. (A) (E) (C) (D) (I) 47. (A) (E) (C) (D) (I)
40. (A) (E) (C) (D) (I) 44. (A) (E) (C) (D) (I) 48. (A) (E) (C) (D) (I)
41. (A) (E) (C) (D) (I) 45. (A) (E) (C) (D) (I)
42. (A) (E) (C) (D) (I) 46. (A) (E) (C) (D) (I)

THANK YOU!

Prepared by the Higher Education Research Institute, University of California, Los Angeles, California 90024-1521

APPENDIX C
FOLLOW-UP SURVEY

1993 Student
Information Form

Dear Student:

This information is being collected for a research study about students at Montana State University. Your completion of this information form will be used to understand how students are affected by their college experiences. Your social security number is collected to compare this data with a form filled out by you during orientation sessions in 1992. All identifying information will be kept completely confidential and your responses will be held in the strictest professional confidence.

Please fill out each section.

Social Security Number _____

(Your social security number is collected to match to another survey filled out last fall.

All information remains CONFIDENTIAL.)

Have you lived on the same floor for the entire year? Yes _____ No _____

What is your current: Major? _____

Minor? _____

How would you characterize your political views? (Mark one)

Far Left — Liberal — Middle of the road — Conservative — Far Right —

What is the highest academic degree that you intend to obtain? (mark one)

- None _____
 Vocational certificate _____
 Associate (A.A. or equivalent) _____
 Bachelor's degree (BA, BS, etc.) _____
 Master's degree (MA, MS, etc.) _____
 Ph.D or Ed.D _____
 M.D., D.O., D.D.S., or D.V.M. _____
 LL.B. or J.D. (Law) _____
 B.D. or M.Div. (Divinity) _____
 Other _____ Specify: _____

How important to you was each of the following reasons in attending college this year? (Mark one answer for each possible reason)

	Very Important	Somewhat Important	Not Important
My parents want me to			
I could not find a job			
To get away from home			
To be able to get a better job			
To gain a general education and appreciation of ideas			
To improve my reading and study skills			
There is nothing better to do			
To make me a more cultured person			
To be able to make more money			
To learn more about things that interest me			
To prepare myself for graduate or professional school			
A mentor/role model encouraged me to go			

During the last year in college how much time did you spend during a typical week doing the following activities?

Hours per week	0	<1	1-2	3-5	5-10	11-15	16-20	>20
Studying/ Homework								
Socializing with friend								
Talking with teachers outside of class								
Exercising/sport								
Partying								
Working(for pay)								
Volunteer work								
Student clubs/groups								
Watching TV								
On your floor								
With other floor residents								
In your residence hall								

For the activities below, indicate which ones you did during this year at college. (Mark one box for each item)

	Frequently	Occasionally	Never
Attended a religious service			
Was bored in class			
Participated in organized demonstrations			
Failed to complete a homework assignment on time			
Tutored another student			
Studied with other student			
Was a guest in a teacher's home			
Smoked cigarettes			
Drank beer			
Drank wine or liquor			
Stayed up all night			
Felt overwhelmed by all I had to do			
Felt depressed			
Performed volunteer work			
Came late to class			
Played a musical instrument			
Asked a teacher for advice after class			
Voted in a student election			
Discussed politics			
Attended a recital or concert			
Worked in a local, state or national political campaign			
Argued with a teacher in class			
Discussed 'safe sex'			
Socialized with someone from a different racial/ ethnic group			

Please rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself. (Mark one in each row)

	Top 10%	Above average	Average	Below average	Low 10%
Academic ability					
Artistic ability					
Competitiveness					
Cooperativeness					
Drive to achieve					
Emotional health					
Leadership ability					
Math ability					
Originality					
Physical health					
Popularity					
Public speaking ability					
Reading speed comprehension					
Self-confidence (intellectual)					
Self-confidence (social)					
Understanding of others					
Writing ability					

Mark one box in each statement's row.

The Federal Government is not doing enough to protect the consumer from faulty goods and services

The Federal government is not doing enough to control environmental pollution

The Federal government should raise taxes to reduce the deficit

There is too much concern in the courts for the rights of criminals

Federal military spending should be increased

Abortion should be legal

The death penalty should be abolished

If two people really like each other, it's all right for them to have sex even if they've known each other for only a very short time

The activities of married women are best confined to the home and family

Marijuana should be legalized

Busing is O.K. if it helps to achieve racial balance in the schools

It is important to have laws prohibiting homosexual relationships

The chief benefit of a college education is that it increases one's earning power

Employers should be allowed to require drug testing of employees or job applicants

The best way to control AIDS is through widespread, mandatory testing

Just because a man thinks that a woman has "led him on" does not entitle him to have sex with her

The Federal Government should do more to control the sale of handguns

A national health care plan is need to cover everybody's medical costs

Nuclear disarmament is attainable

Racial discrimination is no longer a major problem in America

The Federal Government should do more to discourage energy consumption

Realistically, an individual can do little to bring about changes in our society

Students from disadvantaged social backgrounds should be given preferential treatment in college admissions

Student publications should be cleared by college officials

Wealthy people should pay a larger share of taxes than they do now

[illegible]

Becoming involved in programs to clean up the environment

[illegible]

How effective has your RA been on your floor

[illegible]

What is your best guess that you will: (Mark one box for each item)

	No Chance	Very Little Chance	Some Chance	Very Good Chance	I Already Have
Change major field					
Change career choice					
Fail one or more classes					
Graduate with honors					
Be elected to student office					
Get a job to help pay for college expenses					
Work full time while attending college					
Join a fraternity, sorority, or club					
Play varsity/intercollegiate athletics					
Be elected to an academic honor society					
Make at least a "B" average					
Get tutoring help in specific courses					
Have to work at an outside job					
Sought vocational counseling					
Get a bachelor's degree					
Participate in student protests					
Drop out temporarily (exclude transferring)					
Be satisfied with your college					
Find a job after college in the field for which you were trained					
Get married while in college					
Participate in volunteer or community service work					

What are your plans for next year? Please mark all that apply:

- | | |
|-----------------------------------|--------------------------------|
| _____ Return to Montana State | _____ Go to another university |
| _____ Live in the residence halls | _____ Live off-campus |
| _____ Drop out of school | _____ Work full-time |
| _____ Get married | |

Thank you for your participation. To find out additional information for this study, we would like to learn more about your college experiences. If you would be willing to participate in further study, please complete the following section. Thank you.

Name _____

Summer Address _____

Summer Phone Number _____

APPENDIX D

JOSSEY-BASS PERMISSION LETTER



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TO: Nancy Krogh
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December 27, 1996

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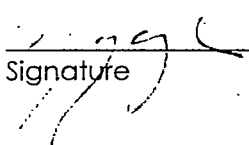
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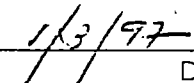
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